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Equal Access/Equal Opportunity

Miami Dade College is committed to providing equal access to education and employment opportunities to students, employees, applicants for admission and employment, and to its activities for the general community in an environment free from harassment or other discriminatory practices based upon sex, race, color, marital status, pregnancy, age, religion, national origin, ethnicity, veteran's status, disability, sexual orientation or genetic information. The College's commitment to equal access and equal opportunity is contained in the District Board of Trustee policies and procedures based on the nondiscrimination provisions of federal and state laws and regulations, including the Civil Rights Acts of 1964, as amended, and 1991; Title IX of the Education Amendments of 1972; Section 504 of the Rehabilitation Act of 1973; the Americans with Disabilities Act Amendments Act of 2008; and the Florida Educational Equity Act (§ 1000.05, F.S.); The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (The Clery Act) as amended in 2008; and The Violence Against Women REAUTHORIZATION Act of 2013 ("VAWA"),

In accord with these protections, Miami Dade College provides equal access/equal opportunity in admissions, recruitment, financial assistance, access to course offerings, participation in extracurricular programs and activities, access to and use of facilities, counseling, housing referral, guidance, advising, health services, athletics, employment and retention of personnel and students.

Responsibility for the implementation of the College's commitment to equal access and equal opportunity rests with the College president.

Consult the offices below for assistance or to obtain more detailed information on equal access/equal opportunity:

District Administration

Joy C. Ruff
Office of Equal Opportunity Programs/
Americans with Disabilities Act (ADA) Coordinator/
Title IX Coordinator
Miami Dade College
11011 S.W. 104th St.
Miami, FL 33176-3393
Phone: 305-237-0278 Fax: 305-237-0943

North Campus

Office of the Campus President
11380 N.W. 27th Ave.
Miami, FL 33167-3495

Kendall Campus

Office of the Campus President
11011 S.W. 104th St.
Miami, FL 33176-3393

Wolfson Campus

Office of the Campus President
300 N.E. Second Ave.
Miami, FL 33132-2296

Medical Campus

Office of the Campus President
950 N.W. 20th St.
Miami, FL 33127-4693

Homestead Campus

Office of the Campus President
500 College Terrace
Homestead, FL 33030-6009

InterAmerican Campus

Office of the Campus President
627 S.W. 27th Ave.
Miami, FL 33135

Hialeah Campus
Office of the Campus President
1780 W. 49th St.
Hialeah, FL 33012-2918

West Campus
Office of the West Campus President
3800 N.W. 115th Ave.
Doral, FL 33178-4856

To obtain additional information about the College, including an Application for Admission/Readmission, contact any campus Admissions and Registration Office or visit the College's Web site at www.mdc.edu.

Purpose of the Catalog

This Catalog provides information about Miami Dade College's academic programs and student support services. The Catalog contains summaries of College policies for academic areas, degree and certificate requirements, descriptions of support services and course listings. Because the Catalog is produced for a two-year period, it does not necessarily contain all of the current policies and requirements. Prospective students and current students may verify these policies and requirements with an academic advisor.

Faculty and academic advisors provide academic advisement; however, students are responsible for fulfilling graduation requirements. The certificate or degree will be awarded only if all requirements have been met. It is important that students know the policies, requirements and procedures that they are expected to follow during their college career.

Accreditations

Miami Dade College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate and baccalaureate degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Miami Dade College.

Additional accreditations include:

Accreditation Commission for Education in Nursing (ACEN)
Accreditation Review Commission on Education for the Physician Assistant (ARC-PA)
American Bar Association, Standing Committee on Paralegals
American Board of Funeral Service Education, Committee on Accreditation (ABFSE)
American Dental Association, Commission on Dental Accreditation (CODA)
American Veterinary Medical Association, Committee on Veterinary Technician Education and Activities (CVTEA)
Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)
Commission on Accreditation for Respiratory Care (CoARC)
Commission on Accreditation in Physical Therapy Education (CAPTE)
Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP)
Commission on Opticianry Accreditation (COA)
Federal Aviation Administration (FAA)
Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS)
Joint Review Committee on Education in Radiologic Technology (JRCERT)
National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
National Association for the Education of Young Children (NAEYC)

Additional approvals include:

Commission on Accreditation of Allied Health Education Programs (CAAHEP)
Florida Board of Nursing
Florida Department of Health, Bureau of Emergency Medical Services

Florida Department of Law Enforcement, Criminal Justice Standards and Training Commission (CJSTC)
Florida Real Estate Commission, Department of Business and Professional Regulation - Division of Real Estate

Professional Organizations and Association Memberships

American Association of Collegiate Registrars and Admissions Officers (AACRAO)
American Association of Community Colleges (AACCC)
American Association of Hispanics in Higher Education Inc. (ACCHHE)
American Association of State Colleges and Universities (AASCU)
American Council on Education (ACE)
American Council on International Intercultural Education (ACIIE)
Asociación de Universidades de América Latina y el Caribe para la Integración (AUALCPI)
Association of American Colleges and Universities (AAC&U)
Association of Community College Trustees (ACCT)
Association of Florida Colleges (AFC)
Association of Governing Boards of Universities and Colleges (AGB)
Business-Higher Education Forum (BHEF)
Center for Global Advancement of Community Colleges (CGACC)
Coalition of Urban and Metropolitan Universities (CUMU)
College Consortium for International Studies (CCIS)
Community College Baccalaureate Association (CCBA)
Community College Survey of Student Engagement (CCSSE)
Community Colleges for International Development (CCID)
Consortio-red de Educación a Distancia (CREAD)
Consortium for North American Higher Education Collaboration (CONAHEC)
Council for Higher Education Accreditation (CHEA)
Council for the Study of Community Education & Information Studies (CSCC)
Council of Foreign Relations (CFR)
Council on Competitiveness
EDUCAUSE-Association of Managing and Using Information Technology in Higher Education
Florida Association of Colleges and Universities (FACU)
Florida Association of Community Colleges (FACC)
Florida Campus Compact
Florida College System Activities Association (FCSAA)
Florida Community College Activities Association (FCCAA)
Florida Developmental Education Association
Greater Miami Chamber of Commerce (GMCC)
Hispanic Association of Colleges & Universities (HACU)
Hispanic Educational Telecommunications System (HETS)
League for Innovation in the Community College
National Association for Community College Entrepreneurship (NACCE)
National Association of College and University Attorneys (NACUA)
National Association of College and University Business Officers (NACUBO)
National Assoc. of Cuban American Educators (NACAE)
National Association of Student Financial Aid Administrators
National Collegiate Honors Council
National Commission for Cooperative Education (NCCCE)
National Community College Hispanic Council (NCCHC)
National Institute for Staff and Organizational Development (NISOD)
Southeast Florida Library Information Network
Southern Association of Colleges and Schools (SACS)
Southern Association of Collegiate Registrars and Admissions Officers (SACRAO)
Southern Association of Junior, Community, and Technical Colleges (SAJCTC)
The College Board
World Association for Cooperative Education (WACE)
World Federation of Colleges and Polytechnics (WFPC)

Requests for review of letters of accreditation may be forwarded to the Office of the Vice Provost for Academic Affairs or Associate Provost for Academic Affairs.

Note: In addition to the above, Miami Dade College administrators, faculty and staff members participate in numerous other international, national, state and regional organizations. Additional information regarding professional associations may be obtained from the College.

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Academic Calendar 2016 - 2018

Fall Term 2016 (2016-1)

Aug. 18 (Thur)	Faculty Report, FALL TERM.
Aug. 19 (Fri)	Fall Term preparation.
Aug. 22 (Mon)	Evening and weekday classes begin.*
Aug. 26 (Fri)	Last day to drop classes with 100% refund for regular Fall Term classes.
Aug. 27 (Sat)	Saturday classes begin.*
Sept. 3-5 (Sat-Mon)	Holiday Period - Labor Day
Nov. 1 (Tues)	Last day to apply for institutional credit by examination, for Individual course withdrawal, and complete withdrawal from college.
Nov. 11-13 (Fri-Sun)	Holiday Period - Veterans Day
Nov. 24-27 (Thur-Sun)	Holiday Period - Thanksgiving
Dec. 16 (Fri)	Last day of classes and examinations
Dec. 17 (Sat)	Faculty grade input ends at 12:00 noon
Dec. 19, 2016 - Jan. 2, 2017	Winter Break

Spring Term 2017 (2016-2)

Jan. 3 (Mon)	Faculty Report, SPRING TERM
Jan. 4 (Tue)	Evening and weekday classes begin.*
Jan. 7 (Sat)	Saturday classes begin.*
Jan. 10 (Mon)	Last day to drop classes with 100% refund for regular Spring Term classes.
Jan. 14-16 (Sat-Mon)	Holiday Period - Martin Luther King, Jr. Day
Feb. 18-20 (Sat-Mon)	Holiday Period - President's Day
Feb. 23 (Thurs)	College-wide Academic Convocation (no classes).
Mar. 16 (Thurs)	Last day to apply for institutional credit by examination, for individual course withdrawal, and complete withdrawal from college.
Mar. 27 (Mon)	Last day to apply for graduation and have name appear in Commencement program.
Apr. 14-16 (Fri-Sun)	Spring Recess
Apr. 28 (Fri)	Last day of classes and examinations.
Apr. 29 (Sat)	Faculty grade input ends at 12:00 noon.
Apr. 29 (Sat)	Commencement
May 1-5 (Mon-Fri)	Semester Break

Summer Term 2017 (2016-3)

May 8 (Mon)	Faculty Report, SUMMER TERM
May 8 (Mon)	Evening and weekday classes begin for first 6-week
May 10 (Wed)	Summer session and for the 12-week Summer Term*.
May 11 (Wed)	Last day to drop classes with 100% refund for first 6-week Summer session.
May 11 (Thur)	Last day to drop classes with 100% refund for the 12-week Summer Term.
May 27-29 (Sat-Mon)	Holiday period - Memorial Day
June 1 (Thur)	Last day to apply for institutional credit by examination, for individual course withdrawal, and complete withdrawal from college for the first 6-week Summer session.
June 16 (Fri)	Last day of classes and examinations for the first 6-week Summer session.
June 17 (Sat)	Faculty grade input for the first 6-week Summer session ends at 12:00 noon.
June 19 (Mon)	Evening and weekday classes begin for the second 6-week Summer session.
June 21 (Wed)	Last day to drop classes with 100% refund for the second 6-week Summer session.
June 27 (Tue)	Last day to apply for institutional credit by examination, for individual Course withdrawal, and complete withdrawal from college for the 12-week Summer Term.
July 4 (Tue)	Holiday Period - Independence Day
July 13 (Thur)	Last day to apply for institutional credit by examination, for individual course withdrawal, and complete withdrawal from college for the second 6-week Summer session.
July 28 (Fri)	Last day of classes and examinations for the 12-week Summer Term and the second 6-week Summer session.
July 29 (Sat)	Faculty grade input ends at 12:00 noon.

Academic Calendar 2016 – 2018

Fall Term 2017 (2017-1)

Aug. 24 (Thur)	Faculty Report, FALL TERM.
Aug. 25 (Fri)	Fall Term preparation.
Aug. 28 (Mon)	Evening and weekday classes begin.*
Sept. 1 (Fri)	Last day to drop classes with 100% refund for regular Fall Term classes.
Sept. 2-4 (Sat-Mon)	Holiday Period – Labor Day
Sept. 9 (Sat)	Saturday classes begin.*
Nov. 7 (Tues)	Last day to apply for institutional credit by examination, for Individual course withdrawal, and complete withdrawal from college.
Nov. 10-12 (Fri-Sun)	Holiday Period – Veterans Day
Nov. 23-26 (Thur-Sun)	Holiday Period – Thanksgiving
Dec. 22 (Fri)	Last day of classes and examinations
Dec. 23 (Sat)	Faculty grade input ends at 12:00 noon
Dec. 25, 2016 – Jan. 7, 2017	Winter Break

Spring Term 2018 (2017-2)

Jan. 8 (Mon)	Faculty Report, SPRING TERM
Jan. 9 (Tue)	Evening and weekday classes begin.*
Jan. 13-15 (Sat-Mon)	Holiday Period – Martin Luther King, Jr. Day
Jan. 16 (Mon)	Last day to drop classes with 100% refund for regular Spring Term classes.
Jan. 20 (Sat)	Saturday classes begin.*
Feb. 17-19 (Sat-Mon)	Holiday Period – President's Day
Mar. 9 (Fri)	College-wide Academic Convocation (no classes).
Mar. 21 (Wed)	Last day to apply for institutional credit by examination, for individual course withdrawal, and complete withdrawal from college.
Mar. 26 (Mon)	Last day to apply for graduation and have name appear in Commencement program.
Mar. 30, 2018 - Apr. 1, 2018 (Fri-Sun)	Spring Recess
May 4 (Fri)	Last day of classes and examinations.
May 5 (Sat)	Faculty grade input ends at 12:00 noon.
May 5 (Sat)	Commencement
May 7-11 (Mon-Fri)	Semester Break

Summer Term 2018 (2017-3)

May 14 (Mon)	Faculty Report, SUMMER TERM
May 14 (Mon)	Evening and weekday classes begin for first 6-week and Summer session and for the 12-week Summer Term*.
May 16 (Wed)	Last day to drop classes with 100% refund for first 6-week Summer session.
May 17 (Thur)	Last day to drop classes with 100% refund for the 12-week Summer Term.
May 26-28 (Sat-Mon)	Holiday period – Memorial Day
June 7 (Thur)	Last day to apply for institutional credit by examination, for individual course withdrawal, and complete withdrawal from college for the first 6-week Summer session.
June 22 (Fri)	Last day of classes and examinations for the first 6-week Summer session.
June 23 (Sat)	Faculty grade input for the first 6-week Summer session ends at 12:00 noon.
June 25 (Mon)	Evening and weekday classes begin for the second 6-week Summer session.
June 26 (Wed)	Last day to drop classes with 100% refund for the second 6-week Summer session.
July 3 (Tue)	Last day to apply for institutional credit by examination, for individual Course withdrawal, and complete withdrawal from college for the 12-week Summer Term.
July 4 (Wed)	Holiday Period – Independence Day
July 19 (Thur)	Last day to apply for institutional credit by examination, for individual course withdrawal, and complete withdrawal from college for the second 6-week Summer session.
Aug. 3 (Fri)	Last day of classes and examinations for the 12-week Summer Term and the second 6-week Summer session.
Aug. 4 (Sat)	Faculty grade input ends at 12:00 noon.



About Miami Dade College

Miami Dade College offers a wide range of programs designed to meet the needs of Greater Miami. The College offers associate and baccalaureate degree options and a wide range of occupational certificates and specialized programs. The Associate in Arts degree (A.A.), designed to prepare students for further study at four-year institutions, includes more than 80 pathways leading to the baccalaureate degree. MDC maintains more than 60 transfer agreements with colleges and universities across the state and country, guaranteeing entry for MDC students who meet the entry criteria. The Associate in Science degree (A.S.), with more than 60 areas of study, prepares students for direct entry into the workforce. Our A.S. graduates take advantage of the College's numerous partnerships with innovative businesses throughout South Florida. Miami Dade College currently offers the following baccalaureate degrees: the Bachelor of Science in Education (Biology, Chemistry, Earth & Space Science, Physics, Mathematics and Exceptional Student Education); the Bachelor of Science in Nursing; the Bachelor of Science in Electronics Engineering Technology, the Bachelor of Science in Biological Sciences; the Bachelor of Science in Early Childhood Education; and the Bachelor of Applied Science in Public Safety Management; the Bachelor of Applied Science in Supervision and Management; the Bachelor of Applied Science in Film, Television & Digital Production; and the Bachelor of Applied Science in Health Science with an Option in Physician Assistant Studies. Additional baccalaureate degrees/programs are planned for the coming years. In addition to these degrees, the College offers numerous short-term occupational certificate programs as well as courses of study to enhance career knowledge through continuing education.

The Open-Door Policy

Miami Dade College's open-door admissions policy provides educational opportunities to community residents and to national and international applicants. Anyone seeking to benefit from the degree or short-term certificate programs, or from the College's student and community services, is encouraged to enroll. The College welcomes all students regardless of gender, race, color, marital status, age, religion, national

origin, disability, veteran's status, sexual orientation or genetic information.

Admission is a simple process, requiring a completed application, with fee and official transcripts of high school or college studies. International applicants have additional entrance requirements based on U.S. immigration rules and baccalaureate degree-seeking applicants may have additional entrance requirements. Transfer students may receive credit for courses that equate to Miami Dade courses.

Mission Statement

As democracy's college, Miami Dade College changes lives through accessible, high-quality teaching and learning experiences. The College embraces its responsibility to serve as an economic, cultural and civic leader for the advancement of our diverse global community.

Vision Statement

To be the recognized leader in student learning, achievement and success while enriching our community

Core Values

- An exceptional learning environment that challenges students and empowers them to attain their academic goals
- An international perspective that makes our students civically engaged and globally competitive
- A commitment to evidence-informed decision making and accountability
- Innovation and efficiency that ensure affordability while optimizing educational quality
- An exceptional work environment that engages an exemplary and diverse workforce
- Quality community partnerships that serve as the foundation for the development of relevant workforce, cultural and civic programs



- Cultural initiatives that capture the richness of Miami-Dade County's multi-cultural fabric

- Environmental awareness that results in intentional sustainability practices

MDC History

The '60s: Opening Education's Doors

Miami Dade College opened its doors as Dade County Junior College in 1960 amid desegregation and the influx of thousands of Cuban refugees. In year one, 1,428 students entered "Chicken Coop College," nicknamed for the original buildings that were transformed into classrooms. The College was open to any county resident who had graduated from high school. The student body included the seven black students who made Dade County Junior the first integrated junior college in Florida. These students, along with the many Cuban refugees seeking to better their lives, paid a \$5 application fee, but tuition was free to all county residents.

By the mid-'60s, the College was already thinking long range. With nearly 15,000 students attending, the original North Campus buildings were bursting at the seams. New construction was under way, with an eye toward not only a second campus in Kendall, but a third in downtown Miami. By 1967, the College was the largest institution of higher education in the state of Florida, enrolling 23,341 students. Dade Junior had become the fastest-growing junior college in the nation. It enrolled more freshmen than the University of Florida, Florida State University and the University of South Florida combined.

The '70s: Setting the Standard

In the mid-'70s, the College's guiding philosophy of "access with excellence" was clearly defined. A bold education review reaffirmed the College's open-door policy and toughened academic standards. The project and its goals became the standard for community colleges across the country. K. Patricia Cross, visiting professor at Harvard University's Graduate School of Education, called the College "the most exciting institution of

higher education in the country."

The excitement spread to every corner of this changing community. The downtown campus, later to be renamed for one of the College's founders, Mitchell Wolfson, was born in 1970. The Medical Campus was founded in 1977, and bilingual studies became a full-fledged division in 1979, with more than 2,000 students enrolled in outreach centers in the Little Havana area. These centers would soon become the InterAmerican Center, the largest bilingual facility in all of higher education.

The '80s: Maturity and Recognition

By the 1983-84 academic year, the effects of a changing community were reflected at the community college. Thirty percent (nearly 18,000 students) were immigrants, and 46 percent reported that English was not their native language. Almost two-thirds of students enrolled in the College were minorities, and 56 percent were women. Part-time students were common.

In 1984, the New World School of the Arts (NWSA) was conceived. Designed to train future performing and visual artists from high school through the baccalaureate, the school became an educational partnership of Miami Dade College, Miami-Dade County Public Schools and Florida International University, with FIU handing the baton to the University of Florida in 1997. Today, NWSA is recognized as one of the premier arts conservatories in the country, with the work of its graduates gracing venues from New York to Los Angeles.

1984 was also witness to a modest College-sponsored bookfest on Kyriakides Plaza at Wolfson Campus. "Books by the Bay" drew a surprising crowd of 25,000 people over two days. Today, Miami Book Fair is a cultural and academic initiative that promotes reading and writing throughout the year by consistently presenting high quality literary activities open to all in South Florida. Housed at the Wolfson Campus, Miami Book Fair serves MDC and K-12 students, as well as the larger South Florida community.

Year round programs include many reading and writing initiatives, in addition to the renowned Miami Book Fair, the largest literary gathering in the U.S.

The College's fifth campus, in

Homestead, opened in 1985 at the First Baptist Church with 350 students. By 1991, a modern campus facility had been built for South Dade's ever-growing student population.

By the close of the decade, the College's place in education was nationally recognized: The prestigious University of Texas Community College Leadership Program identified the College as the No. 1 community college in America.

The '90s: Ready for the New Economy

College personnel challenged the mindset of the past by initiating comprehensive reforms in academic programs and administrative operations. The College's Education Review revamped the academic core and electives by modernizing the curriculum to meet the needs of a changing society. Progressiveness was not limited to education, as the re-engineering process also brought improved strategies to human resources, maintenance operations and budget formulation. The College's effort to streamline its bureaucracy and contain costs brought a new financial stability, freeing resources for new staff and program development.

The College's Technology Master Plan put the College on the fast-track in academic and administrative computing throughout the 1990s. The College sought to keep pace with the changing economy and workforce, developing strong partnerships throughout business and industry. More than 50 new degree and short-term certificate training programs were developed, all aimed at emerging industries and South Florida's job market. The College developed multimedia classrooms and the Virtual College placed the College on the Internet map, allowing students to take classes online. Recognition soon followed: Yahoo! Internet Life proclaimed MDC "WIRED" and voted the College "second best of all colleges and universities." The College's information technology efforts also gained residence in the Smithsonian's permanent collection with a nomination for the Smithsonian Innovation Award.

The College's sixth campus became a reality in the mid-'90s when InterAmerican Center was granted cam-

pus status by the District Board of Trustees and was accredited by the Southern Association of Colleges and Schools.

2000: A New Learning Agenda

The new millennium dawned and MDC breezed through the Y2K jitters safe and sound in its mission to serve students. The College's "Learning Agenda" laid out the next phase of growth, exploring new learning models and student support programs, as well as campus, faculty and leadership development efforts. As always, students stand at the center of this vision: Their success is the ongoing, top priority of Miami Dade College.

The Honors College offers a scholarly environment that challenges academically gifted and intellectually curious students. In addition to expert teachers and a rich comprehensive curriculum, The Honors College offers students a generous scholarship award, college-wide support services and enrichment opportunities that include attendance and participation at national and regional conferences, internships, corporate coaches, travel study tours, university transfer counseling and an individual educational plan. The successful Honors College graduate will be prepared to transfer to many of the most prestigious colleges and universities in the nation.

The Emerging Technologies Center of the Americas (ETCOTA) is the College's response to the need for a qualified workforce to fill the thousands of new jobs in Information Technology and Telecommunications. ETCOTA is a dynamic, state-of-the-art 40,000 square-foot facility housing 19 multimedia classrooms and labs equipped with high-end computers, specialized instrumentation equipment and simulation work-stations. Located at Wolfson Campus, the Center also has a 120-seat auditorium and offices for faculty and staff.

With the addition of four-year degrees in 2003, the institution changed its name to Miami Dade College. While the word "community" is no longer in the title, the College remains the "Community's College," committed to the educational needs of individuals and industries throughout South Florida. Baccalaureate degrees are offered in education; public

safety management; nursing; electronics engineering; supervision and management; film, television and digital production; and health sciences.

In 2005, MDC received official reaccreditation from the Southern Association of Colleges and Schools (SACS), the regional accreditation body. At 10-year intervals, SACS places higher education institutions under the microscope, and MDC passed the review with flying colors. During the review, MDC introduced "The Math Connection," a five-year program of continuous improvement for math students, and Learning Agenda II, with special emphasis on learning outcomes, assessment and competencies.

In 2006, MDC reached an astonishing milestone, welcoming its 1.5 millionth student. In a community of 2.3 million, MDC's role remains central to educational, social, cultural and economic growth.

MDC welcomed President George W. Bush for commencement exercises at Kendall Campus. President Bush applauded MDC as "democracy's college." Since then, President William Jefferson Clinton and President Barack Obama have delivered commencement addresses at the College. MDC also became the proud steward of the historic Freedom Tower, where many immigrants arrived in the 1960s and 1970s. The building hosted the first U.S. exhibition of the complete etchings of Francisco de Goya and a covenant signing for the College's 10 Learning Outcomes, attended by Sara Martinez Tucker, the U.S. Under Secretary of Education. These general education outcomes and assessment methods drew national praise and represented MDC's unique contribution to a new era of liberal learning and the need to assess student learning effectively.

The College continues to contribute to the region's cultural landscape via world-class programs, including those offered by The Center @ MDC (formerly known as the Florida Center for the Literary Arts) and Art Gallery System, New World School of the Arts and Cultural Affairs Department. The year 2008 celebrated the 25th anniversaries of both Miami International Film Festival and Miami Book Fair International. The New York Times named MDC's cultural

programming among the best in academia. In 2010, Miami Dade College celebrated its 50th anniversary.

Campuses & Outreach Centers

MDC enrolls more than 170,000 students at its seven campuses and multiple outreach centers throughout Miami-Dade County. While each campus has developed its own distinct identity, the entire College is united around a fundamental mission: providing access to high-quality educational opportunities for all residents of the community.

North

Located on 245 acres in northern Miami-Dade County, this beautifully landscaped campus was the College's first. It was built in 1960 on land that once hosted a World War II Naval air station. The main academic buildings of the Campus surround a serene lake and lush walking paths. North Campus is a major gateway for students wishing to upgrade skills, complete one-year certificate programs, prepare for licensing exams or complete a bachelor's degree.

North Campus is also recognized for its unique programs. The School of Justice offers the Bachelor of Applied Science with a major in public safety management and provides basic training for all police and correctional officers in Miami-Dade County as well as more than half the private security personnel. The Fire Science Program trains all Miami-Dade County firefighters and provides continuing education for municipalities throughout the county and the East Coast. A live fire training facility is the only one of its kind in South Florida. Additionally, the School offers programs in chemical and watershed management. North Campus also houses the Funeral Services program that trains morticians and funeral service directors, the only program of its kind in southeastern Florida. Those students wishing to pursue careers in film and digital imaging, television and sound engineering, or in the radio and music business take advantage of the School of Entertainment Technologies. This School operates the cable station MDC-TV, and in 2008 it inaugurated the Televisa Centre for Film and Television Production, a hub for Latin

American and Caribbean entertainment industries. North Campus also administers the Carrie P. Meek Entrepreneurial Education Center, which promotes excellence in education, entrepreneurship and workforce preparation.

In January 2010, MDC celebrated the official opening of the College's state-of-the-art science complex at North Campus. The first of its kind in north Miami-Dade County, the facility will create new educational and career-training opportunities for area residents and beyond. The 90,000-square-foot complex features 21 laboratories with media stations, a Palmetum, a roof-top observatory, classrooms, lecture hall, faculty and administrative offices, botanical garden, greenhouse, an outdoor plaza and café.

The new science complex is an invaluable tool for all MDC students who must meet science requirements to graduate. In particular, it will serve as a hands-on training venue for students interested in biotechnology, chemical technology, green and environmental sciences, and advanced manufacturing careers, among many other science, technology, engineering and mathematics (STEM) professions. Training in these areas can lead to an array of jobs, from research technologist to environmental scientist. Another goal is for the complex to become a top regional research facility.

The School of Entertainment and Design Technology (SEDТ) at North Campus launched a Bachelor of Applied Science (B.A.S.) with a major in Film, Television and Digital Production in 2010. Designed to provide students with a seamless, workforce-driven baccalaureate degree that will enable them to obtain immediate employment in the field of digital production, thereby meeting South Florida's workforce needs, the B.A.S. also serves those currently in the production workforce who need to update their skills to increase their career opportunities and wages.

Kendall

Kendall Campus, situated on a 185-acre tract of trees and lakes, opened in 1967, and has become home to a wide variety of academic programs and specialized institutes. The campus features 14 buildings equipped with the latest

technologies, a wellness center with an Olympic-sized pool and several athletic fields.

Kendall Campus offers a comprehensive range of learning opportunities. Kendall provides students with transfer programs designed to facilitate the move to four-year institutions, programs that enhance and modernize professional and technical skills, and preparatory programs for licensing or certification.

Kendall Campus provides students with academic support services focused on enhancing student learning in science, mathematics and engineering. The Environmental Center is a 10-acre facility on campus that hosts Eco Tours for more than 10,000 schoolchildren each year. The Gourmet Academy is the culinary showpiece of Kendall Campus and offers a variety of noncredit programs and courses to the community. Located west of the main campus, the Landscape Technology Program maintains a large nursery and several greenhouses. One of the additions to the campus is the Earth Sciences Museum and Demonstration Center, which boasts one of the largest collections of geological specimens in the southeastern United States. The Kendall Campus art gallery provides the campus and surrounding commu-

nity with several exhibitions each year and houses a permanent collection of more than 700 works. Also, award-winning publications such as *Miambiance*, Kendall's literary magazine, highlight students' literary excellence.

Kendall Campus recently introduced a Bachelor of Applied Science (B.A.S.) in Supervision and Management to prepare graduates for leadership roles and positions in a variety of industries. The upper-level coursework includes applied management practices, prepares students for supervisory and management opportunities within their technical field, and affords students the opportunity to demonstrate the application of acquired knowledge, skills and competencies through internships and capstone experiences.

After graduation, students will be prepared to advance to supervisory and managerial positions in a wide variety of industries, including financial services, retail, hospitality, marketing, aviation management, food service, insurance, real estate, office and administration, and sales.

Wolfson

Wolfson Campus opened in 1970 by holding classes in the storefronts of



downtown Miami. With the completion of the campus' first permanent facility in 1973, Wolfson Campus catalyzed a downtown renaissance by hosting all manner of civic and cultural discourse. It is the only comprehensive urban campus in the city. Located within the city's financial, governmental, technological and cultural hubs, Wolfson Campus capitalizes on its unique geographic resource by offering programs in banking/financial services, business, computer technology, paralegal studies, architecture, economics, hospitality management, engineering, the arts, humanities and social sciences.

Wolfson Campus is home to the Emerging Technologies Center of the Americas (ETCOTA), a state-of-the-art, 40,000-square-foot high-tech training facility. It has fast become the leading provider of skilled professionals for the region's emerging technology industries. The campus also houses the New World School of the Arts, a comprehensive high school and college program, recognized

as one of the best performing and visual arts schools in the country.

Each year Wolfson Campus hosts Miami Book Fair. This is the nation's largest and finest literary festival, bringing hundreds of renowned authors, publishing houses and hundreds of thousands of fairgoers to the Campus. *The New York Times* calls this Wolfson Campus event the model for all other book fairs.

The School of Computer and Engineering Technologies at Wolfson Campus now offers a Bachelor of Science in Electrical Engineering Technologies. This degree addresses the local workforce need for baccalaureate-level engineers, providing job opportunities for MDC's Associate in Science graduates to earn, at a local institution, a degree that will support higher-paying careers.

In the spring of 2011, MDC inaugurated the Miami Culinary Institute at its new, state-of-the-art, green facilities, training students in the latest sustainable food and energy technologies

with unparalleled nutrition and culinary knowledge.

MDC opened the Confucius Institute – a language, business and culture center that is the first of its kind in South Florida – in 2010. Housed at Wolfson Campus, the Institute is a nonprofit learning hub in partnership with China's Ministry of Education, and offers Chinese Mandarin instruction, business seminars, culinary, history and calligraphy courses, traditional medicine workshops, art exhibitions and much more. Other classes and activities will be incorporated over time and based on demand.

Medical

In 1977, Miami Dade College opened its Medical Campus on 4.3 acres within the city's medical/civic center complex. Along with the other members of this complex (the University of Miami Miller School of Medicine, UM/Jackson Memorial Hospital, Veterans Administration Hospital and Miami-Dade County Public Health Service), Medical



Campus forms the backbone of Miami's health care community. The campus offers specialty disciplines in nursing and allied health, and state-of-the-art technologies help to ensure that students are prepared in these and other challenging medical careers. Medical Campus educates two-thirds of the newly graduated registered nurses in Miami-Dade County. The practical nursing program (LPN) was reopened in 2000 and the Bachelor of Science in Nursing launched in 2008. More than 20 Allied Health programs are offered, including Physician's Assistant, Opticianry, Emergency Medical Technician, Veterinary Technology, Physical Therapist Assistant, Dental Hygiene and more. Quality medical faculty guide students with support from tutors, labs and the Student Success Center.

Medical Campus launched a Bachelor of Applied Science (B.A.S.) in Health Sciences in 2010. Designed to provide students with entry-level skills specific to the allied health professions and to supplement the workforce-specific skills that are inherent in Miami Dade College's associate-degree program, the B.A.S. in Health Sciences also offers students a Physician Assistant Studies option. The B.A.S. curriculum provides an interdisciplinary approach to health care by equipping practitioners with specialized health delivery system and patient management strategies, including medical knowledge and skills, the teaching of multicultural health care clients, leadership and management strategies, and research approaches that address health care issues, and alternative medicine.

Homestead

In 1990, Homestead became the fifth campus of Miami Dade College. It was opened in the historic downtown district of the city of Homestead with the mission to deliver a full range of higher education programs for the Homestead/Florida City communities. In fulfilling its mission, the campus enhances the community's capacity to meet cultural and social needs, in turn fostering a stronger sense of community. This togetherness was very important following the devastation of Hurricane Andrew and the closing of the Homestead Air Force Base. After

Hurricane Andrew, the campus, like the city of Homestead, began to rebuild, adding four new facilities by 1996. In January of 2002, the College opened its Aviation Building, housing a simulator of an airport control tower and runways, as well as classrooms and avionics equipment to support the aviation program. The aviation program also extends to facilities at Miami International Airport and Tamiami Airport.

Today, Homestead Campus is a modern, six-building complex offering an array of academic programs, including aviation, entertainment technologies, arts and sciences, and nursing. The campus' award-winning structures include a computer courtyard, student learning lab, career center and specialized assessment facility. As the community continues to grow, Homestead Campus will also grow, expanding its horizons to meet the needs of the South Dade community.

InterAmerican

InterAmerican Campus is located in the heart of Little Havana, a colorful and lively neighborhood in Miami's historic Latin Quarter. The seed for InterAmerican Campus was planted in 1972 when the College offered two night courses at the Belen Jesuit Prep School. Sixty students

enrolled. By 1979, the program had blossomed into the Wolfson Campus' Division of Bilingual Studies, enrolling 2,000 students.

In the early 1980s, an influx of students from Latin America and the Caribbean led to the addition of day classes and full-time faculty. By 1986, the division had grown to "center" designation, and it moved into a building in Little Havana purchased by the College Foundation. InterAmerican Center became the largest bilingual learning environment in all of higher education.

With enrollment at 5,500, the College District Board of Trustees petitioned the state of Florida for "campus" status. The request was approved and on March 27, 2001, InterAmerican Campus was born. The District Board of Trustees pronounced InterAmerican Campus a full-fledged, full-service campus, the sixth campus of Miami Dade College.

Today, InterAmerican Campus provides service to students in more than 200 programs. It is also home to the College's School of Education, which offers bachelor's degree programs in secondary mathematics education, exceptional student education, and secondary science education in the areas of biology, chemistry, physics and earth/space science.



Hialeah

Hialeah Campus became MDC's seventh campus, accorded official campus status by the Florida State Board of Education in 2005. The campus serves the Greater Hialeah-Miami Lakes area, offering day and evening classes six days a week. Courses leading to the Associate in Arts and Associate in Science degrees are offered. Educational opportunities are also available through career technical education programs, as well as through courses providing career entry in computer technology, office technology, electronics and early childhood development. Hialeah Campus houses a large and comprehensive English-language training program for speakers of other languages in various instructional formats.

West Center

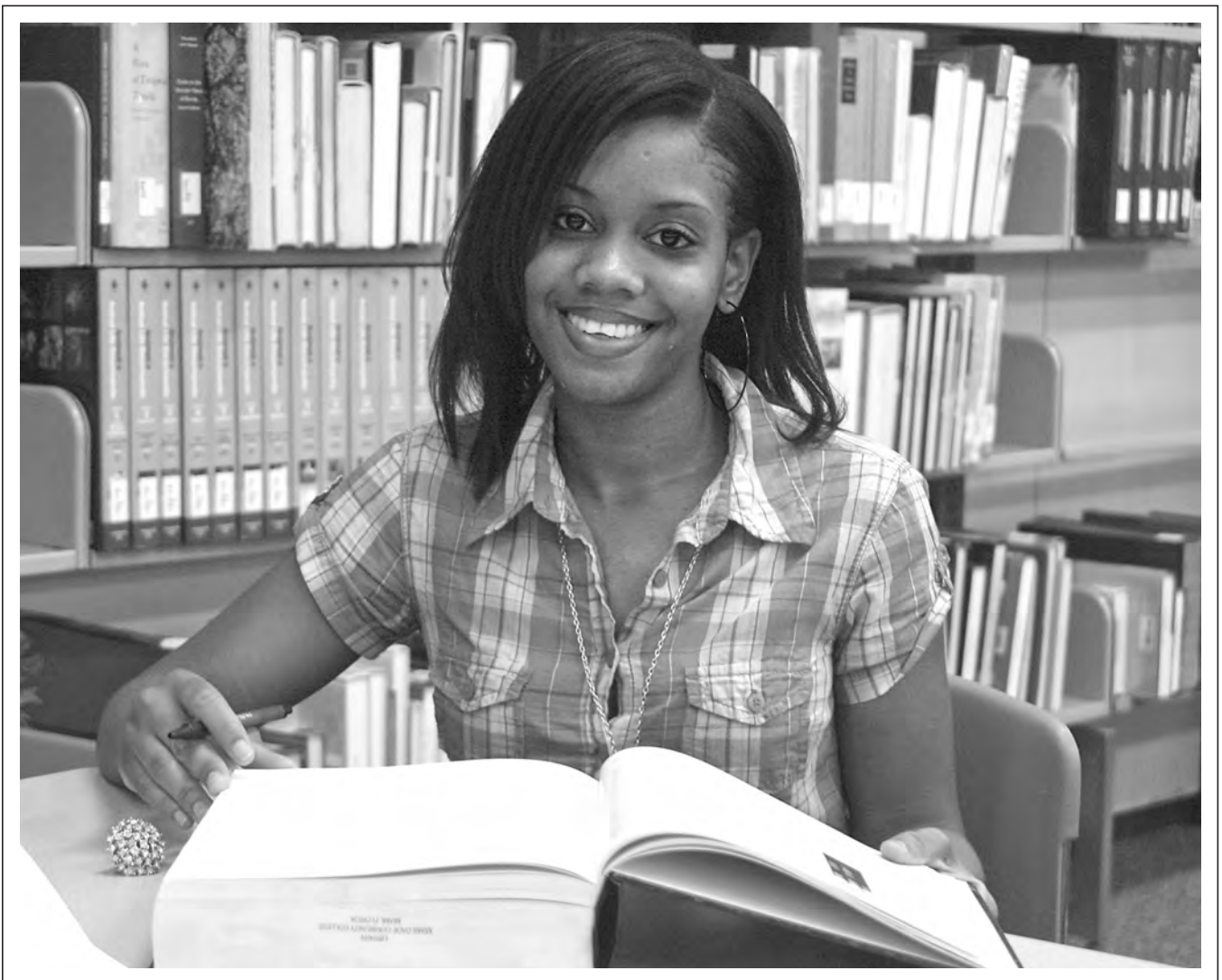
Approved by the Florida Board of Education in 2005, West Campus opened for classes on March 1, 2006. An exciting learning environment for the greater Miami community, West Campus serves one of the fastest-growing locales in Miami-Dade County, including Doral and surrounding areas. West Campus offers courses toward the Associate in Arts and Associate in Science degrees as well as corporate training programs. It houses the College archive and in 2007 became the site of the first public art gallery in Doral.

The Carrie P. Meek Entrepreneurial Education Center

The Carrie P. Meek Entrepreneurial

Education Center is an outreach program of the North Campus. It opened its doors on Oct. 4, 1989, in the heart of Liberty City, a predominantly African-American community within the City of Miami. The mission of the Entrepreneurial Education Center is to implement the broader mission of the College while promoting entrepreneurship, business growth and economic revitalization for the local residents of Liberty City and the surrounding communities.

The Entrepreneurial Education Center offers a vast array of college credit and noncredit courses. Students pursue certificate and vocational programs in a number of fields; they participate in seminars and conferences that promote workforce training and business skills and facilitate entrepreneurship and entry into the labor market.



Admissions & Financial Aid

Call us Essential ... Call us the College

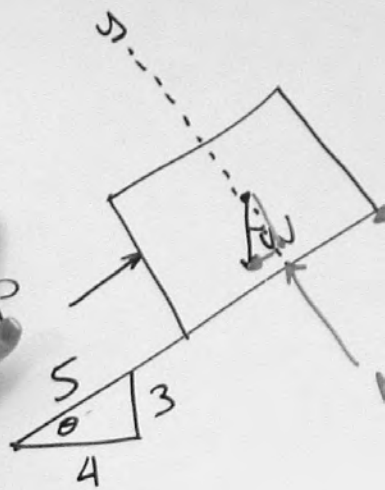
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Admissions Information

In accordance with Manual of Procedure 4000 - Admission Criteria and Guidelines (<https://www.mdc.edu/procedures/Chapter4/4000.pdf>) and section 1007.263 Florida Statutes, the following requirements have been established for college credit and vocational credit admission to Miami Dade College (MDC).

A. College Readiness and Developmental Education

MDC annually reviews and publishes the Placement Criteria document, which adheres to section 1008.30, Florida Statutes, on common placement testing for public postsecondary education. The Placement Criteria document details all placement testing and related requirements for first time in college, degree-seeking students.

B. Admissions to College Credit Programs for the Associate in Arts, Associate in Science, Associate of Applied Science and College Credit Certificate Programs

Applicants who meet any of the following criteria are admissible to the above academic programs:

1. Graduates from any public high school in the United States or territories with a standard diploma, per Section 1007.263 Florida Statute.
2. Applicants with a Florida public high school withdrawal (completion) code eligible for college credit admission, as defined by the Florida Department of Education.
3. Graduates from non-public high schools in the United States and its territories that do not require validation.
4. Anyone awarded a high school equivalency diploma (GED) in the United States and its territories.
5. Home-schooled students with a signed affidavit from their parent or legal guardian stating that the home-schooler completed a Florida home education program, per section 1002.41 Florida Statute.
6. Graduates with the foreign equivalency of a United States high school diploma that meets the admission requirements to a recognized institu-

tion of higher education in their home country with original documentation that shows all the requisite seals and apostilles. The College reserves the right to require a certified official English translation if the language used in the documents is not English. Students who do not have the requisite seals and apostilles on the original foreign high school documentation may opt to obtain an official evaluation of their credentials from a National Association of Credential Evaluation Services (NACES) member organization. The list of member organizations may be found at www.naces.org. Students must present this official evaluation to their campus Admissions and Registration Office. MDC reserves the right to require NACES evaluations for any transcripts in which we are unable to verify the authenticity or legitimacy of the documents provided.

7. International students who meet the admission requirements and require a college credit student visa (F-1) must also provide all of the following supplementary admission documents to the International Students Office 90 days prior to the beginning of the term for which the students seek admission:
 - a. Statement of financial resources available to support their educational expenses
 - b. Certificate of health and accident insurance

C. Cases that Require Additional Validation

For applicants whose diploma does not meet the criteria above, validation is mandatory in cases where MDC has reason to believe that the diploma is not valid or was not earned from an entity that provides secondary school education.

In compliance with 34 CFR 668.16 (p), reasons that the high school diploma may not be accepted or may require additional validation include:

1. The issuance of the high school diploma was based only on a test and/or payment of fees.
2. The curriculum consisted exclusively

of online/distance education instruction, and the high school is not listed as an accredited institution by the Distance Education Accrediting Commission (DEAC). MDC will accept diplomas from on-line high schools only if they are accredited by the DEAC. The DEAC maintains a list of accredited institutions that offer high school via distance education; this list is accessible at <http://www.deac.org/Student-Center/Directory-Of-Accredited-Institutions.aspx>.

3. There is conflicting high school information.
 4. The high school was previously questioned as being a diploma mill by MDC or other accredited higher education institution.
 5. The high school is not listed in the U.S. Department of Education's National Center for Education Statistics (NCES). The list of public high schools is accessible at <http://nces.ed.gov/ccd/schoolsearch/> and the list of private high schools is at <http://nces.ed.gov/surveys/pss/private-schoolsearch/>.
 6. The private high school is not listed in the Florida Department of Education's Office of Independent Education and Parental Choice. The list is accessible at <http://www.floridaschoolchoice.org/Information/PrivateSchoolDirectory/>. Inclusion in this database does not imply approval or accreditation by the Florida Department of Education.
 7. The high school or its course(s) is identified by the National Collegiate Athletic Association (NCAA) as not accepted for athletic eligibility. NCAA-ineligible high schools and/or courses will not be accepted for admission to the College. The NCAA information is accessible at <https://web1.ncaa.org/hsportal/exec/hsAction>.
 8. Other evidence provides reason to believe that the diploma is not valid or was not earned from an entity that provides secondary school education.
- *Once MDC renders a decision on the validity of a high school diploma, the decision is final and not subject to appeal.**

D. Transfer Students

Applicants who are admissible and transfer to MDC from other postsecondary institutions must request final, official transcripts from all of those institutions to be sent directly to MDC. Additional requirements are as follows:

1. Students who transfer from U.S. regionally accredited postsecondary institutions(s) with fewer than 12 college-level credits earned with "C" or higher grades must submit proof of valid high school graduation.
2. Students who transfer from U.S. non-regionally accredited postsecondary institution(s) may be admitted on the basis of the high school graduation. Courses taken at non-regionally accredited institutions that adhere to the Florida Statewide Course Numbering System may be accepted.
3. Students who transfer from foreign postsecondary institution(s) approved by the country's Ministry of Education who provide original documentation showing all the requisite seals and apostilles must provide a certified official English translation if the language used in the documents is not English. Students with fewer than 12 college-level credits earned with "C" or higher grades must submit proof of valid high school graduation. MDC reserves the right to require NACES evaluations for any transcripts in which we are unable to verify the authenticity or legitimacy of the documents provided.

***International students who require a college credit student visa (F-1) must also provide supplementary admission documents.**

E. Dual Enrollment and Early Admission

Admission to dual enrollment and early admission is permitted as per section 1007.263 Florida Statute and based on guidelines listed on the MDC Programs for High School Students web site.

F. Admissions to Baccalaureate Degree Programs

Baccalaureate degree applicants must meet all general and program-specific admission requirements.

G. Admission to Career and Technical Education Certificate Programs

Anyone who meets the requirements

admission may be admitted to Career and Technical Education programs as well as the following:

1. Applicants who are at least 16 years of age and have left high school prior to completion.
2. Applicants who have been awarded a special diploma, as defined in section 1003.438 Florida Statute or a certificate of completion, as defined in section 1003.428 Florida Statute.
3. International students with a vocational credit student visa (M-1) and the supplementary admission documents.

H. Other Considerations

1. Certain academic programs have additional program admission requirements. Students need to check with the department that manages the program for more information.
2. Applicants who have been convicted of a felony or are the subject of an arrest pertaining to a controlled substance and who wish to apply for a program that leads to licensure should confer with the regulatory/licensing agency to determine eligibility for future credentialing and practice. Applicants who are determined to be not eligible for licensing for any reason may apply for admission to that program, but must recognize that program completion may not result in licensure or employment.
3. Miami Dade College has determined that the presence of students officially designated as Sexual Offenders/Sexual Predators on campus may be disruptive to the College's programs and/or would interfere with the rights and privileges of other students. In accordance with section 1001.64(8)(a) Florida Statute, the College may consider the past actions of any person applying for admission or enrollment and may deny admission or enrollment because of misconduct if determined to be in the best interest of the College. Therefore, MDC reserves the right to deny admission/enrollment to students who are officially designated as Sexual Offenders/Sexual Predators.
4. MDC reserves the right to deny admission to applicants who have

been incarcerated, convicted of a felony, experienced disciplinary problems at another educational institution, or who may pose a threat to the life and/or safety of its students, faculty, staff, community, or guests, as determined by the College administration. In accordance with section 1001.64(8)(a) Florida Statute, the College may consider the past actions of any person applying for admission or enrollment and may deny admission or enrollment because of misconduct if determined to be in the best interest of the College.

5. For cases that require additional validation, this procedure is applicable to all students applying for admission on or after the revision date of November 8, 2011, regardless of the issue date of the high school diploma.

Admission to Career & Technical Education (CTE) Programs

1. The following persons are eligible for admission to the CTE programs of Miami Dade College: Graduates from accredited high schools, persons holding a high school equivalency diploma (GED), students who have completed a home education program evidenced by a signed affidavit from their parents or legal guardian stating that the student completed a home education program, or persons at least 16 years of age or older who have left high school prior to completion. Some programs may require high school completion or equivalent as a requirement of admission (consult campus admissions office).
2. Students enrolling in a CTE program of 450 or more contact hours are required to be tested for basic skills. All those who complete the program must meet basic skills competencies before the CTE is awarded.
3. A limited number of programs have supplementary admission requirements (consult campus admissions office).
4. Foreign students who require a student visa (M-1) must also provide the supplementary admission documents indicated in 3 above.

How to Apply

Admissions Procedures and Supporting Credentials

- A. The admission application is accessible online at www.mdc.edu/admissions. The application for admission should be sent to the Admissions Office on the campus where the student plans to enroll, or submitted via the Internet. The application must be submitted prior to the beginning of the term of enrollment. The application may also be accessed at MDC's webpage (www.mdc.edu).
- B. International students must submit the application by the published deadlines. See deadlines at: www.mdc.edu/prospective/international. A \$30 non-refundable application fee is charged for processing a student's first application. The International Student admission application fee is \$50. All students seeking Florida Residency must complete a Florida Residency Statement to verify resident status for assessing fees and tuition. The statement is provided as part of the admission application package. See "Florida Residency" information in this catalog for additional details.
- C. All final, complete, and official domestic transcript(s) must be sent directly from the applicant's high school, college or other post-secondary educational institution to the Transcript Processing Services office at MDC.
- D. High school equivalency diploma or certificate holders should provide the original document and score report (which will be returned to a Campus Admissions and Registration Office. In Florida, this certificate is the General Educational Development Diploma (GED). See the GED section for additional information.
- E. Students with foreign high school and/or college/university transcripts must bring all final, official and complete academic documents with the appropriate seals and apostilles to a campus Admissions and Registration Office.
- F. Failure to submit all necessary admissions documents, transcripts or certifications will prevent registration, release of grades, transcripts and enrollment certification.

Transfer Student Information

A transfer student's transcripts become part of the official student permanent record. Transfer credits are accepted only from regionally accredited colleges and universities or nationally accredited institutions that participate in the Florida Statewide Course Numbering System unless a written agreement between MDC and a specific post-secondary institution has been previously approved. Courses from previous college(s) will be evaluated after the student is admitted to MDC. MDC will determine how many credits, if any, will apply toward a degree. Credit may be granted only for courses in which grades of "D" or better have been earned. The grade of "D" shall transfer and count toward the associate and baccalaureate degrees in the same way as "D" grades obtained by MDC students. See the Standards of Academic Progress in the "Academic Regulations" section of this catalog.

A high school transcript indicating date of graduation may be required of applicants who transfer with fewer than 12 acceptable college credits.

Students with foreign transcripts that are not in English must have an official certified translation made of their credits and submit this translation to the Admissions and Registration Office.

Transient Student Information

Transient students are enrolled at their "home institution" and are enrolled at MDC for a term. MDC prerequisite and/or co-requisite course requirements may apply to course selections. Transient students at Miami Dade College may be required to have official transcript(s) sent directly to Miami Dade College from their previous college(s). Transient students are advised to use Florida's official online student advising system at www.floridashines.org.

Non-Degree Applicants

Non-degree applicants are students who wish to take selected college courses without the intent of completing a college credit certificate, associate or baccalaureate degree program. These students must fill out an application for

admission and provide evidence of high school graduation. Many students attend the College to upgrade their job skills, for transfer credit purposes or for their own personal interest and enjoyment. Non-degree students who wish to enroll in a math or English course or who have earned more than 12 credits as a non-degree student are required to complete the Postsecondary Education Readiness Test (PERT), or provide valid Grade 10 FCAT 2.0 (reading only), ACCUPLACER (CPT), ACT or SAT scores. If, at a later time, these students become associate or baccalaureate degree candidates, regular admissions procedures regarding all transcript(s) requirements will apply.

Special Admissions Categories

In each of the following categories, the regular admissions procedures apply:

A. Dual Enrollment - The Dual Enrollment program allows eligible high school, middle school, and home education students in grades 6-12 to simultaneously earn college credit and credit toward a high school diploma. The college credit may be applied toward a postsecondary certificate or degree at a Florida public institution. The Dual Enrollment program provides an opportunity to take challenging courses and accelerate education opportunities. Students who successfully complete dual enrollment courses will save time in obtaining their college degree. They will also save money, as these students are exempt from the payment of registration, tuition and laboratory fees.

To enroll in courses through the dual enrollment program, students must demonstrate readiness for college-level coursework. Eligibility criteria include both a GPA requirement and passing scores on the appropriate sections of the college placement test. The student's school must grant permission for the student to enroll in these courses, thereby agreeing to accept these college courses to meet high school graduation requirements. Students participating in dual enrollment may begin their studies in any term, provided that they complete the regular admission, advisement and registration procedures. Early

admission is a form of dual enrollment through which eligible high school seniors enroll at the college on a full-time basis. The courses these students take are creditable toward a postsecondary certificate or associate degree and meet the requirements for the student's senior year and high school graduation. Early admission students are required to enroll in a minimum of 24 college credits (12 credits per semester) during their senior year.

B. Early Admission – Academically superior high school students may attend Miami Dade College in lieu of their senior year in high school. In addition to the requirements for Dual Enrollment above, the applicant for early admission must prepare and present to a high school counselor a comprehensive educational plan justifying early admission. The College will accept for screening only those applicants who have received approval from their principal to apply for early admission. The applicant also must have advance approval from the high school principal to apply college credits toward high school graduation. Normally, a minimum of 24 college credits meets the requirements for the student's senior year and high school graduation. A special approval form is available in the College's Admission & Registration Office.

Readmission to the College

Submit an application for readmission and a new residency statement if any of the following apply:

1. The student did not enroll during any one of the three preceding terms but was previously enrolled.
2. The student attended other colleges or universities since the last time enrolled at MDC. In this case, official transcripts from those institutions will be required for degree-seeking students.
3. The Florida student residency was completed more than 12 months ago. To be readmitted to the College go to www.mdc.edu/admissions

Developmental Education Courses

With the exception of students who meet the criteria for an exemption from common placement testing and developmental education instruction, the State of Florida requires entry-level testing for first-time-in-college (FTIC) degree seeking students and students who have not met college level competency either through the completion of developmental education requirements in the Florida College System or have not been awarded credit for college level coursework in the area of deficiency. Students will be placed into developmental education courses in the subjects where scores indicate a need for this instruction, along with a Student Life Skills course (SLS). Enrollment in certain other courses may be restricted until all developmental education courses have been completed.

Students may use adult basic education, adult secondary education or private provider instruction as an alternative to traditional developmental education instruction. A student who elects an alternative is prohibited from enrolling in college-level courses until the student scores college ready on all sections of the Common Placement Test. If scores on one or more of the subtests require developmental education placement, students must enroll in at least one developmental education course during their first term.

Students who test into developmental education instruction and subsequently enroll in developmental education instruction must successfully complete the required developmental education studies by the time they have accumulated twelve (12) credits of college credit coursework or they must maintain continuous enrollment in developmental education coursework each semester until the requirements are completed while performing satisfactorily in the degree.

Florida Board of Education rules limit the number of times a student can take a developmental education or credit courses. Enrollment beyond the 100 percent refund deadline is considered an "attempt," and students can attempt a course only three times.

Contact Academic Advisement for additional information.

Admissions to Select College Programs and Programs Leading to Licensure

Admissions to specialized programs, such as those offered by Medical Campus, have specific eligibility requirements due to enrollment limitations imposed by physical facilities, state licensure regulations or other criteria.

Students requesting admissions to such programs will receive specific eligibility requirements from the program. A selection committee determines final approval for placement into these specific programs. The department chair provides notification of admissions into these programs to each individual candidate.

Students who are not selected for a specific program are encouraged to continue their studies in other courses and programs at the College. Advisement offices will assist all such students to determine alternative educational objectives.

A limited number of programs have supplementary admissions requirements. Applicants who have been convicted of a felony and/or subjected to an arrest pertaining to a controlled substance and are applying to a program that leads to licensure may be ineligible for that license. Applicants in this situation should check with the appropriate regulatory/licensing agency to determine whether this would be the case. These students still can be admitted to the program, but need to understand that program completion may not result in licensure or employment. Additionally, there are usually other requirements for licensure, such as physical and psychological criteria, completion of unpaid internships, criminal history verification and other background checks. It is the student's responsibility to understand and meet these requirements.

General Educational Development (GED) Tests and Diploma

An equivalent to a Florida high school diploma may be obtained by successfully completing the General Educational Development (GED) test. A GED holder is eligible for admission to associate degree programs at the College.

To qualify to take the Florida GED test, individuals must be at least 16 years old and reside in the state. A 16- or 17-year-old must meet College criteria to be eligible to prepare for and take the GED test.

Preparation for the GED test is available at all MDC campuses. Individuals should contact campus Continuing Education and Professional Development departments for assistance and further information. The GED test covers writing skills, reading skills, social studies, science and mathematics. A fee is charged to take the test battery, and there is an additional charge, although nominal, to retake subtests.

Teacher Certification Information

Before taking courses to meet Teacher Certification requirements, teachers should confirm from their public school district's certification office or the Florida Department of Education's Office of Teacher Education, Certification and Staff Development, that the courses in which they wish to enroll meet specific certification requirements.

College credit courses offered by Miami Dade College, may be used for extension, reissuing, other vocational certificates, reinstatement of certificates and for recency of credit. Additionally, information about courses required for general and professional preparation certification is available at the School of Education or campus Academic Advisement offices.

Florida Residency for Tuition Purposes

Miami Dade College policy concerning Florida residency requirements complies with the laws of Florida s. 1009.21,

FS., and Rule 6A-10.044, F.A.C., which are reprinted as follows: s. 1009.21, FS., determination of resident status for tuition purposes.

Determination of resident status for tuition purposes: Students shall be classified as residents or nonresidents for the purpose of assessing tuition in post-secondary educational programs offered by charter technical career centers or career centers operated by school districts, in community colleges, and in state universities.

(1) As used in this section, the term:

- (a) "Dependent child" means any person, whether or not living with his or her parent, who is eligible to be claimed by his or her parent as a dependent under the federal income tax code.
- (b) "Initial enrollment" means the first day of class at an institution of higher education.
- (c) "Institution of higher education" means any charter technical career center as defined in s. 1002.34, career center operated by a school district as defined in s. 1001.44, community college as defined in s. 1000.21(3), or state university as defined in s. 1000.21(6).
- (d) "Legal resident" or "resident" means a person who has maintained his or her residence in this state for the preceding year, has purchased a home which is occupied by him or her as his or her residence, or has established a domicile in this state pursuant to s. 222.17.
- (e) "Nonresident for tuition purposes" means a person who does not qualify for the in-state tuition rate.
- (f) "Parent" means the natural or adoptive parent or legal guardian of a dependent child.
- (g) "Resident for tuition purposes" means a person who qualifies as provided in this section for the in-state tuition rate.

(2) (a) To qualify as a resident for tuition purposes:

- 1. A person or, if that person is a dependent child, his or her parent or parents must have established legal residence in this state and must have main-

tained legal residence in this state for at least 12 consecutive months immediately prior to his or her initial enrollment in an institution of higher education.

- 2. Every applicant for admission to an institution of higher education shall be required to make a statement as to his or her length of residence in the state and, further, shall establish that his or her presence or, if the applicant is a dependent child, the presence of his or her parent or parents in the state currently is, and during the requisite 12-month qualifying period was, for the purpose of maintaining a bona fide domicile, rather than for the purpose of maintaining a mere temporary residence or abode incident to enrollment in an institution of higher education.
- (b) However, with respect to a dependent child living with an adult relative other than the child's parent, such child may qualify as a resident for tuition purposes if the adult relative is a legal resident who has maintained legal residence in this state for at least 12 consecutive months immediately prior to the child's initial enrollment in an institution of higher education, provided the child has resided continuously with such relative for the 3 years immediately prior to the child's initial enrollment in an institution of higher education, during which time the adult relative has exercised day-to-day care, supervision, and control of the child.
- (c) The legal residence of a dependent child whose parents are divorced, separated, or otherwise living apart will be deemed to be this state if either parent is a legal resident of this state, regardless of which parent is entitled to claim, and does in fact claim, the minor as a dependent pursuant to federal individual income tax provisions.
- (3) (a) An individual shall not be classified as a resident for tuition pur-

- poses and, thus, shall not be eligible to receive the in-state tuition rate until he or she has provided such evidence related to legal residence and its duration or, if that individual is a dependent child, evidence of his or her parent's legal residence and its duration, as may be required by law and by officials of the institution of higher education from which he or she seeks the in-state tuition rate.
- (b) Except as otherwise provided in this section, evidence of legal residence and its duration shall include clear and convincing documentation that residency in this state was for a minimum of 12 consecutive months prior to a student's initial enrollment in an institution of higher education.
- (c) Each institution of higher education shall affirmatively determine that an applicant who has been granted admission to that institution as a Florida resident meets the residency requirements of this section at the time of initial enrollment. The residency determination must be documented by the submission of written or electronic verification that includes two or more of the documents identified in this paragraph. No single piece of evidence shall be conclusive.
1. The documents must include at least one of the following:
 - (a) A Florida voter's registration card;
 - (b) A Florida driver's license;
 - (c) A State of Florida identification card;
 - (d) A Florida vehicle registration;
 - (e) Proof of a permanent home in Florida which is occupied as a primary residence by the individual or by the individual's parent if the individual is a dependent child;
 - (f) Proof of a homestead exemption in Florida;
 - (g) Transcripts from a Florida high school for multiple years if the Florida high school diploma or high school equivalency diploma was earned within the last 12 months;
 - (h) Proof of permanent full-time employment in Florida for at least 30 hours per week for a 12-month period.
 2. The documents may include one or more of the following:
 - (a) A declaration of domicile in Florida;
 - (b) A Florida professional or occupational license;
 - (c) Florida incorporation;
 - (d) A document evidencing family ties in Florida;
 - (e) Proof of membership in a Florida-based charitable or professional organization;
 - (f) Any other documentation that supports the student's request for resident status, including, but not limited to, utility bills and proof of 12 consecutive months of payments; a lease agreement and proof of 12 consecutive months of payments; or an official state, federal, or court document evidencing legal ties to Florida.
 - (4) With respect to a dependent child, the legal residence of the dependent child's parent or parents is prima facie evidence of the dependent child's legal residence, which evidence may be reinforced or rebutted, relative to the age and general circumstances of the dependent child, by the other evidence of legal residence required of or presented by the dependent child. However, the legal residence of a dependent child's parent or parents who are domiciled outside this state is not prima facie evidence of the dependent child's legal residence if that dependent child has lived in this state for 5 consecutive years prior to enrolling or reregistering at the institution of higher education at which resident status for tuition purposes is sought.
 - (5) In making a domiciliary determination related to the classification of a person as a resident or nonresident for tuition purposes, the domicile of a married person, irrespective of sex, shall be determined, as in the case of an unmarried person, by reference to all relevant evidence of domiciliary intent. For the purposes of this section:
 - (a) A person shall not be precluded from establishing or maintaining legal residence in this state and subsequently qualifying or continuing to qualify as a resident for tuition purposes solely by reason of marriage to a person domiciled outside this state, even when that person's spouse continues to be domiciled outside of this state, provided such person maintains his or her legal residence in this state.
 - (b) A person shall not be deemed to have established or maintained a legal residence in this state and subsequently to have qualified or continued to qualify as a resident for tuition purposes solely by reason of marriage to a person domiciled in this state.
 - (c) In determining the domicile of a married person, irrespective of sex, the fact of the marriage and the place of domicile of such person's spouse shall be deemed relevant evidence to be considered in ascertaining domiciliary intent.
 - (6) (a) Except as otherwise provided in this section, a person who is classified as a nonresident for tuition purposes may become eligible for reclassification as a resident for tuition purposes if that person or, if that person is a dependent child, his or her parent presents clear and convincing documentation that supports permanent legal residency in this state for at least 12 consecutive months rather than temporary residency for the purpose of pursuing an education, such as documentation of full-time permanent employment for the prior 12 months or the purchase of a home in this state and residence therein for the prior 12 months while not enrolled in an institution of higher education.
 - (b) If a person who is a dependent child and his or her parent move to this state while such child is a high school student and the child graduates from precluded high school in this state, the child may become eligible for reclassification as a resident for

tuition purposes when the parent submits evidence that the parent qualifies for permanent residency.

- (c) If a person who is a dependent child and his or her parent move to this state after such child graduates from high school, the child may become eligible for reclassification as a resident for tuition purposes after the parent submits evidence that he or she has established legal residence in the state and has maintained legal residence in the state for at least 12 consecutive months.
- (d) A person who is classified as a nonresident for tuition purposes and who marries a legal resident of the state or marries a person who becomes a legal resident of the state may, upon becoming a legal resident of the state, become eligible for reclassification as a resident for tuition purposes upon submitting evidence of his or her own legal residency in the state, evidence of his or her marriage to a person who is a legal resident of the state, and evidence of the spouse's legal residence in the state for at least 12 consecutive months immediately preceding the application for reclassification.
- (7) A person shall not lose his or her resident status for tuition purposes solely by reason of serving, or, if such person is a dependent child, by reason of his or her parent's or parents' serving, in the Armed Forces outside this state.
- (8) A person who has been properly classified as a resident for tuition purposes but who, while enrolled in an institution of higher education in this state, loses his or her resident tuition status because the person or, if he or she is a dependent child, the person's parent or parents establish domicile or legal residence elsewhere shall continue to enjoy the in-state tuition rate for a statutory grace period, which period shall be measured from the date on which the circumstances arose that culminated in the loss of resident tuition status and shall continue for 12 months. However, if the 12-month grace period ends during a semester or academic term for which such former resident is enrolled, such grace period shall be extended to the end of that semester or academic term.
- (9) Any person who ceases to be enrolled at or who graduates from an institution of higher education while classified as a resident for tuition purposes and who subsequently abandons his or her domicile in this state shall be permitted to re-enroll at an institution of higher education in this state as a resident for tuition purposes without the necessity of meeting the 12-month durational requirement of this section if that person has reestablished his or her domicile in this state within 12 months of such abandonment and continuously maintains the re-established domicile during the period of enrollment. The benefit of this subsection shall not be accorded more than once to any one person.
- (10) The following persons shall be classified as residents for tuition purposes:
- Active duty members of the Armed Services of the United States residing or stationed in this state, their spouses, and dependent children, and active drilling members of the Florida National Guard;
 - Active duty members of the Armed Services of the United States and their spouses and dependents attending a public community college or state university within 50 miles of the military establishment where they are stationed, if such military establishment is within a county contiguous to Florida;
 - United States citizens living on the Isthmus of Panama, who have completed 12 consecutive months of college work at the Florida State University Panama Canal Branch, and their spouses and dependent children;
 - Full-time instructional and administrative personnel employed by state public schools and institutions of higher education and their spouses and dependent children;
- Students from Latin America and the Caribbean who receive scholarships from the federal or state government. Any student classified pursuant to this paragraph shall attend, on a full-time basis, a Florida institution of higher education;
 - Southern Regional Education Board's Academic Common Market graduate students attending Florida's state universities;
 - Full-time employees of state agencies or political subdivisions of the state when the student fees are paid by the state agency or political subdivision for the purpose of job-related law enforcement or corrections training;
 - McKnight Doctoral Fellows and Finalists who are United States citizens;
 - United States citizens living outside the United States who are teaching at a Department of Defense Dependent School or in an American International School and who enroll in a graduate level education program which leads to a Florida teaching certificate;
 - Active duty members of the Canadian military residing or stationed in this state under the North American Air Defense (NORAD) agreement, and their spouses and dependent children, attending a community college or state university within 50 miles of the military establishment where they are stationed;
 - Active duty members of a foreign nation's military who are serving as liaison officers and are residing or stationed in this state, and their spouses and dependent children, attending a community college or state university within 50 miles of the military establishment where the foreign liaison officer is stationed.
- (11) Once a student has been classified as a resident for tuition purposes, an institution of higher education to which the student transfers is not

required to reevaluate the classification unless inconsistent information suggests that an erroneous classification was made or the student's situation has changed. However, the student must have attended the institution making the initial classification within the prior 12 months, and the residency classification must be noted on the student's transcript. The Higher Education Coordinating Council shall consider issues related to residency determinations and make recommendations relating to efficiency and effectiveness of current law.

- (12) Each institution of higher education shall establish a residency appeal committee comprised of at least three members to consider student appeals of residency determinations, in accordance with the institution's official appeal process. The residency appeal committee must render to the student the final residency determination in writing. The institution must advise the student of the reasons for the determination.
- (13) The State Board of Education and the Board of Governors shall adopt rules to implement this section.

6A - 10.044 Residency for Tuition Purposes

The purpose of this rule is to establish consistent policies for the classification of students as residents for tuition purposes in accordance with criteria set forth in Section 1009.21, F.S.

- (1) For Initial Determination of Residency: Each student shall submit Form FRD-1, Florida Residency Declaration for Tuition Purposes to the institution making a residency determination for tuition purposes, electronically or in any other format required or authorized by the institution, and the documentation required by the institution to establish Florida residency for tuition purposes. Verification of whether the student is a dependent child as defined in Section 1009.21(1)(a), F.S., shall be satisfied if the parent declares on the Florida Residency Declaration that the student is eligible to be claimed as a dependent by the parent under the federal income tax code. Form FRD-1 is incorporated by reference and made a part of this rule to become effective December 2015. A copy of Form FRD-1 may be obtained by contacting the Division of Florida Colleges, 325 West Gaines Street, Tallahassee, Florida 32399.
- (a) A dependent student who attended a Florida high school for a minimum of two (2) academic years immediately preceding his or her initial enrollment in an institution of higher education and graduated from a Florida high school or earned a State of Florida High School Diploma as authorized under Rule 6A-6.0201, F.A.C., within the last twelve (12) months may use their high school transcript or the official transcript for the State of Florida High School Diplomas evidence of Florida residency. At least one (1) additional document identified in Section 1009.21(3)(c)2., F.S., must be presented evidencing parental legal residence.
- (b) If a declaration of domicile, pursuant to Section 222.17, F.S., is being used as one of the documents to establish residency for tuition purposes, the date that an applicant shall be deemed as establishing residency for tuition purposes shall be twelve (12) months hence from the date that the Clerk of Circuit Court notes the declaration was sworn and subscribed to them. Nothing in this subsection shall prevent the use of additional documentation as evidence that legal residency was established by other means pursuant to Section 1009.21(1)(c), F.S., as of a date earlier than that established by the Declaration of Domicile.
- (2) For Residency Reclassification Determination. A student who is classified as a nonresident for tuition purposes may become eligible for reclassification as a resident for tuition purposes by presenting a minimum of three (3) documents identified in Section 1009.21(3)(c)2., F.S., that convincingly demonstrate the establishment of permanent legal residence in Florida other than for the sole purpose of pursuing a postsecondary education. Documentation must demonstrate that the student or, if the student is a dependent, his or her parent, has maintained legal residence in Florida for at least twelve (12) consecutive months immediately prior to the first day of classes for the term for which residency reclassification is sought, except as otherwise provided in Section 1009.21, F.S.
- (3) The burden of providing clear and convincing documentation that justifies the institution's classification of a student as a resident for tuition purposes rests with the student or, if the student is a dependent, his or her parent. For documentation to be "clear and convincing," it must be credible, trustworthy, and sufficient to persuade the institution that the student or, if that student is a dependent, his or her parent has established legal residency in Florida that is not solely for the purpose of pursuing an education and has relinquished residency in any other state for at least twelve (12) consecutive months prior to classification. Each institution of higher education may establish submission deadlines for all documentation that will be used to determine residency for tuition purposes.
- (4) A non-United States citizen may be eligible to establish residency for tuition purposes if evidence is presented verifying that he or she has legal status in the United States, has met the residency requirements of Section 1009.21, F.S., and the person is one of the following:
- (a) A foreign national in a nonimmigrant visa classification that grants the person the legal ability to establish and maintain a bona fide domicile in the United States.
1. The following visa categories grant the person the legal ability to establish and maintain a bona fide domicile in the United States: A, E, G, H-1B, H-1C, I, K, L, N, NATO 1-7, O-1, R, S, T, U, and V.
 2. The following visa categories

do not grant the person the legal ability to establish and maintain a bona fide domicile in the United States: B, C, D, F, H2, H3, M, P, Q, and TN. J visa holders are not eligible to establish residency for tuition purposes except as provided in Section 1009.21(10), F.S.

- (b) A permanent resident alien, parolee, asylee, Cuban-Haitian entrant, or other qualified alien.
- (c) Pursuant to Section 1009.21(2)(d), F.S., a dependent student who is a U.S citizen may not be denied classification as a resident for tuition purposes based solely upon the immigration status of the parent.
- (5) Each institution's official residency appeal process established pursuant to Section 1009.21(12), F.S., shall be in writing and prominently displayed on the institution's website.

International Student Admissions

Admission - Miami Dade College is authorized under United States Federal Law, Immigration and Nationality Act, §(101)(a)(15) (F or M) to enroll non-immigrant alien students. In addition to following the regular admission procedures, international students are required to provide English language placement test scores, such as TOEFL if a non-native speaker, proof of mandatory health insurance coverage, and official bank letter of financial resources to support education costs.

Registration and placement into available courses and programs is dependent on English language proficiency, advisement and counseling, assessment/ placement testing and course or program requirements. Academic transcript(s) of secondary school, college, university, technical and other post-secondary schools attended must be certified as official. Transcript(s) in languages other than English must include official certified English translations, authentic verifying statements and signatures.

Deadlines - International applicants should apply at least three months prior to enrollment at the College.

International mail, transcript verifications, international money transfers, consular appointments, travel and housing arrangements and advisement/testing requirements all take a great deal of time and may cause delays.

Applications for admission, including all admissions credentials and TOEFL test scores (if available), must be received at least 90 days prior to the start of the term in which the applicant plans to enroll. The Test of English as a Foreign Language (TOEFL) is usually administered several times each year at centers in most countries of the world. Information and application forms for TOEFL may be obtained from international centers, by writing to TOEFL, Box 899, Princeton, NJ 08541, USA, or by visiting their website at www.toefl.org.

Deadlines for International Student Admissions

Spring Term	Oct. 2
Summer Term	Feb. 15
Fall Term	May 26

Readmission - Readmission to the College for the international student requires submitting a new application for admission, new official transcripts of post-secondary education attempted since last attendance at Miami Dade College, official bank letter of financial resources to support education costs and a letter explaining the circumstances requiring readmission. Transcript(s) in languages other than English shall include official certified English translations, authentic verifying statements and signatures provided by members of the National Association of Credential Evaluation Services (NACES) <http://www.naces.org/>.

English Language Requirements

- Miami Dade College courses are taught in the English language. The College will provide English-language training for students who have insufficient English language skills.

English-language test scores determine placement into college courses. Students with TOEFL scores (or an equivalent score on other standardized tests) of 550 (213 on the computerized version or 79-80 on the Internet-based version) or higher are eligible to take the Basic Skills Assessment Test to determine placement in courses leading to an associate degree. Alternative placement tests will be administered to students

without TOEFL scores or with scores below 550 (213 on the computerized version or 79-80 on the Internet-based version). Students requiring English-language training may need to attend additional semesters at the College in order to complete all associate degree requirements. Financial Requirements - All international students must have sufficient funds to pay full college matriculation and nonresident fees, textbooks, living expenses, transportation expenses, health insurance coverage and other incidental expenses while attending college in the United States.

Financial requirements are included with the application for admissions form. Documentary evidence of means of financial support must be provided to the College to be issued a Certificate of Eligibility (SEVIS I-20). This evidence is also required by the American Embassy or Consulate when applying for a student visa to enter the United States. Students must have these funds available when they register for classes each term. College financial aid is not available to students on visa. See the "Fees" section in this catalog for details concerning matriculation, non-resident and other fee requirements.

Employment - Visa students in the United States are not allowed to be employed outside the College, unless permission has been granted by the United States Citizenship and Immigration Services (USCIS). On-campus employment may be authorized by the International Student Services advisors.

Health and Accident Insurance Certificate - Prior to registration, international students must purchase the mandatory health insurance policy available in the International Student Services Office. This insurance coverage must continue for the entire period of enrollment at the College.

Duration of Status - International students on a visa are admitted to the United States for the entire time estimated for them to complete their approved program of study as indicated on the SEVIS I-20. Students must fulfill the following conditions to maintain Duration of Status: pursue a full course of study at the educational institution they are authorized to attend, make normal progress, keep a current passport that is valid

for at least six months, maintain a valid SEVIS I-20 and not accept off-campus employment without USCIS approval.

Arrival in Miami - International students should arrive in Miami approximately 30 days before the beginning of the first term of enrollment based upon the program start date on the I-20. Students need the time to obtain housing, provide a local address to the College, participate in new student orientation, take English-language and placement assessment tests, obtain advisement and counseling and register for courses.

Housing in the Community - Miami Dade College does not provide or supervise student housing. Each college campus has an International Student Advisor to assist students to locate housing. International students must bring sufficient funds to pay three months' rent in advance (first and last month's rent, plus a security deposit equal to one month's rent). The estimated expense information provided with the application for admission form provides important details.

Transportation - International students must provide their own transportation or use public transportation (buses or rail) to travel between home and the campus(es).

School Transfer - Completion of a degree program at the designated educational institution is recommended. International students who wish to transfer to another school must officially do so by requesting a release of their SEVIS record to the school they wish to transfer to and by providing an admission letter. That institution will notify Immigration of the student's school transfer. A student who transfers to a different school without completing this process is considered to be out of status.

Passport Validity - International students on a visa must have and maintain a current passport valid for a period of not less than six (6) months into the future. It is the student's responsibility to meet this requirement.

Full-Time Enrollment - International students are required by USCIS regulations to be enrolled fulltime. Students should make satisfactory progress in their approved program each term, otherwise the continuation of study on an International Student Visa may be jeopardized and the Certificate of Eligibility (SEVIS I-20) rescinded. See Standards

of Academic Progress in "Academic Regulations" section.

United States Department of Homeland Security Laws and Regulations - It is the student's responsibility to comply with all non-immigrant alien requirements as stated under the United States statutes I.N.A. 101(a) (15)(F); I.N.A. 214(m); IIRIRA 641. The College is required to report to the Department of Homeland Security international students who:

1. Do not register at the College by the first day of the semester.
2. Do not carry a full course of studies.
3. Do not attend classes to the extent normally required.
4. Become employed without authorization.
5. Terminate their attendance at the College.

Visa Student Advisement - Advisors are available at each campus to advise international students concerning academic programs and course objectives. Students on an International Visa should contact the International Student Services advisor each term for a review of the student's progress and for the updates and compliance of immigration regulations.

Admission to Continuing Education (Non-College Credit) Programs and Courses

Miami Dade College, through its Continuing Education Program, offers students opportunities for enrollment in Continuing Workforce Education Training and recreation and leisure courses.

Admission requirements are established by the nature of the particular program or course. A student who plans to register only for continuing education non-college credit courses need not apply for regular College admission.

A. Continuing Workforce Education Courses - These courses are for those students who have had prior employment in jobs related to the enrolled course or are presently employed in a career related to the Continuing Workforce Education course. Students enroll in the courses to upgrade their current skills, for re-employment pur-

poses or to enhance their current employability. For purposes of state certification or registration and updating to meet various professional organization requirements, the College student registration system allows for the award of Continuing Education Units (CEUs) on the student's transcript. These units may be awarded when a Continuing Workforce Education course is completed and the course has been designated for the award of CEUs. Ten contact hours of classroom instruction equal one CEU.

B. Recreation and Leisure Courses - These non-credit courses are self supporting with the total program costs being paid by the students who are enrolled. There are no state or College funds provided to support these activities. The College offers these courses on demand from students and community, as space is available. The range of activities and courses are unlimited and are determined by the students enrolled. For further information please consult the Web site at www.mdc.edu/ce

Fees and Refunds

Fees are contingent upon approval of the District Board of Trustees and are subject to change. Special fees may also apply. Important note: Tuition and fee rates are determined annually by state and Board of Trustee processes. The best way to determine current tuition and fee rates is to check on the Miami Dade College Web site, www.mdc.edu, or to check at the Admissions & Registration Office at any MDC campus. The fees listed below are an example - for planning purposes only - of rates for the 2016-17 year only.

A. Registration Fees 2016-17 - College Credit Courses

1. Florida Residents* Matriculation
Total.....\$118.22 per credit
2. Non-Florida Residents* Matriculation
Total.....\$402.51 per credit

B. Registration Fees 2016-17 - Baccalaureate Courses

1. Florida Residents*
Total.....\$128.89 per credit
2. Non-Florida Residents*
Total.....\$535.97 per credit

C. Registration Fees 2016-17 - Career and Technical Education Courses

1. Florida Residents* Matriculation
Total.....\$91.08
per vocational credit

(Special fees may also apply)

2. Non-Florida Residents*

Total.....\$355.31
per vocational credit

*See Florida Residency for Tuition Purposes section for definitions. Note: Fees are subject to change.

D. Special Fees and Charges

1. Admission Application Processing Fee - All new college credit students are assessed a \$30.00 non-refundable admissions application processing fee. This fee must be paid when you submit the application.

*Please note that some programs may require a different application fee. For further information contact the program director.

2. Bachelor's Degree Admission Application Processing Fee - All students admitted to an in-program Bachelor's degree are assessed a \$25.00 nonrefundable admissions application processing fee.
3. International Student Admission Application Processing Fee - All new international students are assessed a \$50.00 nonrefundable admissions application processing fee.
4. Virtual College Fee - Virtual College classes have a fee of \$15.00 per credit (i.e., \$45.00 for a 3-credit course).
5. Late Registration Fee - College credit students registering on or after the first day of classes will be assessed a \$50.00 nonrefundable late registration fee. Please see the Academic Calendar for dates.
6. Full Cost of Instruction - out-of-state fee charged for students repeating courses more than allowed by state law (This is on a third or subsequent attempt).
7. Examination Fee - A \$30.00 per credit nonrefundable fee is charged for institutional credit by exam.
8. Special Course Fees - Variable fees are charged in certain courses to cover the use of special supplies, materials, equipment or facilities. Such fees are listed on the student schedule.
9. Special fees in music courses that offer private lessons range from \$60.00 to \$300.00.

E. Registration Fees – Continuing Education & Professional Development and Non-Credit Courses

1. Continuing Workforce Education (CWE) - Fees are variable and calculated to cover the cost of the course.
2. Recreation and Leisure Courses - Fees are charged to cover all expenses for providing the course.
3. Adult Education Courses, which are considered Adult Basic Ed, Adult High School, GED and VPI course fees:
 - \$31.50 per term for In-State Residency
 - \$126 per term for Out-of-State Residency

Fee Policy for Repeated Courses

Sections 1009.28 and 1009.285, Florida Statute require the assessment of fees for community college students who repeat a course due to withdrawal or failure. The fee for a third attempt of the same course is equal to 100 percent of the cost of instruction. Since state law prescribes student fees to equal 25 percent of the cost of instruction, the fee for a repeated course is approximately four times that of an initial attempt.

Sections 1009.28 and 1009.285, Florida Statute and College policy allow one-time exceptions to the increased fees for courses. Students assessed such a fee should consult an advisor for more information.

Excess Hours Advisory

Section 1009.286, Florida Statutes, establishes an "excess hour" surcharge for students seeking baccalaureate degrees at state universities. It is critical that students, including those entering Florida College System institutions, are aware of the potential for additional course fees. "Excess hours" are defined as hours that go beyond 115 percent of the hours required for a baccalaureate degree program. For example, if the length of the program is 120 credit hours, students may be subject to an excess hour surcharge for any credits attempted beyond 138 credit hours (115 x 120 percent). All students whose

educational plan may include earning a bachelor's degree should make every effort to enroll in and successfully complete those courses that are required for their intended major on their first attempt. Florida College System students intending to transfer to state universities should identify a major or "transfer program" early and be advised of admission requirements for that program, including the approved common prerequisites. Course withdrawals and/or repeats, as well as enrollment in courses nonessential to the intended major, may contribute to a potential excess hours surcharge. Per Section 1009.286(5), Florida Statute, it is recommended that students who intend to earn credit hours at the institution in excess of the credit hours required for baccalaureate degrees in which students are enrolled meet with their academic advisor.

Refund Policy

Refunds of matriculation and tuition fees are made only if students withdraw from (drop) the course via the Web (and the drop is confirmed) or at any campus Registrar's Office using a withdrawal card by the 100 percent refund deadline printed on the fee invoice.

The one-time college credit admissions application fee and the late registration fee are not refundable. Refunds are processed as soon as possible after the refund deadline and should be received within 30 days after classes begin. Refund for matriculation, tuition or any special fees paid by Visa or MasterCard will be credited back to the credit card used for payment. Refund for matriculation, tuition or any special fees paid by cash or check will be processed via the MDC Bank Mobile Card. All students who maintain bank accounts can also pay course fees by means of e-check (electronic check). The e-check payment method is rapid and secure and can be accessed via the MDC Web page, www.mdc.edu. Miami Dade will accept a maximum of \$21,000 of foreign fund checks, for any one student, for any year, July 1 to June 30. Any bank fees charged for processing foreign fund checks will be paid by the student. A student who remits a United States bank check where the funds originated in a country other than the United States will be required

to show his or her valid passport before receiving any excess funds.

1. Refund Deadlines – College Credit and Vocational Courses

Refund deadlines for each term are published in the Academic Calendar. The dates vary, so students should be sure to check the deadlines. The Academic Calendar is found on the beginning pages of this catalog, and copies are available from the Registrar's Office or on our website at www.mdc.edu. Weekday classes refer to classes meeting Monday through Friday. The number of days a student has to receive a 100 percent refund when withdrawing from courses is based on the length of the term, not individual course days.

This is an estimated refund schedule for weekday classes, for a 100 percent refund of applicable matriculation, tuition and special class (lab) fees:

For a term student with this number of weeks	Student has this many class days to make an official withdrawal to receive a 100 percent refund.
1-3	1
4-5	2
6-10	3
11-14	4
15-16	5
17-20	6
21-23	7
24-26	8
27-29	9
30-32	10

A procedure exists for handling specified exceptions to the refund policy. See the "Petitions Procedure" in the Students' Rights and Responsibilities Handbook.

2. Refund Deadlines – Continuing Education & Professional Development Courses

For one-day courses and workshops, the student must have paid in full and must make an official withdrawal at least one day prior to the day of class. For courses meeting for two or more days, the student must have paid in full

and must make an official withdrawal at least one day prior to the second class meeting.

A procedure exists for handling specified exceptions to the refund policy. Students should see the Continuing Education chairperson on their campus.

Payment Policy

1. All fees are due and payable in full at time of registration. Fees and charges are subject to change without notice. Cash is not to be sent by mail.
2. Payment of Fees by Check – Checks may be remitted to Miami Dade College for payment of fees owed. Check payments are also accepted via the MDC Web page. All checks accepted in payment for fees must be drawn on a United States bank and must be payable to the College. If a student submits a check exceeding the amount owed to the College, he or she will not get cash back. The College will issue the student a Bank Mobile Card. Upon receipt the student will have to activate the card and choose their refund method preference via the Bank Mobile Web page (<https://www.refundselection.com/refundselection/#/welcome/continue>). If the overage is less than \$250, then the College will issue the student a check, but the student will have to wait between nine and 20 business days. If the overage is more than \$250, the check will not be accepted and the student will have to submit a new check. Miami Dade College will accept a maximum of \$21,000 of foreign fund checks, for any one student, for any year, July 1 to June 30. Any bank fees charged for processing foreign fund checks will be paid by the student. A student who remits a United States bank check where the funds originated in a country other than the United States will be required to show his or her valid passport before receiving any excess funds.

3. Payment by Credit Card – Miami Dade College will accept MasterCard or Visa for payment of course fees and for purchases in the campus bookstore (\$15.00 or more). Charge card payments are also accepted by

mail or telephone, and via the MDC Web page, www.mdc.edu. Refunds for fees paid by credit/ debit cards will be refunded to the credit/debit card used for fee payment.

4. Payment by an Employer, Company or Other Agency – Prospective students whose registration fees will be paid in part or in full by an employer or other company or agency outside of Miami Dade College should have these arrangements approved by Student Financial Services at least two weeks prior to the expected day of registration.
5. Payment Via Wire Transfer by International Students – Prospective and current international students whose registration fees will be paid in part or in full by a wire transfer originating outside of the United States will complete a Wire Transfer Form, which can be obtained at the campus International Students Office or the campus Bursar's Office. Once the student has notified the campus Bursar's Office about the wire transfer, and the wire transfer is associated with the student, the campus Bursar's Office will apply those funds to any outstanding fees/obligations owed by the student.

For further information, contact Student Financial Services.

Florida Pre-Paid Tuition Program

The Florida Pre-Paid Tuition Program covers only defined matriculation, scholarship and capital improvement fees. Students are required to pay any special fees and other local service fees, which include student service fees and technology fees.

Financial Aid Information

Student Financial Aid

Financial aid is any grant, scholarship, loan or employment offered to assist a student to meet college expenses. Funding is usually provided by federal and state agencies, foundations, corporations, private donors and/or the College itself. Most financial aid is based on financial "need" as determined by the federal government's system of needs analysis.

The amounts and types of financial aid that a student can receive are determined by federal, state and institutional guidelines. Financial aid is usually offered in "packages," which may consist of a combination of grants, loans, employment and scholarships. Grants and scholarships are regarded as a "gift" and need not be repaid. Loans are usually offered at low interest rates and can be repaid over an extended time period. When aid is offered in the form of employment, the student is paid an hourly rate for work performed (usually minimum wage).

Students who wish to be considered for financial assistance offered by or through the College, including short-term tuition loans, must complete and submit the FAFSA (Free Application for Federal Student Aid, see "How to Apply"). The availability of certain types of financial aid is dependent upon the student's immigration status. Financial aid is available for approved and/or certified credit and vocational certificate programs of study.

Philosophy of Financial Aid

The objective of the student financial aid program at Miami Dade College is to provide financial assistance to students who, for lack of funds, would be unable to attend the College. The College stands ready to help students who are willing to help themselves and whose families will contribute as their income and assets permit. Well-trained financial aid officers are available to counsel and assist the student and parents seeking additional or alternative sources of aid.

Parents and prospective students are strongly encouraged to contact the Financial Aid Office at any one of our campuses to obtain additional information regarding financial aid opportunities.

What is Financial Need?

Financial need is defined as the difference between the cost of education and the amount the student (and parents) can be expected to contribute to offset educational expenses. Financial need is based on federal regulations and information provided by the student and/or student's family on the Free Application for Federal Student Aid (FAFSA, see below).

How to Apply

To be considered for most types of financial assistance, a student must complete the Free Application for Federal Student Aid (FAFSA). The FAFSA is available online at www.fafsa.ed.gov. The application process begins Oct. 1 for the academic year that begins in August. The results of the federal analysis are transmitted electronically to the College and are also sent to the student in the form of a Student Aid Report (SAR) via email or regular mail.

Students should carefully read all notifications and communications from the U.S. Department of Education, Federal Student Aid offices and in a timely manner, provide information to the College or on the FAFSA, if the information originally submitted has to be corrected.

Miami Dade College reserves the right to request supplemental information from parent(s), guardian(s), spouse and/or student as required by the financial aid staff to assess the need of the student. Students who are eligible to receive outside educational assistance such as Veterans Administration benefits and vocational rehabilitation assistance are expected to apply for this assistance through the appropriate agencies..

Verification

The Department of Education selects applicants for verification randomly, to determine the accuracy of the information provided on the FAFSA. If selected for verification, a student will be asked to provide additional information, such as but not limited to federal, tax return transcripts. Student files will not be processed until all required documentation is received, verification is complete and all corrections have been made.

Reapplying

Financial aid is not automatically renewed each year. To be considered for financial assistance from one year to the next, all students must reapply. Since the amount and type of aid are based upon the family's financial situation each year, it is quite possible that financial aid awards may change from one year to the next.

Basis on Which Financial Aid is Granted

The amount of financial assistance a student receives is generally determined by the need of the applicant, the availability of funds from federal, state, institutional and private sources, as well as the order in which the applications were completed (first-come, first-served basis).

Students receiving federal financial aid are required to achieve and maintain an acceptable level of academic progress to receive financial aid. Specific eligible categories are posted on the Financial Aid Web page, and information is available in the Financial Aid Office.

Who Qualifies for Financial Aid

To be considered for most need-based assistance, you must meet the following basic eligibility requirements:

- Demonstrate financial need
- Be a U.S. citizen or eligible non-citizen
- Be registered with selective service, if required

- Not be in default on a previous student loan or owe a repayment on previous federal financial aid received at any institution
- Be enrolled at least half-time in an eligible program of study (some aid is available only to full-time students)
- Maintain satisfactory academic progress.
- Additional requirements may apply depending on the financial aid awarded to you.

Refunds and Repayments (Return to Title IV)

Federal regulations mandate that financial aid recipients who drop all courses or officially withdraw from the College before completing 60 percent of their enrollment period for the semester may be liable to repay a portion of the federal aid disbursed. The amount of the return is calculated using a federal formula that depends on the date the student ceased attendance. A student who owes a repayment will not be eligible for additional financial aid until the repayment is made in full.

Miami Dade College Student Assistance Programs

Scholarships and Grants

Scholarships and grants are available annually for students who require additional financial assistance beyond that received from federal and state sources. College funds for scholarships and grants are provided by businesses, clubs and organizations, agencies and from individual friends of the College through the Miami Dade College Foundation Inc. The primary criterion on which grant and scholarship recipients are selected is financial need. However, academic achievement is strongly considered during scholarship recipient selection. A limited number of grants are made available annually for service to the College and to students who may not be eligible for other types of financial assistance. Students who complete the FAFSA will be considered for a College grant. Students must complete an MDC Scholarship

Application online at <http://www.mdc.edu/financialaid/scholarships/default.aspx> to be considered for a scholarship. Scholarship candidates may be required to submit additional documentation and/or information.

Tuition Payment Plan

A Tuition Payment Plan may be offered to students who are unable to pay the full amount of their schedule. Students should review their fee invoice for the term to determine the payment due date and to apply for the Tuition Payment Plan.

Tax Help for Educational Expenses

The Taxpayers Relief Act of 1997 offers several tax credits and deductions for educational expenses. For more information regarding these programs, go to the IRS webpage at: www.irs.gov.

Veterans Administration Assistance

The Veterans Benefit Program is designed exclusively for providing educational assistance to veterans of the United States armed forces and eligible dependents. Miami Dade College is an approved institution for the education and training of veterans and eligible dependents under all public laws now in effect. The College assists veterans and eligible dependents wishing to receive V.A. educational benefits. Personal and academic counseling, registration fee deferments, tutorial assistance and V.A. Work-Study programs are available. Veterans are encouraged to contact any campus Registrar's Office to obtain further information.

Other Sources of Financial Assistance

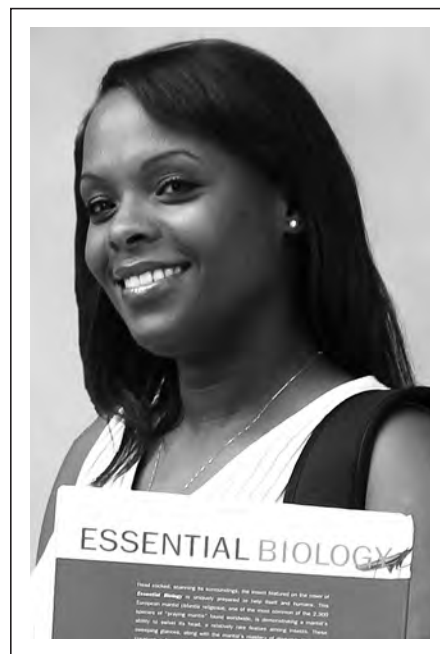
Benefits for the Disabled - The state of Florida provides funding for the purchase of special equipment and services for all persons with disabilities enrolled in public postsecondary institutions.

Accessing the Financial Aid Office

- Counseling - Financial Aid counselors are available at all MDC campuses, on a walk-in basis, to assist students.
- Online - You can access the Financial Aid Office webpage at www.mdc.edu/financialaid to obtain more detailed information about financial aid programs, procedures and to check the status of your application and financial aid award.
- Email Communications - Regardless of the campus you attend, you can communicate with the Financial Aid Office via email at: finaid@mdc.edu

Student Complaint Procedures

Prospective or current students may voice their concerns about college rules, regulations, procedures or experience. Students must first voice concerns to the department staff and supervisor. Students who are unable to resolve any concerns on their own, may contact the Federal Student Aid Ombudsman via <https://studentaid.ed.gov/sa/repay-loans/disputes/prepare/contact-ombudsman>.



Call us Essential ... Call us the College

Student Services

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MDC

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Advisement & Career Services

Advisement and Career Services

The mission of the Academic Advisement and Career Services Department at Miami Dade College is to provide students with a quality, learning centered experience that enables them to establish and fulfill their educational and career goals. By facilitating an effective decision-making process regarding educational, transfer and career goals, advisors promote appropriate course selection and assist students with referrals to internal and external resources and support services.

Advisement and Career Services supports first-time-in-college and non-traditional student populations by offering office hours until 7:00pm Monday to Thursday and until 4:30 on Fridays at all of our campuses which facilitates access to the full scope of services provided by advisors even for those students attending classes during non-traditional times. Access to advisors is also available via phone and email.

All first-time-in-college, direct-entry students from high school will be assigned an advisor at their mandatory orientation session (Shark Start) after admission to the College. At that time, students and their assigned advisors will begin to chart an appropriate choice of courses based on the student's academic pathway, placement scores, high school transcripts, non-cognitive factors, and transfer institution of choice. In addition, advisors provide students assistance with career exploration, skills assessments, and guidance about how to best match student's skills and abilities with the right career path. Once a career path is chosen, advisors will provide important information regarding required courses, program information, graduation status and much more.

All students are encouraged to see an advisor after admission to the College, after assessment testing has been completed (for those who require testing) and before first term registration. During these advisement sessions, the student and the advisor can chart an appropriate choice of courses based on the

student's chosen pathway. Returning students who have completed 25% of their program requirements should seek advisement from faculty mentors in their department. Students are especially encouraged to consult with an advisor or their faculty mentor in the term preceding the term of expected graduation. Conferring of graduation eligibility at this time may be crucial to a student's success in meeting their career goals.

During enrollment at Miami Dade College, students are encouraged, and sometimes required, to see an advisor when they encounter academic problems or contemplate a change in educational goals. In addition to helping students chart their educational and professional careers, advisors work with students to resolve problems affecting academic performance. Students may be referred for testing or to community agencies when appropriate, as a means to aid decision-making.

The Advisement and Career Services department also assists students with career planning, resume building and interviewing skills, and other employment needs. Career-related events, including seminars, career exploration workshops, and job and college fairs, are scheduled throughout the academic year. Students are also provided with guidance and information about transfer options and transfer assistance in preparation for the completion of their degree at the College. Transfer resources, including college catalogs, scholarship information and information on the College's Articulation Agreements with local, in-state and out-of-state institutions are available through the Department and on the MDC website. The department offers a variety of online tools that assist students with job placement, through a feedback system on resumes, cover letters, and interviewing skills assessments.

Degree Audit

The Degree Audit is a tool used for advising purposes only. The catalog and/or the MDC website should be consulted for program/degree requirements.

Basic Skills Assessment Program

In an effort to provide more effective educational services for students, the College has established a Basic Skills Assessment Program. Through this program, the College can identify the student's academic strengths and weaknesses in reading, writing and mathematics.

Results from the assessment are used to advise students on how best to take advantage of their strengths. Regarding weaknesses, assessment results are used to guide a student into courses designed toward improvement in the respective discipline.

MDC administers the Florida Postsecondary Education Readiness Test (PERT). The PERT is not timed, and it consists of three sections: reading, writing and elementary mathematics.

With the exception of students who meet the criteria for an exemption from common placement testing and developmental education instruction, the State of Florida requires entry-level testing for first-time-in-college (FTIC) degree seeking students and students who have not met college level competency either through the completion of developmental education requirements in the Florida College System or have not been awarded credit for college level coursework in the area of deficiency. Students whose native language is not English may be required to take another test to measure their English proficiency before entry-level testing is permitted. The State also requires institutions offering Postsecondary Career and Technical Education and Adult Education programs to test students pursuing these programs. Miami Dade College (MDC) may accept official test scores from approved academic institutions and approved regional workforce boards.

If a student presents valid Grade 10 FCAT 2.0 (Reading only), ACCUPLACER (CPT), SAT or ACT scores that meet or exceed the state minimum score requirements, he or she does not have to take the PERT in the related subject area. All scores presented must

have been obtained within the past two years. To find out what minimum scores a student needs to be exempt from taking the PERT, or for other reasons why a student may not be required to take the PERT, students are asked to call the campus Testing Department. This information may also be acquired by visiting the Testing Web site, accessed from MDC's Homepage (www.mdc.edu) by clicking on Resources," then "Testing Information." If a student does have to take the PERT, he or she should utilize the resources available on the college-wide Test Preparation website, as well as workshops offered through Community Education and other departments, before he or she takes the PERT. A student who entered 9th grade in a Florida public school in the 2003-2004 school year, or any year thereafter, and earned a Florida standard high school diploma or a student who is serving as an active duty member of any branch of the United States Armed Services shall

not be required to take the common placement test and shall not be required to enroll in developmental education instruction in a Florida College System institution. However, a student who is not required to take the common placement test and is not required to enroll in developmental education under this paragraph may opt to be assessed and to enroll in developmental education instruction, and the college shall provide such assessment and instruction upon the student's request. For additional information please contact an academic advisor.

Students without sufficient English-language proficiency to take the PERT are required to take an MDC approved English proficiency placement test (COMPASS/ESL) and be placed in designated English for Academic Purposes (EAP) courses, EAP students who have satisfied the 0200 level or above, either by EAP course completion or COMPASS/ESL placement, may take the mathemat-

ics subtest of the MDC Placement Test. Continuing EAP students in the 0400 level or above in all four skill areas (Speech, Reading, Writing, Grammar, or their equivalents) shall take the reading and writing subtests of the MDC Placement Test after the last withdrawal date of the term for advisement into advanced EAP levels, or ENC 1101 in the following term. New incoming students whose COMPASS/ESL sub-scores in Reading, Grammar, and e-Write place them into the EAP 1500 or 1600 levels shall take the MDC Placement Test prior to registering for EAP courses.

If a student's scores on one or more of the subtests of the PERT fall below minimum passing scores established by the Florida Board of Education, he or she must enroll for at least one developmental education course during their first term. Further evaluation may be conducted in classes, and developmental education course placement changed, based on the results of the additional



assessments. If a student meets a minimum score but is identified as likely to benefit from a developmental education course, he or she may enroll in such a course.

The state requires agencies offering Post-secondary Career and Technical Education programs (CTE) to assess the basic skills level of students entering programs of 450 or more contact hours. MDC offers the Tests of Adult Basic Education (TABE) for these career certificate seeking students. The minimum passing scores vary among the career certificate programs, so a student must check with his or her advisor for these scores. A student must take the TABE within the first six weeks of admission into the program. Academic support labs are available to prepare students to take the TABE. If a student is enrolling in an Adult General Educational program, he or she also must take the TABE.

Adult Education students without English proficiency are given the College-approved alternate for placement into appropriate Adult English for Speakers of Other Languages (ESOL) and English Literacy for Career and Technical Education (ELCATE) program courses. Upon completion of the English instructional curriculum adult education students transitioning to career certificate programs will take the required TABE to determine program eligibility.

If a student has any questions regarding the TABE, including exemption from taking the test, he or she should contact the campus Testing Department. This information may also be acquired by visiting the testing information Web site, accessed from MDC's homepage (www.mdc.edu) by clicking on "Resources" then, "Testing Information."

Students seeking entrance into MDC's School of Justice are exempt from the TABE testing requirement, but they are required to pass the Florida Basic Abilities Test (F-BAT). If a student has any questions regarding the F-BAT, he or she should contact the School of Justice. Students may also visit the F-BAT Web site, accessed from MDC's homepage (www.mdc.edu) by clicking on "Campuses," then "North Campus," and then, "F-BAT."

Bookstore

Bookstores are located on all of the campuses. Hours vary during the term and at each location, with longer hours in the early weeks of the semesters. Locations and phone numbers are:

Carrie P. Meek Entrepreneurial Education Center: 305-237-1991, Room 1215. When closed, visit the North Campus bookstore.

Hialeah Campus: 305-237-8806, Room 1113, located near Public Safety;

Homestead Campus: 305-237-5042/5043, located in Building F, Room F102, next to the Cafeteria;

InterAmerican Campus: 305-237-6019/6696, located in Building 1000, Room 1114, across from the Library;

Kendall Campus: 305-237-2361/2063, located in Building 8, Room 8105, across from the Cafeteria and pool;

Medical Campus: 305-237-4178, Room 1180, located between Buildings 1 and 2;

North Campus: 305-237-1247, Room 4101, Building 4000, located just inside the breezeway and the entrance to the Cafeteria;

West Campus: 305-237-8953, located on the first floor;

Wolfson Campus: 305-237-3236, Room 2102, Building 2, located beside Fourth Street and near the Cafe.

The best time to purchase textbooks for an upcoming term is at the beginning of classes. If a student has a schedule and/or syllabus, he or she can purchase textbooks before the class begins. When purchasing textbooks, a student should bring his or her schedule as the bookstore is organized alphabetically by course abbreviation and by reference number (six-digit code identifying the class). If a student cannot locate textbooks, the professor's name, or reference number on the shelf tags, the student should ask for assistance at the customer service desk. The store's textbook manager and sales staff can assist in answering questions. If a student purchases a textbook before attending class and later finds that the textbook is incorrect, it can be returned if the student has the original cash register receipt. The textbook must also be in the original shrink-wrap (if applicable), and in the exact condition as when purchased. The refund policy and dates

for each term are posted in all of the bookstores and on the cash register receipts. If a student needs any information concerning the refund policy and dates, the student should contact the campus bookstore at the phone number listed above. During the refund periods, new and used textbooks will be fully refundable when returned in the same condition as purchased. If a textbook is not in the same condition as originally purchased, the textbook will be returned at 25 percent markdown from the original price. If the student does not have the original receipt the book can be sold back to the bookstore at buyback. Shrink-wrapped packages are nonrefundable if opened; however if the student has all of the components of the package then a return may be done for a 25 percent markdown from the original price.

Any textbook purchased during the last week of classes or during final exams is not fully refundable, but may be sold back at buyback. If a student has textbooks that are no longer needed, he or she can sell the books back to the bookstore at anytime of the year. The price for the buyback textbooks will vary, depending on the level of demand for the upcoming term and the inventory in the store. If the bookstore has a need for a textbook, a student can receive up to 50 percent of the new price whether it was purchased new or used. Another feature the bookstore offers is online ordering of textbooks at www.efollett.com. Students can either log in directly to www.efollett.com or upon registering for a class on the MDC website, proceed through Book Now with a link to efollett.com to purchase the textbooks required for their class. By selecting the state, institution and classes, as well as purchasing information, a student may order textbooks and have them delivered directly to his or her home or have them ready for pick up at the bookstore on campus.

First Year Experience

Effective Fall 2014, First Time In College (FTIC) AA degree seeking students must enroll in *SLS1106 - First Year Experience Seminar* (or approved equivalent). The students will learn skills which will assist in successful transition into college.

Library Services

The seven Miami Dade College campuses, including the two outreach center libraries, have a combined book collection of more than 325,000 titles. The libraries subscribe to hundreds of periodical titles available in print, and have access to thousands of online full-text periodicals. Access to these databases is available 24 hours a day, seven days a week, from any computer that has an Internet connection.

The libraries offer a variety of services beyond the traditional scope of lending materials and providing in-house reference. Additional services include using information resources for research, classroom instruction and an online reference service. The College libraries actively participate in arrangements with other libraries throughout the state and nation to secure information resources not in the Miami Dade collections.

Media Services

The campus Media Services Departments have more than 35,000 media titles in a variety of formats, including the latest in multimedia resources and technology, all of which are available to students and faculty. The Media Services Departments also support the College's technology needs for audio-visual presentations.

New Student Center

The New Student Center is the first point of contact for prospective and new students who are attending college for the first time or who are transferring from another institution. Prospective students are encouraged to meet with a pre-admission advisor to obtain information about degree and vocational program options, admissions requirements, assistance with the admissions process and the steps a new student will take from admission through course registration.

The New Student Center conducts orientation sessions prior to each semester. All new degree-seeking students are required to participate in an orientation

program. The objective of the new student orientation sessions is to provide practical information to assist new students in transitioning to college life. The New Student Center at the Medical Campus (MC) assists students in pre-select programs as they transition from other campuses. Staff help guide students with course selection, the development of educational plans, and the application process for the selective admission programs at MC.

Registration and Records

Registration is held each term on the dates scheduled by the College Registrar's Office. Students may register online by going to the College's Homepage (www.mdc.edu). Students may register for courses in person at each campus Admissions and Registration. The College Registrar's Office is the designated custodian of all official academic records. The campus Admissions and Registration offices maintains official student transcripts, processes final grades at the end of each term and updates student records with address, name and approved grade changes. The Collegewide Transcript Processing Services area provides official copies of student transcripts to students, or to institutions or agencies upon request from students. The College also participates in the electronic transmission of student transcripts (to other participating institutions). Students may request academic transcript online at www.mdc.edu/transcripts.

Services for Students with Disabilities

ACCESS - A Comprehensive Center for Exceptional Students' Services

Federal and state laws and regulations guarantee students with disabilities equal access and equal opportunity in post-secondary education. The College provides auxiliary aids and services to assist students with disabilities in achieving equal opportunity. These services include, but are not limited to, assistance with registration, advise-

ment, financial aid, and sign language interpreting services, note takers, adaptive or assistive technology, testing accommodations and more.

The ACCESS department works to promote awareness of disability issues, federal and state regulations, and College procedures that encourage accessibility and inclusion. Under certain circumstances, ACCESS can arrange for program modifications, course substitutions, and waivers, in accordance with the College's Manual of Procedures.

Students may find out about additional services and eligibility by contacting the ACCESS office or representative in the Division of Student Services at their campus and visiting on line at (HYPERLINK "<http://www.mdc.edu/ACCESS/>" www.mdc.edu/ACCESS/).

Student Health Services

Miami Dade College is not legally or financially responsible for medical care and does not provide the services of a physician on any campus. The Fire Department Rescue Service provides first aid emergency health service.

At the time of application, each student should provide, on the appropriate line of the application form, the name of a person to contact in an emergency. If that contact person changes while the student is attending the College, the student should update that information through the Registrar's Office. Students should carry emergency information at all times, as well as any medical insurance card(s).

Information and Policies

AIDS Policy

MDC will offer its students and employees diagnosed HIV positive the same opportunities and benefits offered to other students and employees in accordance with appropriate laws and Center for Disease Control (CDC) guidelines. These include access to educational programs, advisement and counseling services, employment opportunities and, financial aid.

The College is committed to a policy of non-discrimination in the conditions and privileges of employment for those diagnosed HIV positive, but who are otherwise qualified and able to perform the essential functions of the job. Except where course work or employment requires involvement with body fluids, no special policies, procedures or rules will be imposed on students or employees diagnosed with HIV that will limit or restrict the students' participation in College activities and programs or the employees' rights to employment, use of benefits, or livelihood. The College will exercise an appropriate level of privacy and confidentiality in the provision of rights and benefits as required by law.

Automobiles on Campus

Student and faculty parking areas are designated on each campus. The MDCard may be required for access to a lot or a garage. Students must have the MDC parking decal affixed to their car's rear window or bumper. The parking decal is issued upon acceptance to the College. Parking decals are good for one year. Updated decals are available from the Student Life Department on each campus.

Miami-Dade County and municipal police enforce traffic and parking regulations on and around each campus. Citations are issued for traffic and parking irregularities; violators may be towed at their own expense.

Although campus security officers patrol parking areas, the College assumes no responsibility for the care or protection of a vehicle or its contents at any

time. If a vehicle must be left on campus overnight, students should notify the Campus Security Office.

Visitor parking policies vary by campus, so visitors should phone ahead for information. Visitors parked in unauthorized spaces may be subject to traffic citations and towing at the owner's expense.

Kendall Campus has a multistory parking facility with more than 700 student, staff and visitor parking spaces, as well as a number of parking lots. The parking garage is open Monday through Friday from 6 a.m. to 11 p.m. and Saturday from 6 a.m. to 6 p.m. The facility is closed on Sundays. During some special events, visitors may obtain parking passes in advance from the Campus Information Booth, from Campus Public Safety (located on the south side of Building 5000), or from the event's sponsor.

Wolfson Campus has a multistory parking garage open to students, faculty and staff. The garage, also known as Building 7, is located between First and Second avenues and between Fifth and Sixth streets. Entrances are on Fifth Street, Sixth Street, and First Avenue. Students must use the MDCard to gain access. Hours of operation vary, so students need to check with security if planning to leave a car after hours.

Medical Campus operates a parking lot at Northwest 10th Avenue and Northwest 20th Street. This lot is equipped with electronic control arms monitored by Campus Public Safety Officers from 6 a.m. to 10:30 p.m. Monday to Thursday, and 6:30 a.m. to 6 p.m. Fridays, Saturdays and Sundays. Handicapped parking is available east of Building 2. Limited shuttle service is provided to and from the



Culmet Metro-Rail station from 6:30 a.m. to 10:30 a.m. and from 3:30 p.m. to 5:30 p.m., Monday through Friday. Drop-off and pick-up at the Campus are north of Building 2. The driveway is posted as a "NO PARKING" and "TOW-AWAY" zone. Vehicles parked illegally in this area will be towed. Campus Public Safety enforces traffic laws on campus. Identification is verified before entry to the lots.

Homestead Campus provides visitor, student, faculty and staff parking in designated areas. The College and the Homestead Police Department enforce traffic and parking regulations on the campus.

InterAmerican Campus has a multi-story parking garage and several off-campus facilities for students. These facilities offer parking free of charge and access is gained upon presentation of an MDCard (or a class schedule with the Registrar's indication that the student has paid tuition). Direct access to campus buildings is available from the parking garage.

North Campus has numerous lots, though some are accessible only by faculty and staff.

West Campus has numerous parking lots located around the building.

Family Educational Rights and Privacy Act (FERPA) - Information Statement

Release of Student Information

Miami Dade College has a long-standing commitment to protect students' rights and privacy of information. This commitment will continue as a matter of College practice. The College complies with the provisions of the federal Family Educational Rights and Privacy Act (FERPA), State of Florida law, and Florida State Department of Education, Florida College System rules. These federal and state requirements concern accessibility and confidentiality of student records. Miami Dade College Procedure 4085, Release of Student Information, provides pertinent

details concerning classifications of student records and access and release provisions. The College procedure is available to students, faculty, administration and staff in the Dean of Student Services Office, as well as other offices and departments at each campus. In addition, the complete procedures are published in the Student's Rights and Responsibilities Handbook.

In accordance with U.S. Public Law 93-380 (FERPA), students at Miami Dade College have the right to inspect their educational records and to correct such records if warranted. All student records are open for inspection and review by the student unless he or she waives this right. These records are protected from release of information without written consent. The parent(s) of a dependent student, as defined in Title 26 U.S.C. §152 of the Internal Revenue Code, also has the right to inspect records which are maintained by the College on behalf of the student.

Directory Information, which may be made public, includes:

- a. Student name,
- b. Major field of study,
- c. Participation in officially recognized activities and sports,
- d. Weight and height of members of athletic teams,
- e. Degrees, honors and awards received,
- f. Enrollment status (full-time, half-time, not enrolled).

The office of the Dean of Student Services or designee will release this information only after the requestor has demonstrated a legitimate need to have such information. Students not wishing the dissemination of Directory Information must complete a statement in the Registrar's Office, otherwise Directory Information may be disclosed for legitimate purposes by the College.

Additional details concerning the release of student information, including exceptions, challenges to the content of records and related matters, may be obtained by consulting the Dean of Student Services, the Registrar's Office or designee at any campus.

FERPA information can be found on our website at:

www.mdc.edu/main/ferpa/



Grievance Policy

In compliance with federal and state requirements, the College has an institutional grievance policy for students alleging discriminatory practices or sexual harassment. The initial contact point for students to lodge a claim of discrimination or sexual harassment is the office of the Dean of Student Services at Kendall, North and Wolfson campuses, Dean of Students and Administration Support Services at Medical Center and InterAmerican campuses, and the Dean of Academic and Student Services at Hialeah and Homestead Campuses.

Housing

As a college, Miami Dade does not provide or supervise housing facilities. Two or three months' advance payment is generally required for rental housing. Out-of-area students should arrive approximately two to four weeks in advance of registration in order to locate suitable housing.

Identification

The MDCard is the official identification card for students and employees. This card will provide immediate access to the library, laboratories and parking lots. Students with questions should contact the Student Life Office at any campus for details.

Students' Rights and Responsibilities

The Students' Rights and Responsibilities publication, available to all students, sets forth the rights of students with corresponding responsibilities. This document details the relationship between student and College. The document covers protection in academic pursuits and privacy of records, sets forth the conditions for responsible behavior on the campus and lists the various appeal mechanisms and grievance procedures available to students.

The section on student discipline complies with Rule 6A-14.56, F.A.C., and §240.132, §240.133 and §877.13, F.S. This section concerns control and discipline of college students. The document complies with relevant federal regulations such as the award of financial aid, protection of privacy of records and equal access/equal opportunity.

Safety and Security

As required by the Federal Student Right to Know Legislation, the College publishes the annual crime statistics for each campus. These statistics may be obtained at the campus bookstore, Registrar's Office or the Public Safety Office. Prospective students may request a copy from the Admissions Office.



Campus Activities

Campus Activities, Clubs and Organizations

There are many opportunities for students to get involved in campus activities. Each year, outstanding artists, musicians, singers, dancers, lecturers and other performers share their talents and expertise with students. Student Life committees, composed of representatives from student groups, assist with the establishment of these programs and the policies governing these activities. In addition, there are on-campus art exhibits, dance programs, music concerts and theatrical productions presented by different campus departments.

Students have the opportunity to join 85+ clubs chartered on the various campuses. The best time to find out about clubs and organizations on each campus is at the beginning of the semester, when most campuses hold special events to publicize the various clubs. Students may also visit the campus Student Life Department to find out how to get involved. All students are encouraged to participate actively in clubs and organizations.

North Campus Pen Players and Kendall Campus Studio Theatre players present several full-length theatrical productions each year and tryouts are open to all students. In addition, there are several programs of experimental one-act plays produced and directed by students. At Wolfson Campus, Teatro Prometeo presents a number of productions in Spanish, and the New World Players give performances in English, both on and off campus. Interested students should contact the campus theater department.

The College bands, choruses and ensembles are open to all students, and in some cases, students can receive college credit for participating in a music group. These groups present numerous concerts each year, both on and off campus, and participate in various College activities. Students can check with each group's director to find out if they need

to audition to join. The campus music department is the best resource for information on music groups.

Intercollegiate Athletics

Students with outstanding athletic abilities may try out for one of the following intercollegiate sports teams: men's, basketball or baseball; women's, basketball, volleyball or softball. Miami Dade College teams, all known as The Sharks, compete at the highest level of the National Junior College Athletic Association. Each year, Shark teams travel around the state to compete against other college teams, and they consistently finish in the higher rounds of conference and state events. Sharks also have the opportunity to compete for the National Junior College Championship, and have the chance to be selected for NJCAA All-American teams and other special awards. MDC offers first-rate athletic facilities, training and conditioning services and a talented coaching staff. For information on trying out for an athletic team, contact the college director of athletics, based at Kendall Campus.

Student Government Association

Students are given an opportunity for self-government. A student-run governing body works with faculty and administration to formulate appropriate policies. The Student Government Association (SGA) provides an opportunity for students to gain the leadership skills vital in today's competitive job market.

Student Publications

The Reporter is the student newspaper at Miami Dade College. It was launched on Oct. 4, 2010, features 16 pages printing on a biweekly schedule has a circulation of 10,250 per print cycle. It is augmented by a website with video and audio content.

The Reporter is distributed college-wide and has newsrooms at the North, Wolfson and Kendall campuses:

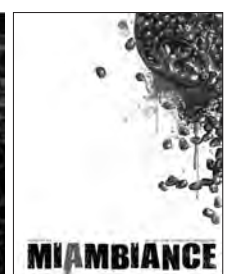
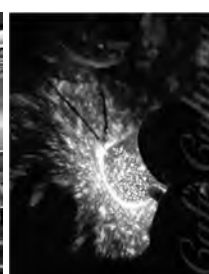
North Campus Bureau 11380 N.W.
27th Avenue, Room 4209, 305-237-1255

Kendall Campus Bureau 11011 S.W.
104th Street, Room M239, 305-237-2323

Wolfson Campus Bureau 300 N.E.
Second Avenue, Suite 1610, 305-237-3477.

The Antidote Newsletter at Medical and the *Urbana* at InterAmerican are under the guidance of advisors who work with student editors and staff members. These publications serve as the media for student expression on matters involving the curricular and extracurricular activities of the College. These publications also provide training for those interested in journalism.

The Students' Rights and Responsibilities Handbook provides students on each campus with basic information about collegewide policies and procedures.



Call us Essential ... Call us the College

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Academic Regulations

Attendance in Class

Students are expected to attend every class meeting and to arrive on time. Students who expect to miss a class, or those anticipating tardiness, should let the instructor know. In most courses, attendance requirements are listed on the syllabus. It is the responsibility of the student to make up work missed.

Audit

Students desiring to enroll in a course at Miami Dade College, but who do not wish to receive a grade or credit for the class, may elect to audit. Students will not be allowed to change from an audit status to a credit status (or from credit to audit) after the 100-percent refund date for each term.

Audit courses will be included in the student's academic record with a non-punitive grade of "X." Courses and credits enrolled for audit purposes do not count in the computation of a student's full-time or part-time enrollment status. College Preparatory students, who are required to be certified as completing competency-based College Preparatory instruction, cannot be enrolled under audit status.

Auditing a class costs the same as enrolling for credit.

Course Load

All credit courses carry a specified number of credits. A 3-credit lecture course normally meets three hours per week during the 16-week terms, and eight hours per week during the six-week terms. Lab classes generally meet for two hours per credit.

The fall and spring terms are called "major terms" and are approximately 16 weeks long. During a major term, a full course load is considered to be between 12 or more credits. The summer term consists of two six-week summer sessions (first six-weeks/second six-weeks). Some courses are scheduled for the combined summer sessions of 12 weeks. During the

six-week summer session a full load is considered to be 6 or more credits.

It is suggested that students who are employed should reduce their college load as follows:

Work Hours per week	# Credits fall/spring	# Credits summer A/B
20	12-15	6-7
25	8-11	5-6
40	6-7	3

Grading System

Students in college credit and vocational credit courses are graded according to the following grade point average (GPA) system:

A. Used in GPA computation:

Grade	Interpretation	Point Value
A	Excellent	4
B	Good	3
C	Average	2
D	Poor	1
F	Failure	0
U	Unsatisfactory	0

B. Not used in GPA computation:

I	Incomplete
W	Withdrew
X	Audit
S	Satisfactory
P	Progress - course requirements not completed, student must repeat
NR	Grade not reported by instructor

Final grades are available on the College's Web site following the end of the term.

Grade Point Average (GPA)

Each letter grade has a point value (see above). To compute the grade points for a course, multiply the grade point value by the number of credits. For example, a "B" in a 3-credit course, is worth 9 points. A "B" in a 4-credit course is worth 12 points. To calculate a GPA, add the total grade point values for all courses and divide that figure by the total number of credits attempted.

Example:

ENC 1101	3 credits	Grade A	(4 points) = 12
HUM 1020	3 credits	Grade C	(2 points) = 6

ISS 1120	3 credits	Grade F	(0 points) = 0
ISS 1161	3 credits	Grade B	(3 points) = 9
ART 1300C	3 credits	Grade C	(2 points) = 6
DAA 1160	1 credit	Grade B	(3 points) = 3
Total Credits 16		Total Points 36	
Divide 36 points by 16 credits = 2.25 GPA			

In order to graduate from any credit program at MDC and/or to qualify for entry into a bachelor's degree program, a student must have a minimum 2.0 GPA.

Repeating Courses

Students may repeat courses taken at MDC if they received a "W," "U," "D," or "F" grade.

State rule (F.A.C. 6A-14.0301) limits the number of repeat attempts to three per course. The third and final repeat attempt (i.e., the fourth time a student attempts the course) may be granted only if the student petitions through an appeals process, and if the student has documentation to convey extenuating circumstances. However, a student is not permitted to withdraw during the third or fourth attempt (i.e., a grade must be assigned). Repeated surcharges apply to any third or fourth attempt. All courses originally taken and then repeated will appear on the student's transcript with assigned grades, but the GPA will be recomputed to average the third and subsequent attempts of computable grades.

Specific courses, as identified in the course description section, may be repeated multiple times for additional credit. All attempts of these courses will be included within the GPA. Students should note that some state universities and colleges may not accept courses repeated for additional credit. Students should also be aware that some private colleges or universities might not accept the grade of a repeated course, and that some institutions compute the grade originally assigned.

Incomplete "I" Grade

When a student is unable to complete the requirements of a course by the end of the semester, the student may be assigned an "Incomplete" or "I" grade. The "I" grade is recorded by the instruc-

tor if the student has valid reasons for not being able to finish the work. The student and instructor complete an "Agreement for Grade of Incomplete" form, which stipulates the work to be completed for a grade. Students have until the end of the next major term to finish the coursework or a failing grade for the course may be assigned.

Grade Appeals

The responsibility for the academic evaluation and assignment of grades is that of the faculty member teaching the course. A student who believes that he or she has been unfairly graded should first appeal the grade to the faculty member. If satisfaction is not achieved, the student may appeal through administrative channels (Department Chair, Academic Dean or the grade appeals committee).

Academic Amnesty

Students with credits more than 10 years old may petition to have these grades excluded from cumulative GPA calculation. This is a one-time privilege. Students may not request specific courses to be removed; it must be the

entire prior record. Students may obtain a *Request for Academic Amnesty* form at any Advisement & Career Services Department.

Since academic amnesty does not remove courses from the academic record (it only excludes them from cumulative grade point average calculations at MDC), state/federal regulations concerning course attempts will still apply. Therefore, if a student has three or more attempts in the same course, state regulations mandate that the student be assessed the full cost of instruction and not be permitted to withdraw after the 100 percent refund deadline for the course.

Academic amnesty does not apply to federal and state financial aid regulations. The academic record impacted by academic amnesty is not excluded from federal and state financial aid policies. Students should consult an MDC financial aid advisor prior to requesting academic amnesty. Academic amnesty requests that include courses that were used as part of the requirements for a previously awarded program of study will not be processed.

Petitions Committee

The Petitions Committee considers exceptions to financial and withdrawal policies as stated in this catalog. Students should submit a written petition to the committee. The committee will make a recommendation to the Dean of Student Services for approval and implementation. The decision of the Dean is final. Petitions should identify the student (complete name and student number), and clearly and concisely state the request (by writing a personal letter and supplying supporting documentation for the reason stated in the letter). Students should address the petition to: Petitions Committee, Dean of Student's Office, and submit the petition at the campus at which they are registered for courses. Petitions must be made by the end of the next major term (fall and spring).

Student Ombudsman

MDC has a student ombudsman who serves as the initial point of contact for students who have concerns, complaints or issues related to College processes, policies and procedures. The Ombudsman listens to student concerns; directs students to the appropriate MDC office, policies and procedures; and, if requested, assists students in completing the forms required to obtain a resolution. The Student Ombudsman has the authority to investigate issues and arrange meetings among the involved parties in order to reach a resolution. MDC has designated the Student Ombudsman as the Assistant Dean of Student Services or designee at each campus.

Standards of Academic Progress

The "Standards of Academic Progress" (SOAP) establish a formal process through which the administration and faculty at MDC can identify and provide assistance to students who experience academic difficulty.

Most MDC students make satisfactory academic progress by maintaining a minimum 2.0 grade point average (GPA) and passing at least two-thirds of



the credits for which they register. MDC alerts students who do not meet SOAP, so that their academic weaknesses may be strengthened early in their college careers. This is particularly important for students receiving financial aid, because the College's "Standards of Satisfactory Academic Progress" must be maintained to remain eligible for financial aid and veterans' educational benefits.

When academic progress has not been satisfactory, the Standards require students to limit the number of credits for which they register. They are also required to register and successfully complete a mandatory Student Life Skills (SLS1125). The Standards are not intended to discourage or penalize students who are sincerely trying to make good use of the College's instructional services. The objective of the Standards is to improve the performance of students experiencing academic difficulty. SOAP reflects the commitment of the MDC faculty and administration to provide students with as much assistance as possible to ensure success in achieving their educational goals.

Academic Standards

Standards of Academic Progress (SOAP) require students to maintain a minimum 2.0 grade point average (GPA) and to pass a minimum of two-thirds (or 67 percent) of the credits for which students register in order to maintain clear academic standing.

SOAP is not designed to penalize or discourage students; instead, the overall objective is to improve the performance of students experiencing academic difficulty. Miami Dade College strives to provide the highest quality of instructional and support services.

Students experiencing academic difficulty should speak to their academic advisor to develop an individualized educational plan to address their academic difficulties and to discuss repercussions for Financial Aid, Veteran's educational benefits and International Student status to name some examples.

Incomplete and audit grades are not calculated to determine if a student has earned "two-thirds" of the credits registered.

Academic Warning

"Academic Warning" limits a student's enrollment to 12 credits in the fall term, 12 credits in the spring term, and 12 credits in the summer term (6 credits in the first six weeks and 6 credits in the second six weeks). This may include 3 credits of a prescribed intervention course. This may entail a study skills course, career counseling or a combination.

Academic Probation

"Academic Probation" limits a student's enrollment to 9 credits in the fall term, 9 credits in the spring term, 6 credits in the summer term, (3 credits in the first six weeks and 3 credits in the second six weeks). This limitation includes 3 credits of a prescribed intervention course. This must entail a study skills course, career counseling or a combination. Students remain on "Academic Probation" until they maintain a 2.0 overall GPA and earn credit in two-thirds of the credits for which they register.

Academic Suspension

"Academic Suspension" requires a student to discontinue enrollment at Miami Dade through the next major term. A suspended student may achieve probation status if he or she successfully appeals the academic suspension. In this case, students may continue to register on extended "Academic Probation" provided that they maintain a 2.0 term GPA and earn credit in at least two-thirds of their registered coursework.

Students who discontinue their enrollment because of suspension during a major term may re-enter the College and continue for each subsequent term of enrollment, provided they maintain a 2.0 term GPA and earn credit in at least two-thirds of the credits for which they register.

Academic Dismissal

"Academic Dismissal" is defined as the separation of students from Miami Dade College for at least 12 months. "Academic Dismissal" occurs if a student fails to meet the minimum requirements during an extended academic probation after suspension. If after being readmitted following suspension, the student fails to meet minimum standards (maintaining a 2.0 term GPA and earning at least

two-thirds of the credits for which he or she has registered), the student will be dismissed from the College.

Students are eligible to apply for enrollment to the College after the dismissal period. This request will be on an appeal basis. In order for re-enrollment to be approved, the appeal must present evidence of some change in the student's circumstances.

Standards of Progress for Students Receiving Financial Aid -

A student receiving financial aid must meet "Standards of Academic Progress." Federal regulations state that students are eligible to receive financial aid benefits for up to 150 percent of the number of credits registered to complete the degree or certificate. After the 150-percent mark, benefits will terminate. This applies to all registered credits, including courses that were attempted or withdrawn from, but not including "I" grades or audits. Thirty credits of College Preparatory and AP credits are exempted from this 150-percent rule. Students who meet or exceed the 150 percent are no longer eligible to receive federal/state financial aid. For extenuating circumstances, students may appeal through the Petition for Financial Aid Waiver.

Suspension

By the act of registering at Miami Dade College, a student agrees to abide by the Code of Conduct of the College. A student who violates the Code of Conduct while on College property or while participating at a College-sponsored event may be suspended.

Transcript of Records

A transcript is a printed list of all the courses taken, the number of credits and grade earned. Transcripts summarize the GPA and also indicate the receipt of any certificates or degrees. Students must submit a written request to the Registrar's Office in order to have a transcript sent to a particular location.

Students will be unable to get a transcript if an obligation to the College has not been satisfied. These obligations include unpaid fees or overdue loans, as well as the return of library books, audio-visual media and athletic equipment.

Drops and Withdrawals

Dropping Courses

Students may drop courses within the drop period indicated on their class schedule. They may do so online using their MyMDC account, or in person at any campus Admissions and Registration Office. Note that a reduction in course load may impact athletic eligibility, financial aid, scholarships, and veteran benefits.

Administrative Withdrawal from Courses

Miami Dade College reserves the right to cancel courses and/or programs for which there is insufficient enrollment, to close a course when the enrollment limit in that course is reached

and to make any schedule changes as necessary, including a change in time, days, credit, location or instructor. In the event of course cancellation, the College will notify each registrant by email and/or by telephone and will issue a full refund for the course. Miami Dade College is not responsible for any other related expenses. Students may see an academic advisor regarding selection of another course.

Faculty have the right to withdraw a student from their course for lack of attendance ("no show") or excessive absences as determined by established departmental guidelines.

If a student is withdrawn from a course or courses for disciplinary reasons, the student is not entitled to a refund of matriculation, tuition or special fees.

College Withdrawal Policy for Credit and College Prep Courses

Effective the Fall Term of 1997, students who enroll in the same course for the third time (or subsequent time) will not be permitted to withdraw from (drop) the course. Attempts taken by students prior to the Fall Term 1997 will not be counted as an attempt for the purposes of this policy. An attempt is counted any time students officially enroll, have a schedule validated for a course, and do not withdraw from (drop) the course with a refund. For example, a student enrolled in a course in the Fall Term 2015 and received an "F" grade in the course. The student enrolled again in the same course in the Spring Term 2016 and found it necessary to withdraw from (drop) the course with a grade of "W" (Withdrawal). The student enrolled again for the third time in the course for the Summer Term 2016. The student needed to withdraw again from the course. This was not permitted, and the student received a valid grade of A, B, C, D, F, S, P or U at the end of the term.

Cost to Re-Enroll in a Course

Florida Statutes 1009.28 (applies to developmental education courses) and 1009.285 (applies to college credit courses) state that students who enrolled in the same course twice, received a grade of W, D, F, P, U or X and wish to re-enroll for the third time must pay the full cost of instruction for this attempt and any later attempts. This fee is equivalent to the cost of the course for a student paying fees as a nonresident of the state of Florida for tuition purposes. Students who are assessed the higher fee on the third attempt only may appeal to have the fee lowered. Contact the Dean of Student Services Office at the campus where the course is offered for more information. A student cannot re-enroll in a course for credit if the student previously earned a grade of I, S, C or better. This policy is a result of 6A-14.0301 Florida Administrative Code.

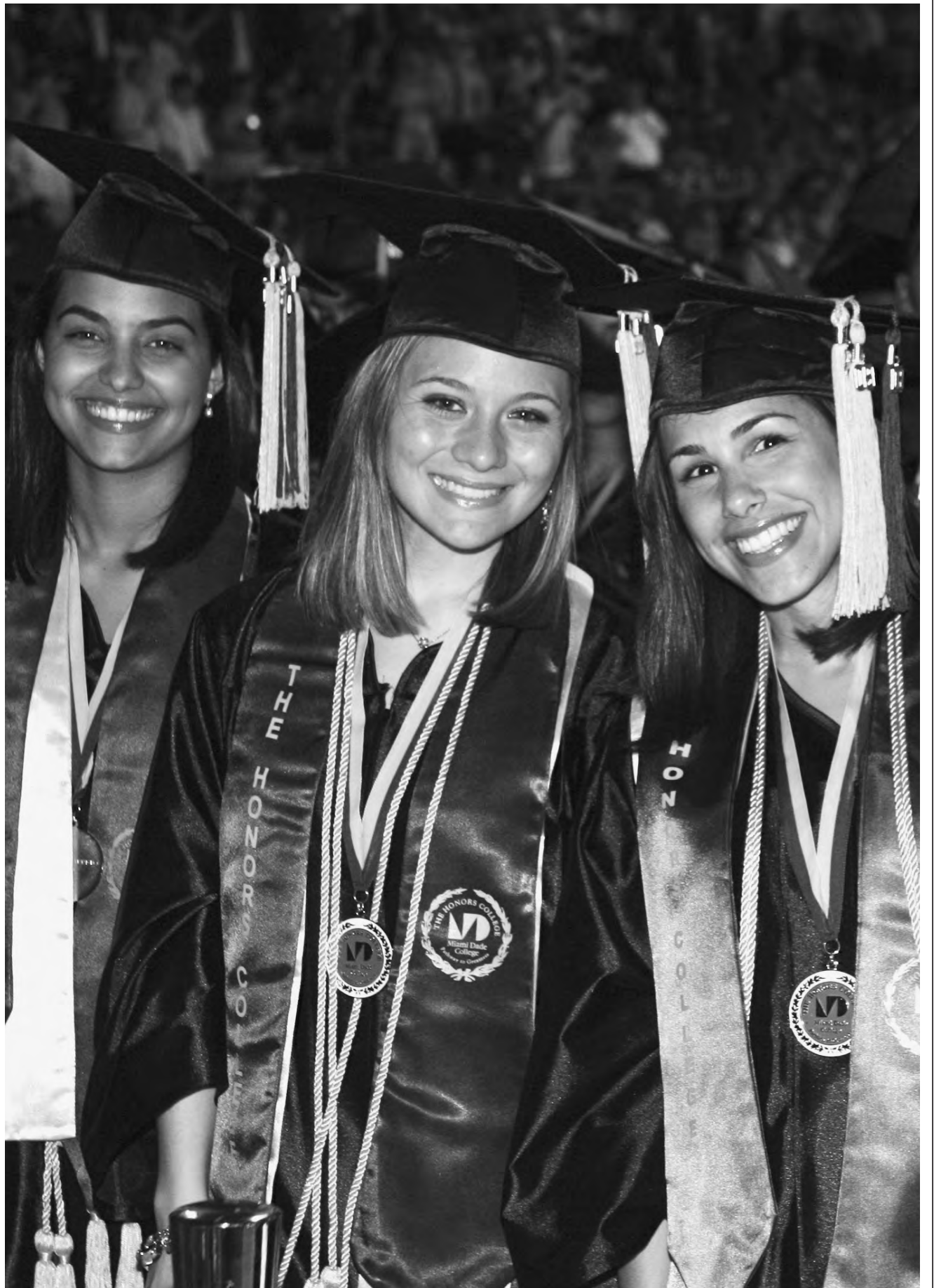


Graduation Requirements and Transfer Information

Call us Essential ... Call us the College

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Graduation Requirements and Transfer Information

Graduation Requirements

Miami Dade College awards baccalaureate degrees in education, public safety management, nursing, supervision and management, film/television and digital production, health sciences with an option in physician assistant studies, electronics engineering technology, biological sciences, and early childhood education, as well as Associate in Arts, Associate in Science, and the Associate in Applied Science degrees. MDC also offers college credit certificates, advanced technical certificates and career technical certificates. Students must meet the general education requirements and any program requirements to be eligible for a degree.

Continuous Enrollment for Graduation Requirements

The College graduation requirements are based upon the term of admission or readmission to Miami Dade College. Those requirements apply as long as the student has continuous annual enrollment. If a student does not register for a period exceeding one year, he or she is subject to the graduation requirements in effect for the year and term of re-admission to the College.

Residency Requirements for Graduation

To satisfy the residency requirement for graduation, students must earn at Miami Dade College a minimum of 25 percent of the credits applicable toward the program of study for which graduation is sought. Additional requirements for specific programs of study include:

1. All Associate in Science/Associate in Applied Science degree-seeking students, as well as College Credit Certificate-seeking and Career and Technical Education-seeking students, must earn at Miami Dade College a minimum of 50 percent of the credits in discipline-specific courses.

2. Baccalaureate degree students must earn at Miami Dade College a minimum of 50 percent of the credits in upper-division course work.
3. Different residency requirements may apply as required by programs that have special accreditation or by state regulations such as the state-wide articulation agreements.

All financial obligations must be fulfilled in order to graduate from any MDC program of study.

All associate, baccalaureate, and college credit programs require a minimum 2.0 GPA to graduate; some programs may have higher GPA requirements.

Baccalaureate Degree

Required Hours and GPA

Successful completion of a minimum of 120 semester hours or higher, and a minimum GPA of 2.0 is required to earn a baccalaureate degree.

Note: Higher grade point averages may be required for specific majors.

General Education

Satisfactory completion (a minimum GPA of 2.0) of General Education courses (36 semester hours) as follows:

- Area I. English Composition (6 semester hours)
- Area II. Oral Communication (3 semester hours)
- Area III. Humanities/Fine Arts (6 semester hours)
- Area IV. Behavioral/Social Science (6 semester hours)
- Area V. Natural Science (6 semester hours)
- Area VI. Mathematics (6 semester hours)
- Area VII. General Education Elective (3 semester hours)

Per Florida Administrative Code 6A-10.030

General Education Requirement

All areas of General Education must be satisfactorily completed. Students must have an overall GPA of at least 2.0 in their General Education courses. Students must have a "C" or better in each course designated as "Gordon Rule."

Computer Skills Competency

All MDC degree-seeking students and students seeking a college credit certificate in School of Business programs with 16 or more credits must demonstrate computer competency prior to graduation. Students demonstrate this competency by passing the MDC computer competency test, currently known as CSP (Computer Skills Placement) examination or by enrolling in and successfully completing an equivalent course. No credit is awarded for successful completion. For additional information please visit the Testing Criteria Computer Competency Web site, accessed from MDC's Homepage (www.mdc.edu) by clicking on "Resources," then "Testing Information".

Requirements for Admission to Upper Division

Students should review the Baccalaureate Degree section of this catalog and contact the Academic Department responsible for the specific Baccalaureate admissions criteria.

Foreign Language Requirement

In accordance with Florida Administrative Code 6A-10.02412 and pursuant to Florida Statute 1007.262, all AA and baccalaureate degree-seeking students must demonstrate Foreign Language Competence (FLC) by: (a) successfully completing the elementary 2 level (i.e., 2 years of secondary/high school level) or postsecondary/college level equivalent in one (1) foreign language or American Sign Language OR (b) successfully completing a standardized examination that documents the required FLC. Students who demonstrate proficiency in a native language other than English are exempt. For more information, please visit the MDC Credit-by-Exam website or contact the MDC World Languages department.

Associate in Science/ Associate in Applied Science Degrees

The Associate in Science degree is awarded to students who successfully complete one of the occupational, education or allied health programs. These areas of study are designed primarily to prepare students for immediate employment. However, credits earned for many courses in these programs are acceptable to upper-division colleges should the student decide to continue toward a four-year degree. To be granted upper-division standing at a Florida public institution, the student must meet the admissions criteria.

Requirements for Associate in Science/Associate in Applied Science Degrees

1. Complete an approved program with 60 or more credits specified in courses numbered 1000-2999, including the general education core courses.
2. Earn a minimum 2.0 GPA in the 60 or more program credits presented for graduation.
3. Complete a minimum of 15 credits of general education courses with a minimum of a C grade.
4. Meet Residency for Graduation requirements. See this section within the catalog.

General Education and Miami Dade College Student Learning Outcomes

General Education: Student Learning Outcome Foundation

Academic study has its foundation in the required courses and designated elective areas of general education. Through this coursework, the student begins the acquisition of fundamental knowledge, skills and attitudes. What begins in specified general education coursework is reinforced and expanded through the general and intentional presence of Student Learning Outcomes throughout each student's degree program and cocurricular learning.

Student Learning Outcomes: A Promise between Students and Faculty

All students who graduate from MDC – regardless of major or degree type – have 10 things in common: the college-wide student learning outcomes summarized below. Developed after many conversations with students, faculty, alumni and members of the business community, the outcomes are part of all programs regardless of major or degree type. They will help students to succeed in their chosen field, to strengthen the life skills critical to their future and to become lifelong learners.

1. **Communication** – Good communication skills can be a defining characteristic in both personal and professional development. A MDC education helps students develop effective communication habits and skills.
2. **Quantitative Analysis** – Numbers are everywhere, from the calories in your favorite soda to political polls. All students should be able to process, understand and accurately analyze numerical data.
3. **Critical/Creative Thinking and Scientific Reasoning** – There is no guarantee that you will know all the answers by the time you graduate, but you will develop the skills to think through a situation and arrive at a logical conclusion.
4. **Information Literacy** – Most individuals use Internet search engines such as Google, Bing or Yahoo to find information quickly. However, academic research requires you to incorporate additional Net Resources into your research practices. By the time you graduate, you will know the pros and cons of using Internet resources and be able to locate relevant and accurate information resources.
5. **Global, Cultural and Historical Perspectives** – Thanks to technology in the information age, we are aware of many ways of life across the world. In order to succeed in this global society, students need to develop an appreciation of various cultures and an understanding of different points of view.
6. **Personal, Civic and Social Responsibility** – While at MDC, you'll develop skills to fulfill not only your personal responsibilities, but also your roles as citizens and members

of a global community. For example, John Donne said, "No man is an island." Everything you do and say has an impact on those around you.

7. **Ethical Thinking** – Our core beliefs influence the way we view headlines such as Black Lives Matter; Plagiarism and Political Speeches; Wikki Leaks; Big Data and Privacy; Political Corruption; Campaign Rhetoric; Childhood Vaccines. Your course of study will help you identify ethical dilemmas/issues and develop perspectives based on ethical concepts, not just your core beliefs.
8. **Computer and Technology Usage** – You can probably surf the Net, send emails and create post for social media already, but there are other ways technology can support your educational experience. Before you graduate, you will learn how to use word processing, spreadsheets, databases and presentation programs.
9. **Aesthetic Appreciation** – Appreciating the creative process is an essential part of being a well-rounded individual.
10. **Natural Systems and the Environment** – An understanding of natural systems is important in caring for your health and the world around you.

General Education Requirements for the Associate in Arts

To receive an Associate in Arts, students must complete 36 "General Education" credits with the minimum grade requirement of "C" (except in the three "General Education" elective credits). **Designates "Gordon Rule" course. Students must complete the following (updated information located at <https://sisvsr.mdc.edu/ps/sheet.aspx>):

ASSOCIATE IN ARTS

Total credits required for the degree: 60

1. **COMMUNICATIONS** (6.00 credits)
**ENC 1101 - English Composition 1 (3 credits)
**ENC 1102 - English Composition 2 (3 credits)
2. **ORAL COMMUNICATIONS - MDC CORE** (3.00 credits)

- **ENC 2300 - Advanced Composition and Communication (3 credits)
 **LIT 2480 - Issues in Literature & Culture (3 credits)
 **SPC 1017 - Fundamentals of Speech Communication (3 credits)
3. **HUMANITIES** (6.00 credits)
 SELECT AT LEAST ONE GORDON RULE WRITING (GW) COURSE.
 Must take 3.0 credits from the following group.
 ARH 1000 - Art Appreciation (3 credits)
 HUM 1020 - Humanities (3 credits)
 LIT 2000 - Introduction to Literature (3 credits)
 MUL 1010 - Music Appreciation (3 credits)
 **PHI 2010 - Introduction to Philosophy (3 credits)
 **THE 2000 - Theatre Appreciation (3 credits)
 --- And ---
 Must take 3.0 credits from the following group.
 ARC 2701 - History of Architecture 1 (3 credits)
 ARC 2702 - History of Architecture 2 (3 credits)
 ARH 1000 - Art Appreciation (3 credits)
 ARH 2050 - Art History 1 (3 credits)
 ARH 2051 - Art History 2 (3 credits)
 ARH 2740 - Cinema Appreciation (3 credits)
 DAN 2100 - Dance Appreciation (3 credits)
 DAN 2130 - Dance History 1 (3 credits)
 HUM 1020 - Humanities (3 credits)
 IND 1130 - History of Interiors 2 (3 credits)
 LIT 2000 - Introduction to Literature (3 credits)
 LIT 2120 - A Survey of World Literature 2 (3 credits)
 MUH 2111 - Survey of Music History 1 (3 credits)
 MUH 2112 - Survey of Music History 2 (3 credits)
 MUL 1010 - Music Appreciation (3 credits)
 MUL 2380 - Jazz and Popular Music in America (3 credits)
 PHI 2010 - Introduction to Philosophy (3 credits)
 PHI 2604 - Critical Thinking/Ethics (3 credits)
 THE 2000 - Theatre Appreciation (3 credits)
4. **BEHAVIORAL/SOCIAL SCIENCE** - State Core (3.00 credits)
 IF A BEHAVIORAL SCIENCE COURSE IS SELECTED FROM THE STATE CORE, THEN A SOCIAL SCIENCE COURSE MUST BE SELECTED FROM THE MDC CORE.
 IF A SOCIAL SCIENCE COURSE IS SELECTED FROM THE STATE CORE, THEN A BEHAVIORAL SCIENCE COURSE MUST BE SELECTED FROM THE MDC CORE.
 Must take 3.0 credits from the following group.
 ANT 2000 - Introduction to Anthropology (3 credits)
 PSY 2012 - Introduction to Psychology (3 credits)
 SYG 2000 - Introduction to Sociology (3 credits)
 --- Or ---
 Must take 3.0 credits from the following group.
 AMH 2020 - History of the US since 1877 (3 credits)
 **ECO 2013 - Principles of Economics (Macro) (3 credits)
 POS 2041 - American Federal Government (3 credits)
5. **BEHAVIORAL/SOCIAL SCIENCE** - MDC Core (3.00 credits)
 IF A BEHAVIORAL SCIENCE COURSE IS SELECTED FROM THE STATE CORE, THEN A SOCIAL SCIENCE COURSE MUST BE SELECTED FROM THE MDC CORE.
 IF A SOCIAL SCIENCE COURSE IS SELECTED FROM THE STATE CORE, THEN A BEHAVIORAL SCIENCE COURSE MUST BE SELECTED FROM THE MDC CORE.
 Must take 3.0 credits from the following group.
 ANT 2000 - Introduction to Anthropology (3 credits)
 ANT 2410 - Introduction to Cultural Anthropology (3 credits)
 CLP 1006 - Psychology of Personal Effectiveness (3 credits)
 DEP 2000 - Human Growth and Development (3 credits)
 ISS 1161 - The Individual in Society (3 credits)
 PSY 2012 - Introduction to Psychology (3 credits)
 SYG 2000 - Introduction to Sociology (3 credits)
- Or ---
 Must take 3.0 credits from the following group.
 AMH 2010 - History of the US to 1877 (3 credits)
 AMH 2020 - History of the US since 1877 (3 credits)
 **ECO 2013 - Principles of Economics (Macro) (3 credits)
 ISS 1120 - The Social Environment (3 credits)
 POS 2041 - American Federal Government (3 credits)
 WOH 2012 - History of World Civilization to 1789 (3 credits)
 WOH 2022 - History of World Civilization from 1789 (3 credits)
6. **NATURAL SCIENCE - STATE CORE** (3.00 credits)
 Must take 3.0 credits from the following group.
 BSC 1005 - General Education Biology (3 credits)
 BSC 2010 - Principles of Biology (3 credits)
 BSC 2085 - Human Anatomy and Physiology 1 (3 credits)
 EVR 1001 - Introduction to Environmental Sciences (3 credits)
 Lab course(s) are not allowed for credit in this area.
 --- Or ---
 Must take 3.0 credits from the following group.
 AST 1002 - Descriptive Astronomy (3 credits)
 CHM 1020 - General Education Chemistry (3 credits)
 CHM 1045 - General Chemistry and Qualitative Analysis (3 credits)
 ESC 1000 - General Education Earth Science (3 credits)
 PHY 1020 - General Education Physics (3 credits)
 PHY 2048 - Physics with Calculus 1 (4 credits)
 PHY 2053 - Physics (without Calculus) 1 (3 credits)
 Lab course(s) are not allowed for credit in this area.
 IF A LIFE SCIENCE COURSE IS SELECTED FROM THE STATE CORE, THEN A PHYSICAL SCIENCE COURSE MUST BE SELECTED

FROM THE MDC CORE. IF A PHYSICAL SCIENCE COURSE IS SELECTED FROM THE STATE CORE, THEN A LIFE SCIENCE COURSE MUST BE SELECTED FROM THE MDC CORE.

STUDENTS IN THE HEALTH SCIENCES ARE RECOMMENDED TO COMPLETE CHM 1033/1033L PRIOR TO REGISTERING FOR BSC 2085/2085L.

STUDENTS IN THE BIOTECHNOLOGY PATHWAY MUST TAKE BSC 2426/2426L PRIOR TO ADMISSION TO THE BS IN BIOLOGICAL SCIENCES DEGREE.

7. **NATURAL SCIENCE - MDC CORE**
(3.00 credits)

Must take 3.0 credits from the following group.

BOT 1010 - Botany (3 credits)
BSC 1005 - General Education Biology (3 credits)
BSC 1030 - Social Issues in Biology (3 credits)
BSC 1050 - Biology & Environment (3 credits)
BSC 1084 - Functional Human Anatomy (3 credits)
BSC 2010 - Principles of Biology (3 credits)
BSC 2020 - Human Biology: Fundamentals of Anatomy/Physiology (3 credits)
BSC 2085 - Human Anatomy and Physiology 1 (3 credits)
BSC 2250 - Natural History of South Florida (3 credits)
EVR 1001 - Introduction to Environmental Sciences (3 credits)
HUN 1201 - Essentials of Human Nutrition (3 credits)
OCB 1010 - Introduction to Marine Biology (3 credits)
PCB 2033 - Introduction to Ecology (3 credits)
PCB 2340C
ZOO 1010 - Zoology (3 credits)
The following course(s) are not allowed for credit in this area:
All Labs
- - - **Or** - - -
Must take 3.0 credits from the following group.
AST 1002 - Descriptive Astronomy (3 credits)
CHM*
ESC 1000 - General Education Earth Science (3 credits)

GLY*

MET*

OCE*

PHY*

PSC 1121 - General Education

Physical Science (3 credits)

PSC 1515 - Energy in the Natural Environment (3 credits)

The following course(s) are not allowed for credit in this area:
All Labs

IF A LIFE SCIENCE COURSE IS SELECTED FROM THE STATE CORE, THEN A PHYSICAL SCIENCE COURSE MUST BE SELECTED FROM THE MDC CORE. IF A PHYSICAL SCIENCE COURSE IS SELECTED FROM THE STATE CORE, THEN A LIFE SCIENCE COURSE MUST BE SELECTED FROM THE MDC CORE.

STUDENTS IN THE HEALTH SCIENCES ARE RECOMMENDED TO COMPLETE CHM 1033/1033L PRIOR TO REGISTERING FOR BSC 2085/2085L.

STUDENTS IN THE BIOTECHNOLOGY PATHWAY MUST TAKE BSC 2426/2426L PRIOR TO ADMISSION TO THE BS IN BIOLOGICAL SCIENCES DEGREE.

8. **MATHEMATICS** (6.00 credits)

Must take 3.0 credits from the following group.

**MAC 1105 - College Algebra (3 credits)
**MAC 2311 - Calculus and Analytical Geometry 1 (5 credits)
**MGF 1106 - Mathematics for Liberal Arts 1 (3 credits)
**MGF 1107 - Mathematics for Liberal Arts 2 (3 credits)
**STA 2023 - Statistical Methods (3 credits)
- - - **And** - - -
Must take 3.0 credits from the following group.
MAC*
MAD 2104 - Discrete Mathematics (3 credits)
MAP*
MAS*
MGF*
MTG 2204 - Geometry for Educators (3 credits)

QMB 2100 - Basic Business Statistics (3 credits)

STA 2023 - Statistical Methods (3 credits)

9. **GENERAL EDUCATION ELECTIVE**
(3.00 credits)

Any approved general education course previously listed but not used to satisfy another general education requirement.

Any 3 credit introductory course in a major field that satisfies statewide general education requirements:

ACG 2021 • AMH 2010 • ANT 2410 • ARH 1000
CHM 1045 • ECO 2013 • EDF 1005 • LIT 2120
PHI 2010 • PHY 2048 • POS 2041 • POS2112
PSY 2012 • REL 2300 • SYG 2000 • THE 2000

Computer Science: 1 to 3 credit transferable computer course.

Cross-Cultural Studies

ANT 2410 • ECO 2013 • EDG 2701 • EEX 2000
GEO 2420 • INR 2002 • ISS 2270 • LIT 2120

LIT 2480 • SYG 2230 • WOH 2012 • WOH 2022

Foreign Language: CHI, FRE, FRW, GER, HBR, ITA, JPN, POR, SPN

Health & Wellness: HSC 1121, HSC 2400, HLP 1080 or HLP 1081

Mathematics: MAC, MAP, MAS, MGF, MTG 2204, STA 2023, QMB 2100 (excluding labs)

Natural Science: AST, BOT, BSC, CHM, GLY, MET, OCE, PHY, PSC, ZOO, HUN 1201, PCB 2033 or

linked lab

Sign Language: ASL

10. **COMPUTER COMPETENCY REQUIREMENT**

By the 16th earned college-level credit (excluding EAP, ENS, ESL, and developmental education courses), a student must have attempted CGS 1060C, an equivalent college credit course, CTS 0050, or the CSP.

Or

By the 31st earned college-level credit (excluding EAP, ENS, ESL, and developmental education courses), a student must have demonstrated computer competency by passing CGS 1060C, an equivalent college credit course, CTS 0050, or the CSP.

11. FOREIGN LANGUAGE COMPETENCY

- ASL 1150C - American Sign Language 2 (4 credits)
 CHI 1121 - Elementary Mandarin Chinese 2 (4 credits)
 FRE 1121 - Elementary French 2 (4 credits)
 GER 1121 - Elementary German 2 (4 credits)
 ITA 1121 - Elementary Italian 2 (4 credits)
 JPN 1121 - Elementary Japanese 2 (4 credits)
 POR 1121 - Elementary Portuguese 2 (4 credits)
 RUS 1121 - Elementary Russian 2 (4 credits)
 SPN 1121 - Elementary Spanish 2 (4 credits)

12. FIRST YEAR EXPERIENCE SEMINAR

- SLS 1106 - First Year Experience Seminar (1 credits)
 IDH 1001 - Honors Leadership Seminar 1 (1.00 - 3.00 credits)
 IDS 1044 - Leadership Seminar (3 credits)
 SLS 1125 - Student Support Seminar (3 credits)
 SLS 1502 - College Study Skills (1.00 - 3.00 credits)
 SLS 1505 - College Survival Skills (1 credit)
 SLS 1510 - Preparing for Student Success (3 credits)
 Note: SLS 1106 is the recommended course. For the alternative courses listed, see advisor.

NOTE(S):

- Foreign Language Requirement: In accordance with Florida Administrative Code 6A-10.02412 and pursuant to Florida Statute 1007.262, all AA and baccalaureate degree-seeking students must demonstrate Foreign Language Competence (FLC) by: (a) successfully completing the elementary 2 level or postsecondary/college level equivalent in one (1) foreign language or American Sign Language OR (b) successfully

completing a standardized examination that documents the required FLC.

Or

Students who demonstrate proficiency in a native language other than English are exempt. For more information, please visit the MDC Credit-by-Exam website or contact the MDC World Languages department.

- If the Computer Competency or Foreign Language requirements are met through appropriate competency testing, then the full 36 credits of General Education must be met.
- A minimum cumulative grade point average of 2.0 is required for graduation.
- Students should check their individualized Degree Audit Report to determine the specific graduation policies in effect for their program of study for the year and term they entered Miami Dade. This outline includes current graduation requirements.
- Course numbers, titles, descriptions, and listing are subject to change. Please consult the MDC Course Dictionary for updated information.
- The final responsibility for meeting graduation requirements rests with the student.

Other Assessment Procedures for College- Level Communication and Computation Skills (6A-10.030) (often referenced as Gordon Rule)

- In addition to assessments that may be adopted by the State Board of Education or Board of Governors to measure student achievement in college-level communication and computation skills, other assessment requirements shall be met by successful completion of coursework in English and mathematics. For the purposes of this rule, a grade of C or

higher shall be considered successful completion.

- Prior to receipt of an Associate in Arts degree from a public community college or university or prior to entry into the upper division of a public university or college, a student shall complete successfully the following:
 - Six (6) semester hours of English coursework and six (6) semester hours of additional coursework in which the student is required to demonstrate college-level writing skills through multiple assignments. Each institution shall designate the courses that fulfill the writing requirements of this section. These course designations shall be submitted to the Statewide Course Numbering System. An institution to which a student transfers shall accept courses so designated by the sending institution as meeting the writing requirements outlined in this section.
 - Six (6) semester hours of mathematics coursework at the level of college algebra or higher. For the purposes of this rule, applied logic, statistics and other such computation coursework which may not be placed within a mathematics department may be used to fulfill three (3) hours of the six (6) hours required by this section.
 - Students awarded college credit in English based on their demonstration of writing skills through dual enrollment, advanced placement, or international baccalaureate instruction pursuant to Rule 6A-10.024, F.A.C., and students awarded college credit based on their demonstration of mathematics skills at the level of college algebra or higher through one (1) or more of the acceleration mechanisms in Rule 6A-10.024, F.A.C., shall be considered to have satisfied the requirements in subsection 6A-10.030(2), F.A.C., to the extent of the college credit awarded.
- Exemptions and Waivers. Any public community college or university desiring to exempt its students

from the requirements of subsection 6A-10.030(2), F.A.C., shall submit an alternative plan to the Department of Education. Upon approval of the plan by the Department, the plan shall be submitted to the State Board of Education or the Board of Governors as appropriate. Upon approval by the State Board of Education or the Board of Governors, said plan shall be deemed effective in lieu of the requirements of subsection 6A-10.030(2), F.A.C.

Note: A list of MDC courses that fulfill this requirement, can be found at http://www.mdc.edu/asa/faculty/gordon_rule_courses.asp.

General Education Requirements for the Associate in Science/ Associate in Applied Science Degrees

To receive an Associate in Science/ Associate in Applied Science degree, students must complete the approved courses or substitution identified on the program outline and earn a minimum of a "C" grade (updated information located at <http://www.mdc.edu/academics/programs/associate.aspx>):

To receive an Associate in Applied Science degree, students must complete the General Education Requirements identified on the program outlines and earn a minimum "C" grade.

In order to be eligible to enroll in the communications courses, students must achieve specified scores on the reading and the writing assessments. Students who do not demonstrate the required proficiency on these assessments must register for developmental education courses.

Computer Competency

By the 16th earned college-level credit (excluding ESL, ENS, EAP, and developmental education courses), a student must have attempted CGS 1060, an equivalent college credit course, CTS 0050 (formerly CGV 0010), or the CSP.

OR

By the 31st earned college-level credit (ESL, ENS, EAP, and developmental education courses), a student must have demonstrated computer competency by passing CGS 1060, an equivalent college credit course, CTS 0050 (formerly CGV 0010), or the CSP.

Advanced Technical Certificate Programs

The Advanced Technical Certificate is available to students who have already been awarded an Associate in Science degree and wish to upgrade their skills. Students must successfully complete a prescribed set of courses at the advanced level in order to be awarded the certificate (updated information located at <https://sisvsr.mdc.edu/ps/sheet.aspx>).

College Credit Certificate Programs

A College Credit Certificate is awarded to students who complete all course requirements for state-approved college credit certificate programs offered at MDC. All college credit certificate program courses also apply toward the related Associate in Science/Associate in Applied Science degree (updated information located at <https://sisvsr.mdc.edu/ps/sheet.aspx>).

Career Technical Education Programs

To receive a Career Technical Education Certificate (formerly V.C.C.), students must successfully complete all courses specified within the program, meet the reading and computational skills required for the particular program and apply for graduation (updated information located at <https://sisvsr.mdc.edu/ps/sheet.aspx>).

Commencement

(Graduation Ceremony)

Students who anticipate completing their program during the academic year should meet with an academic advisor to ensure that all graduation requirements will be met. Also, students must apply for graduation by the deadlines published in the academic calendar. Students planning to graduate in spring or summer terms should note that the deadline is very early in the spring term. The commencement ceremony is held once a year, at the end of spring term (late April or early May). Caps and gowns are available at campus bookstores for those who have applied for graduation. There is no cost for these items.

Special Recognition for Outstanding Academic Performance

(College Credit Students Only)

The College gives special recognition to students who demonstrate outstanding academic performance while working toward a degree. Students are eligible for the following recognition:

Dean's List - recognizes students who have a term GPA of 3.5 or above for 12 or more credits earned in the fall or spring term, and for 6 or more credits earned in the summer A or summer B terms.

Letter of Congratulations - the campus academic dean sends a special letter of congratulations to students who earn a term grade point average of 4.0 for 12 or more credits earned in the fall or spring terms (excluding courses that do not satisfy degree requirements).

In addition, special designations are entered on transcripts of students awarded a degree program as follows:

Honors

A cumulative GPA of 3.5-3.69 is required to graduate with Honors.

Honors and Distinction

A cumulative GPA of 3.5-3.69 and at least 15 credits earned in honors courses

is required to graduate with Honors and Distinction.

Highest Honors

To graduate with Highest Honors, a student must achieve a cumulative GPA of 3.7 or higher.

Highest Honors and Distinction

A cumulative GPA of 3.7 or higher and at least 15 credits earned in honors courses is required to graduate with Highest Honors and Distinction.

Phi Theta Kappa

To be eligible for induction into Phi Theta Kappa, the International Honor Society of the Two-Year College, a student must have completed a minimum of 12 college-level credits leading to an Associate degree, with a minimum 3.5 GPA and the student must be currently enrolled. Upon graduation, initiated students will have the designation noted on their transcript.

Transfer Information

Transfer information and resources, including transfer agreements and transfer tips, can be found at: <http://www.mdc.edu/academics/transfer/default.aspx>.

Graduating with an Associate in Arts degree guarantees MDC graduates numerous transfer benefits. Certain Associate in Science/Associate in Applied Science degrees are also transferable to related baccalaureate degree programs. Additional information about transfer guarantees and agreements can be found in the Articulation section below.

Miami Dade College offers baccalaureate degrees in several areas of study: <http://www.mdc.edu/academics/programs/bachelors.aspx>. Students who meet the admissions criteria for these programs may apply at: <https://sisvsr.mdc.edu/admission2/default.aspx>.

Campus Advisement & Career Services Offices offer students a variety of academic advising and career-related services. Students who are undecided about their academic major or career goals, or who are interested in a systematic investigation of the universities best

sued for their needs, should visit the Advisement & Career Services Office at their campus.

Articulation

Articulation is a system designed to provide for smooth movement of students from high school, through the Florida College System and into a baccalaureate degree program at a State University, Florida College System institution, or other postsecondary institution. There are a number of articulation agreements which create special transfer opportunities for students (updated information located at <http://www.mdc.edu/academics/transfer/default.aspx>).

Articulation Agreements with Miami-Dade County Public Schools

Miami Dade College and Miami-Dade County Public Schools have entered into several articulation agreements. These range from the formalized New World School of the Arts and the School for Advanced Studies, to agreements for transfer of specific career pathways and adult vocational credits to Associate in Applied Science and Associate in Science degrees and certificate programs.

State of Florida

Articulation Agreement

Section 1007.23, Florida Statutes, states the following:

(1) The State Board of Education and the Board of Governors shall enter into a statewide articulation agreement which the State Board of Education shall adopt by rule. The agreement must preserve Florida's "2+2" system of articulation, facilitate the seamless articulation of student credit across and among Florida's educational entities, and reinforce the provisions of this chapter by governing: (a) Articulation between secondary and postsecondary education; (b) Admission of Associate in Arts degree graduates from Florida College System institutions and state universities; (c) Admission of applied technology diploma program graduates from Florida College System institutions or career centers; (d) Admission of Associate in

Science degree and Associate in Applied Science degree graduates from Florida College System institutions; (e) The use of acceleration mechanisms, including nationally standardized examinations through which students may earn credit; (f) General education requirements and statewide course numbers as provided for in ss. 1007.24 and 1007.25; and (g) Articulation among programs in nursing. (2)(a) The articulation agreement must specifically provide that every associate in arts graduate of a Florida College System institution shall have met all general education requirements and must be granted admission to the upper division of a:

1. State university, except for a limited access or teacher certification program or a major program requiring an audition.
2. Florida College System institution if it offers baccalaureate degree programs, except for a limited access or teacher certification program or a major program requiring an audition. (b) Florida College System institution Associate in Arts graduates shall receive priority for admission to the upper division of a Florida College System institution or to a state university over out-of-state students. Orientation programs, catalogs, and student handbooks provided to freshman enrollees and transfer students at Florida College System institutions and state universities must include an explanation of this provision of the articulation agreement.
- (3) To improve articulation and reduce excess credit hours, beginning with students initially entering a Florida College System institution in 2013-2014 and thereafter, the articulation agreement must require each student who is seeking an Associate in Arts degree to indicate a baccalaureate degree program offered by an institution of interest by the time the student earns 30 semester hours. The institution in which the student is enrolled shall inform the student of the prerequisites for the baccalaureate degree program.
- (4) The articulation agreement must guarantee the statewide articulation of appropriate workforce development programs and courses between school districts and Florida College System institutions and specifically provide that every applied technology diploma graduate must be granted the same amount of

credit upon admission to an Associate in Science degree or Associate in Applied Science degree program unless it is a limited access program. Preference for admission must be given to graduates who are residents of Florida.

(5) The articulation agreement must guarantee the statewide articulation of appropriate courses within Associate in Science degree programs to baccalaureate degree programs. Courses within an Associate in Applied Science degree program may articulate into a baccalaureate degree program on an individual or block basis as authorized in local interinstitutional articulation agreements.

(6) The articulation agreement must guarantee the articulation of 9 credit hours toward a postsecondary degree in early childhood education for programs approved by the State Board of Education and the Board of Governors which: (a) Award a child development associate credential issued by the National Credentialing Program of the Council for Professional Recognition

or award a credential approved under s. 1002.55(3) (c)1.b. or s. 402.305(3) (c) as being equivalent to the child development associate credential; and (b) Include training in emergent literacy which meets or exceeds the minimum standards for training courses for prekindergarten instructors of the Voluntary Prekindergarten Education Program in s. 1002.59.

Independent Colleges and Universities of Florida (ICUF)

There is also an articulation agreement between the Florida College System and the Independent Colleges and Universities of Florida (ICUF). Under the agreement, Florida College System graduates holding an Associate in Arts degree are guaranteed junior standing in any member institution, recognition of their completed general education core and the application of a minimum of 60 earned credit hours toward a baccalaureate degree.

Additional Agreements

In addition, Miami Dade College has developed several unique arrangements with local and out-of-state colleges and universities that make it possible for a student to apply for admission toward a baccalaureate degree. As a general rule, participating institutions will accept associate degree credits and work out a schedule for the additional bachelor's degree requirements. Miami Dade College also has agreements with universities that facilitate the transfer of MDC baccalaureate graduates to graduate programs. For additional information relating to articulation agreements, contact the Office of School and College Relations or visit <http://www.mdc.edu/academics/transfer/articulation.aspx>.



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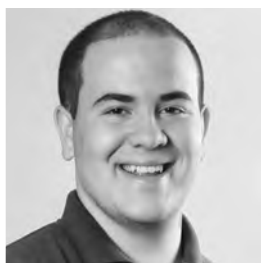
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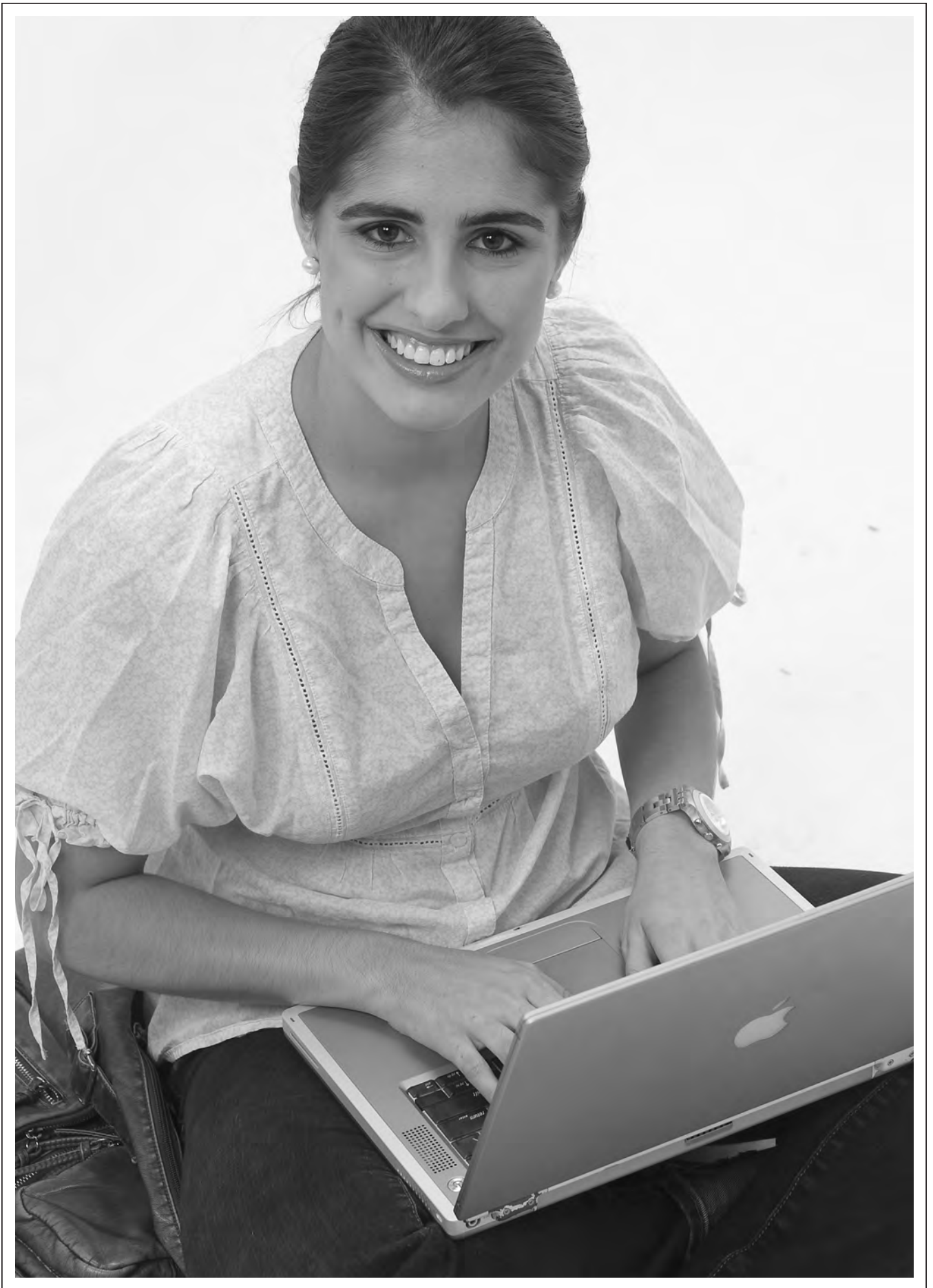
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Baccalaureate Degrees

The baccalaureate (or Bachelor's) degree is an upper-level degree for students who wish to pursue further education. Miami Dade College (MDC) offers the Bachelor of Science (B.S.) and the Bachelor of Applied Science (B.A.S.) in selected areas of study (<https://sisvsr.mdc.edu/ps/sheet.aspx>). All MDC baccalaureate programs are approved by the Florida Board of Education and are accredited by the Commission on Colleges of the Southern Association of College and Schools Commission on Colleges (SACSCOC).

Note: All students must complete the MDC Bachelor's Application at <https://sisvsr.mdc.edu/admission2/default.aspx>.

General Education Requirement

All areas of General Education must be satisfactorily completed. Students must have an overall GPA of at least 2.0 in their General Education courses. Students must have a "C" or better in each course designated as "Gordon Rule."

Foreign Language Requirement

In accordance with Florida Administrative Code 6A-10.02412 and pursuant to Florida Statute 1007.262, all baccalaureate degree-seeking students admitted to the baccalaureate degree program without meeting the Foreign Language Competence (FLC) must demonstrate competence prior to graduation.

Requirements for the Major

Departments are responsible for disseminating major requirements to students. Each candidate for the baccalaureate degree must complete requirements in their chosen major. The upper-division major requirements consist of a minimum of thirty (30) semester hours. See departmental entries for specific requirements.

Dual Degree Versus a Double Major

Students should note that there is a difference between a **double major** (one degree, with a second major listed) and a **dual degree** (second baccalaureate degree). A student completing multiple majors that have the same degree (e.g. Bachelor of Science or Bachelor of Applied Science), will receive a single degree. The transcript will list the degree plus each major.

• Double Major

To obtain a double major, students must meet all requirements of the school/department of the primary major but only the major requirements of the secondary major.

• Dual Degree

Students may receive a second baccalaureate degree provided that:

- 1) the requirements for each major/minor as well as individual college requirements for both the first and the second degrees are satisfied; and
- 2) 30 semester hours in residence are completed, in addition to the hours required for the first degree. The additional 30 semester hours must be completed in residence after the completion of the first degree. Hours earned by the student during the completion of the first baccalaureate degree, over and above those extra credit hours actually required for the first degree, may not be included in the 30 semester hours. There are no General Education requirement for the second (dual) degree.

BACHELOR OF APPLIED SCIENCE

Film, Television & Digital Production

The Bachelor of Applied Science with a major in Film, Television and Digital Production degree is designed to provide the South Florida workforce with a highly skilled applicant pool to fulfill job demands and to provide an affordable opportunity for students completing either an Associate in Science or an Associate in Arts to continue seamlessly and complete a baccalaureate degree. Graduates of the Bachelor of Applied Science with a major in Film, Television and Digital Production degree will be prepared with the abilities and skills needed to succeed in the film and television industry.

Please Note: Students in all programs should check their individualized degree audit report to determine the specific graduation policies in effect for their program of study. Requirements may change based on the year and term a student enters Miami Dade College. The degree audit report includes current graduation requirements. The final responsibility for meeting graduation requirements stated in the degree audit report rests with the student.

Admission Requirements:

- Completion of an Associate in Science degree or Associate in Arts from a regionally accredited institution **OR** a minimum cumulative of 60 semester hours from a regionally accredited institution, including 4 credits applicable to the program curriculum, including ENC 1101 and MAC 1105 or equivalent.
- Have a minimum cumulative GPA of 2.0 or higher.
- Successful completion of the Florida Common Prerequisite coursework (FIL 1030 and FIL 1100).

Health Sciences with an Option in Physician Assistant Studies

The Bachelor of Applied Science with a major in Health Sciences with an Option in Physician Assistant Studies (concentration) consists of 130 total semester credits that incorporate A.A. and A.S. lower-division coursework. Students will complete course work in basic sciences, general studies, clinical medicine, history and physical examination techniques, surgical, clinical and practice management skills. Students will be provided with opportunities to develop discipline-specific medical skills and to expand their knowledge by participating in structured clinical experiences under the supervision of physician assistants and physicians.

Please Note: Students in all programs should check their individualized degree audit report to determine the specific graduation policies in effect for their program of study. Requirements may change based on the year and term a student enters Miami Dade College. The degree audit report includes current graduation requirements. The final responsibility for meeting graduation requirements stated in the degree audit report rests with the student.

Admission Requirements:

Applicants who meet program requirements will be placed into the selection pool. Selection priority will be granted according to the following:

- An earned A.S. degree in Physician Assistant Studies from a regionally accredited institution
- Successful completion of the Physician Assistant National Certifying Examination (PANCE)
- Cumulative GPA of 2.50, 2.75 in science courses, and 2.50 in Physician Assistant coursework
- Completed Health Form
- Successful completion of a background investigation and a drug screen.

Public Safety Management

The Bachelor of Applied Science with

a major in Public Safety Management is designed to provide education and training, resulting in immediate employment possibilities for students in numerous careers in Public Safety. This comprehensive curriculum emphasizes critical thinking, analytical, written and oral communications, as well as research skills designed to prepare today's learners for entry-level, mid-management, and upper-level supervisory positions within Public Safety agencies such as: the FBI, DEA, ICE, U.S. Marshals Service, U.S. Secret Service and others.

Please Note: Students in all programs should check their individualized degree audit report to determine the specific graduation policies in effect for their program of study. Requirements may change based on the year and term a student enters Miami Dade College. The degree audit report includes current graduation requirements. The final responsibility for meeting graduation requirements stated in the degree audit report rests with the student.

Admission Requirements:

- An earned Associate in Science degree or Associate in Arts from a regionally accredited institution OR completion of a minimum of 60 semester hours from a regionally accredited institution.
- Students must have a minimum, cumulative GPA of 2.0

Supervision & Management

The Bachelor of Applied Science degree with a major in Supervision and Management provides an opportunity for students completing an associate's degree to complete a bachelor's degree seamlessly. Graduates of the Bachelor of Applied Science with a major in Supervision and Management will be prepared with the abilities and skills needed to succeed as a manager or supervisor in the dynamic and global business environment. The Bachelor of Applied Science with a major in Supervision and Management prepares graduates with the hands-on training necessary to meet workforce demands.

Please Note: Students in all programs should check their individu-

alized degree audit report to determine the specific graduation policies in effect for their program of study. Requirements may change based on the year and term a student enters Miami Dade College. The degree audit report includes current graduation requirements. The final responsibility for meeting graduation requirements stated in the degree audit report rests with the student.

Admission Requirements:

- An earned Associate in Science, Associate in Applied Science or Associate in Arts from a regionally accredited institution. Or:
- Completion of a minimum of 60 semester hours from a regionally accredited institution, including 45 credits applicable to the program curriculum, including ENC 1101 or its equivalent.
- A minimum cumulative GPA of 2.0 or higher.

Supply Chain Management

The Bachelor of Applied Science degree with a major in Supply Chain Management (BAS-SCM) is an interdisciplinary field that emphasizes cross-functional integration of diverse business functions, facilities, and activities and seeks to manage those activities to enhance a company's competitive advantage. The BAS-SCM is designed to provide knowledge of the supply chain while exploring the risks, operations, logistics, economics, regulatory issues, change management, forecasting, resource allocation, production planning, inventory management, customer delivery, after-sales support and service and other functions basic to business.

Please Note: Students in all programs should check their individualized degree audit report to determine the specific graduation policies in effect for their program of study. Requirements may change based on the year and term a student enters Miami Dade College. The degree audit report includes current graduation requirements. The final responsibility for meeting graduation requirements stated in the degree audit report rests with the student.

Admission Requirements:

- Earned Associate in Science (AS-Transportation and Logistics or business related fields) with a minimum of 15 general education credits or Associate in Arts from a regionally accredited institution. OR
- A minimum of 60 semester hours from a regionally accredited institution, including completion of all general education requirements.
- Completion of the Common Prerequisite courses applicable to the program, with a minimum grade of "C" in each: ACG 2021, ACG 2021L, ACG 2071, ACG 2071L, ECO 2013, ECO 2023, MAN 2021, TRA 1154, and TRA 2010
- A minimum cumulative GPA of 2.5 or higher.

BACHELOR OF SCIENCE

Biological Sciences

The Bachelor in Science (B.S.) in Biological Sciences is designed to provide students with a broad foundation in biology. Miami Dade College students will explore structure, function, genetics, and evolution of cells and organisms, while being provided the hands-on skills necessary to obtain jobs in the Biological/Life Science fields. Students take the core courses in biology, chemistry, physics and mathematics, and must meet the same General Education Requirements as all students seeking an A.A. Students may choose from a variety of electives in science and general education to complete their degree requirements.

Admission requirements:

- Students must submit a completed Miami Dade College Admissions Application.
- An Associate in Science in Biotechnology or Associate in Arts from a regionally accredited institution OR
- A minimum of 60 semester hours from a regionally accredited institution including a minimum of 16 semester hours of the Common Prerequisites applicable to the program, ENC 1101 or its equivalent,

and MAC 1105 or higher

- A minimum cumulative GPA of 2.0 or higher on a 4.0 scale
- A minimum of 2.0 or higher on a 4.0 scale in natural science courses (Note: Common Prerequisites necessary for program admission should be earned within 10 years of admission to the baccalaureate degree. If these credits are more than 10 years old, students must consult an academic advisor.)

Students entering with an A.S. in Biotechnology degree may have more than 24 Elective credits and may need additional General Education credits to meet the 36 General Education credits required for the baccalaureate degree. Students entering with an A.A. or an A.S. in Biotechnology degree may need additional electives to provide appropriate background for the baccalaureate degree (i.e., State-mandated Common Prerequisites or Lower-Division program requirements).

Early Childhood Education

Upon completion of the Bachelor of Science degree with a major in Early Childhood Education program, the student will be eligible to obtain a Florida Educator Certification in Preschool (Birth to Age 4) and Pre-Kindergarten/Primary (Age 3 to Grade 3) with endorsements in English for Speakers of Other Languages (ESOL), Reading, and Pre-Kindergarten Disabilities.

Admission requirements:

- A completed MDC application
- A completed MDC Supplemental admission application
- Recommendation form
- An earned Associate in Science (A.S.-Early Childhood) or Associate in Arts from a regionally accredited institution, including 36 semester hours of General Education coursework OR
- Completion of a minimum of 60 semester hours from a regionally accredited institution, including completion of all general education requirements
- Minimum of 2.5 Grade Point Average on a 4.0 scale
- Completion of the Common Education Prerequisite courses with a minimum grade of "C" in each: EDF1005,

EDF2085, EME2040, EEC1000, EEC1001, EEC2601, EEC2224, EEC2271, EEC2407

- General Knowledge Test (GKT)
- Essay section passed for admission
- All other sections (Reading, English, Math) passed or in process
- Foreign Language:
 - Students admitted to the baccalaureate degree program without meeting the foreign language admission requirement must complete such requirements prior to graduation.
 - If satisfying the requirement by high school courses, high school transcript must be presented.
- Nine credits of diversity must be taken at the lower division, including a minimum of 6 semester hours with an international or diversity focus. Eligible courses will be determined with assistance of a MDC School of Education advisor.
- Completion of CGS1060 with a minimum grade of "C" or passing score on the Computer Competency Test
- Background clearance card (current)
- Student Acknowledgement of Responsibilities (signed)
- All financial obligations to Miami Dade College satisfied

Please Note: All applicants must complete the admissions process with a school of education advisor.

Education

The four-year baccalaureate degree programs in Secondary Education and Exceptional Student Education are state-approved teacher education programs. The programs prepare students to become professional teachers and pass state professional certification exams. Clinical experience in school settings is included in each course to provide practical experience and culminates with a semester of full-time internship. Please refer to the online College Catalog for specific program prerequisites (www.mdc.edu).

Students may select programs in the following areas:

- Exceptional Student Education (K-12)
- Mathematics Education (Grades 6-12)

- Biology Education (Grades 6-12)
- Chemistry Education (Grades 6-12)
- Earth/Space Science Education (Grades 6-12)
- Physics Education (Grades 6-12)

Additionally, individuals with bachelor's degrees in other fields are able to earn teacher certification by completing courses in the SOE.

Please Note: Students in all programs should check their individualized degree audit report to determine the specific graduation policies in effect for their program of study. Requirements may change based on the year and term a student begins the Teacher Education programs at Miami Dade College. The final responsibility for meeting graduation requirements stated in the degree audit report rests with the student.

Admission Requirements:

- Passing scores on General Knowledge Test (GKT). For more information about GKT, visit the Testing Office at one of the MDC campuses.
- Completion of an A.A. from a regionally accredited college. Students with at least 60 semester credit hours of postsecondary education from an accredited college or university will be considered.
- A cumulative grade point average of 2.5 on a 4.0 scale in all postsecondary coursework (including common prerequisite coursework).
- Completion of all general education requirements and lower-division state-mandated common prerequisites, including the following three statewide Education common prerequisites:
 - EDF 1005 - Introduction to the Teaching Profession
 - EDF 2085 - Introduction to Diversity
 - EME 2040 - Introduction to Technology

And the Miami Dade College School of Education prerequisite course:

- EEX 2000 Introduction to Special Education

Note: Grades in these three courses must be a minimum of "C."

- Applicants must clear a Level 2 background check conducted by the Florida Department of Law Enforcement (FDLE) and the Federal Bureau of Investigation (FBI). The

clearance procedures are coordinated by the School of Education for all education students.

In addition, some school districts require drug testing for student interns and/or student teachers. Students with felony arrests may wish to consider this carefully and seek advice from an advisor before applying to programs in the School of Education.

- Satisfactory completion of foreign language requirement, computer competency and financial obligations to MDC met.
- A supplemental application, Student Acknowledgement of Responsibilities and recommendation form are also required.

Prospective students are advised to ask the School of Education for current information regarding specific programs of interest.

Effective research-based practices, a technology-enhanced curriculum, clinical education, a dynamic, updated and knowledgeable faculty that models effective teaching, a supportive and caring administration and many support services are in place to ensure each student's success.

Electronics Engineering Technology

The Bachelor of Science with a major in Electronics Engineering Technology is designed to prepare students for entry level engineering positions such as Electronics Engineers, Test Engineers, Project Engineers, Electronics Manufacturing Engineers, Electronics Systems Engineers, Electronics Hardware Engineers, Technical Support Engineers, Quality Control Engineers, Reliability Engineers, Field Engineers, Processing Engineers and Sales Engineers.

Please Note: Students in all programs should check their individualized degree audit report to determine the specific graduation policies in effect for their program of study. Requirements may change based on the year and term a student enters Miami Dade College. The degree audit report includes current graduation requirements. The final responsibility for meeting graduation requirements

stated in the degree audit report rests with the student.

Admission Requirements:

- Students must have an earned A.A. or A.S. degree from a regionally accredited institution or must have completed a minimum of 60 credit hours with a cumulative grade point average of 2.0 and a minimum grade point average of 2.5 in all lower-division engineering technology core courses.
- Students must have a minimum of 28 lower-division technology courses and must satisfy all course prerequisite requirements before being admitted into senior level institution engineering technology core courses.
- Students must complete MAC1105 and ENC1101 prior to being admitted into the senior level institution.

Information Systems Technology

The Bachelor of Science (BS) with a major in Information Systems Technology (IST) immerses students in information systems technology and provides skills and knowledge essential to effectively support the design, planning and management of information infrastructures and information resources within diverse organizational settings in all aspects of our increasingly digital culture and economy. The curriculum introduces concepts upon which information systems are founded and analyzes them as suitable solutions to real-world problems. The BS in IST degree program addresses the need for information systems technology professionals with systems management and development expertise.

Please Note: Students in all programs should check their individualized degree audit report to determine

the specific graduation policies in effect for their program of study. Requirements may change based on

the year and term a student enters Miami Dade College. The degree audit report includes current graduation requirements. The final responsibility for meeting graduation requirements stated in the degree audit report rests with the student.

Admission Requirements:

- Earned Associate in Science (AS-Transportation and Logistics or business related fields) with a minimum of 15 general education credits or Associate in Arts from a regionally accredited institution.
- OR
- A minimum of 60 semester hours from a regionally accredited institution, including completion of ENC 1101 or equivalent, CGS 1060 or equivalent.
- Completion of the Common Pre-requisite courses applicable to the program, with a minimum grade of "C".
- A minimum cumulative GPA of 2.0 or higher on all lower division Computing Technology courses (earned within 5 years of admission to the BS-IST program).
- A minimum cumulative GPA of 2.0 or higher.

Nursing

The Bachelor of Science in Nursing (BSN) is designed for licensed RNs with an A.S. degree in Nursing from regionally accredited programs who wish to attain the next level of education in order to provide professional nursing care in all clinical practice settings around the world, or to be eligible for advanced nursing leadership, management, staff education and practice positions, in a multicultural society.

Please Note: Students in all programs should check their individualized degree audit report to determine the specific graduation policies in effect for their program of study. Requirements may change based on the year and term a student enters Miami Dade College. The degree audit report includes current graduation requirements. The final responsibility for meeting graduation requirements stated in the degree audit report rests with the student.

Admission Requirements:

- An active license as a registered professional nurse;
- An earned A.S. in Nursing from a regionally accredited college;
- A minimum 2.5 cumulative GPA and

2.5 GPA in Nursing coursework from a regionally accredited A.S. in Nursing program, or equivalent;

- Completed School of Nursing application with supporting documentation;
- A successfully completed background investigation and drug screening.

POST-BACCALAUREATE CERTIFICATE**Educator Preparation Institute (EPI)**

The Educator Preparation Institute (EPI) is an approved Florida Department of Education intensive competency-based accelerated certification program designed for career changers who wish to become teachers. This program offers an opportunity for non-education majors who have a minimum of a bachelor's degree to become highly qualified teachers for public, charter and private school employment in the State of Florida and

obtain professional state certification. The program can be completed in less than a year.

Participants may begin their teaching careers in high-need subject areas and specializations.

Applicants interested must apply to the Florida Department of Education for a Statement of Eligibility and pass the General Knowledge Test of the Florida Teacher Certification Exam

(see <http://www.teachinflorida.com>). Candidates are encouraged to contact the School of Education for more specific details.

Please Note: Students in all programs should check their individualized degree audit report to determine the specific graduation policies in effect for their program of study. Requirements may change based on the year and term a student enters Miami Dade College. The degree audit report includes current graduation requirements. The final responsibility for meeting graduation requirements stated in the degree audit report rests with the student.





Associate in Arts Degree

A.A. Degree Pathways

Miami Dade College offers courses for a wide range of pathways in the Associate in Arts degree. The A.A. prepares students to enter the junior year at four-year upper-division colleges and universities.

Four-year institutions vary in the required number and nature of courses a student needs to take during the freshman and sophomore years. The State Common lower level course prerequisites have been identified for all baccalaureate majors. Students should see an advisor for additional information.

Students who have determined which profession or major they plan to pursue should become familiar with the requirements of the upper-division institutions. With the help of advisors and through using the degree audit, students may choose electives best suited for pursuit of a baccalaureate degree.

Students must be high school graduates or have a high school equivalency diploma (GED) to enroll in Associate in Arts courses.

Each pathway is comprised of courses specified by one or more of the universities in the SUS or by local private institutions. The first two years of these transfer programs contain specialized courses as prescribed by the respective university (refer to FLVC.org for the Common Prerequisite Manual information). All general education requirements are included. Students should be aware that credits earned in excess of the 60 credits required for graduation might not be accepted for transfer by the upper-division university. Students may be awarded the A.A. degree only once, and students who have already earned a baccalaureate degree cannot be awarded an A.A.

Note: The A.A. does not prepare students to be eligible to take certification/licensure exams or to practice in the health care professions.

STUDENTS SHOULD CHECK THEIR INDIVIDUALIZED DEGREE AUDIT REPORT TO DETERMINE THE SPECIFIC GRADUATION POLICIES

IN EFFECT. REQUIREMENTS MAY CHANGE BASED ON THE YEAR AND TERM A STUDENT ENTERS MIAMI DADE COLLEGE. THE DEGREE AUDIT REPORT INCLUDES CURRENT GRADUATION REQUIREMENTS. THE FINAL RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS STATED IN THE DEGREE AUDIT REPORT RESTS WITH THE STUDENT.

Accounting

This pathway offers fundamental instruction in accounting and related subjects (such as economics or business). Students who wish to become accountants may transfer to senior colleges or universities that offer baccalaureate degrees in accounting. Accountants work in a variety of settings such as corporations, small businesses, financial institutions and government agencies.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Agriculture

Agriculture is the art, science and industry of managing the growth of plants and animals for human use. Study at MDC emphasizes a strong foundation in the sciences of biology (including botany), chemistry and/or physics. The range of careers in agriculture extends from rural farming to urban landscaping, with numerous specializations in areas such as hydroponics, agricultural engineering, animal husbandry, food packing and processing and soil chemistry.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Anthropology

Anthropology studies all aspects of human life by evaluating society, evolution and culture. Course offerings prepare the student in the four fields of the discipline: cultural anthropology, physical anthropology, anthropological linguistics and archaeology. Most anthropologists are researchers who work in museums or educational institutions. Students pursuing anthropology should plan to obtain a Ph.D. to

fully succeed in the field.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Architecture

This pathway provides a foundation in areas such as architectural drawing, design and structure, as well as necessary courses in mathematics. Students may transfer to any of the universities in Florida or other states that have accredited programs in architecture. An architect designs and oversees the construction or remodeling of buildings, working with engineers and contractors toward a prescribed goal.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Area and Ethnic Studies

The undergraduate pathway in area and ethnic studies is a flexible, interdisciplinary program that emphasizes the history, politics and literature of various groups. Students can concentrate in a specific area such as African-American or Black Studies, American Studies, Asian Studies, Jewish Studies, Latin American Studies or Women's Studies. These studies could lead to careers in sociology, political science or academic work in areas such as comparative literature or history.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Art or Art Education

This pathway offers hands-on instruction in media such as ceramics, jewelry-making and metalsmithing, painting, photography, print-making, drawing, computer art and sculpture. Additionally, the curriculum includes design, art history and education classes, so that students may work as artists or art teachers.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Atmospheric Science and Meteorology

To transfer to a four-year program in atmospheric science and meteorology, students must take science and math

courses as well as introductory courses in meteorology. Job opportunities may include weather forecasting in aviation, marine or shipping companies, government agencies, broadcasting or transportation industries. Additionally, meteorologists may work with other scientists researching phenomena such as volcanoes, hurricanes and global warming.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Biology

Biology, or life science, is the study of all aspects of living organisms, emphasizing the relationship of animals and plants to their environment. This pathway provides the first two years of a four-year curriculum for students planning to major in biology, botany, zoology, marine biology, ecological studies or microbiology. Biology students may also enter professional schools in medicine, dentistry, veterinary medicine, optometry or podiatry.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Biotechnology (Interdisciplinary Sciences)

Biotechnology is the practice of using living organisms to make products or improve processes. It combines elements of biology, chemistry, engineering and computing. This pathway provides the first two years of a four-year curriculum for students planning to major in biotechnology, biology, chemistry or bioinformatics. Students may also enter professional schools in related disciplines.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Building Construction

This pathway is for students primarily interested in the construction of buildings rather than their architectural design. Coursework includes math and science subjects as well as courses in business and construction. A four-year degree in this program will prepare students to enter the building construction industry at the management level.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Business Administration

Business Administration includes courses in accounting, business law and finance, as well as more generalized courses in mathematics. Students may transfer to senior colleges or universities that offer baccalaureate degrees in business administration. Ultimately, graduates may work in the fields of banking, finance, marketing, information systems or real estate.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Chemistry

Chemistry is the science that investigates the composition, properties and change of properties of elementary forms of matter. In addition to coursework in chemistry, the A.A. pathway provides science and math-intensive courses that include botany, biology, physics, geometry and calculus. Chemists may work as researchers, analysts or quality control specialists in companies that manufacture anything from pharmaceuticals to food products. Additionally, students may pursue careers in medicine, environmental science, chemical engineering or many other fields.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Computer Arts Animation

This pathway enables students to develop creative and artistic skills in conjunction with advanced computer skills. Studies include basic drawing and figure drawing, use of computer animation software and general education, as well as evaluation of trends and standards in the animation industry for film, television and video game design.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Computer Information Systems (CIS)

CIS focuses on the structure, management and control of information resources on computers. Coursework includes business and math classes, as well as courses in information systems and programming languages. Students transferring to four-year institutions may major in computer information systems, computer and information sciences, information

sciences or management information systems degrees which lead to careers in systems analysis, computer application programming, database management, network services and IT support.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Computer Science

As the name suggests, Computer Science is more science-intensive than CIS. In addition to courses in programming and applications, the pathway provides a thorough grounding in mathematics, biology, chemistry and physics. Computer scientists design technical programs, do research, create new technologies, develop operating systems, code device drivers, write specialized programming languages and implement complex applications in a variety of settings. Computer Science requires skills in mathematics and physics. Students must complete Calculus II and Physics with Calculus II before entering their junior year.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Criminal Justice Administration

The A.A. pathway in Criminal Justice Administration provides coursework which focuses on criminal justice and law, including classes in history, sociology and political science. Pre-law students will find this pathway suitable, as well as those seeking bachelor's degrees in public safety related fields such as law enforcement, corrections, security and loss prevention, probations and parole, emergency management, crime scene investigation and criminal justice. The A.A. pathway offers students a seamless transition to the MDC's Bachelor of Applied Science degree with a major in Public Safety Management.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Dance

Studio classes feature modern dance and ballet, and the pathway also includes theoretical courses. The curriculum meets the pre-professional and general education course requirements for transfer, but students should meet with an advisor to discuss the specific

requirements of the four-year institution they plan to attend. Often, departments in four-year institutions will require an audition. This pathway is designed to prepare students pursuing careers in choreography, ballet, jazz, contemporary dance performance, or for students wishing to become dance teachers.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Dietetics

This pathway provides the science education needed to transfer to a four-year program in dietetics. Chemistry, biology, anatomy and physiology courses are emphasized. Dieticians and nutrition specialists may work as meal planners in institutions such as schools and hospitals, in the food products or health and fitness industry, or in a range of health and medical professions.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Drama or Drama Education

This is a comprehensive pathway in all aspects of theatrical production, including lighting, costuming, make-up and stagecraft. Students participate in stage productions which are presented to the public throughout the academic year. While this pathway does provide the necessary coursework to transfer to a four-year institution, some departments in four-year colleges and universities will require an audition or portfolio, depending on the student's intended area of study. Careers in drama include education, theatrical production, casting, acting and a wide variety of stagecraft.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Economics

Economics is the study of how people produce, trade and consume goods and services. The A.A. pathway emphasizes fundamental coursework in business and mathematics. While many students choose to obtain graduate degrees, economists with bachelor's degrees can work in fields such as business economics and forecasting, urban real estate and regional planning, analysis of markets and industrial regulation, management consulting, and in banking and financial services.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Engineering

Miami Dade College offers 10 engineering A.A. pathways: architectural, chemical, civil, computer, electrical, industrial, mechanical, ocean, science, and surveying and mapping. Each has its own curriculum to best prepare students for transfer to a four-year institution. Interdisciplinary fields can include the study of biomechanics, kinesiology, nutrition and related areas.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

English Literature & English Education

English literature is the study of great written works and how they were shaped by historical and cultural events. This pathway also includes education courses to prepare students for careers as teachers. However, a student who graduates with a bachelor's degree in English is equipped to work in publishing and may be qualified to work as a writer in virtually any field.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Environmental Studies

The Environmental Studies pathway examines environmental issues from both ecological and sociological standpoints. It is an interdisciplinary field that

combines life sciences, social sciences and the humanities. Students at MDC take mostly science and mathematics courses to prepare for transfer into a baccalaureate program. This field is projected to grow as the need for environmental researchers, analysts, engineers and journalists grows.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Exercise Science

Exercise Science studies the relationship of physical exercise to human health and disease prevention. This pathway at MDC prepares students for transfer with coursework in human anatomy and physiology, nutrition, health and exercise. Exercise science is a growing field with professionals working in diverse settings, such as hospitals and health clubs, research facilities and sports teams. Specialists also work in corporate, industrial and educational environments.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Foreign Languages

Foreign language pathways train students to achieve reading, writing and verbal fluency in one or more foreign languages. The demand for interpreters, translators and language instructors is projected to grow, and graduates with bachelor's degrees can work almost anywhere in the world for corporations, businesses, governments, nonprofit agencies or schools.



For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>

Forestry

Forestry studies the ecology and economy of forest management. Students should be aware that the University of Florida is the only in-state university offering this program, with majors in forest resources, and conservation and urban forestry. Foresters manage, develop and protect woodlands and their resources (timber, water, wildlife, forage and recreational areas).

For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>

Geology

Geologists study the structure, composition and history of the Earth. This pathway provides basic coursework in geology, calculus, biology and chemistry. Some examples of employers of geologists include agencies targeting pollution or urban waste, corporations searching for new sources of petroleum or natural gas and research organizations studying volcanoes or earthquakes.

For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>

Graphic or Commercial Arts

Graphic design emphasizes studio courses in design, drawing and digital techniques. This pathway provides students with occupational skills in page layout, illustration and photographic editing software with a variety of projects, leading to extensive portfolio preparation. Graduates may find work in advertising agencies, design studios, exhibition and display businesses, department stores and industrial organizations.

For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>

Health Services Administration

This pathway provides the fundamental science coursework for transfer to a baccalaureate program in health services administration. The baccalaureate degree prepares students for entry-level management positions in health services delivery organizations. People licensed in clinical health often pursue this pathway, as do medical care professionals who do not have an undergraduate degree. The baccalaureate also prepares individuals for graduate study in this field.

For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>

History

History is the study of the events, patterns and cycles that have shaped our present world with an emphasis on examining change and continuity over time. Depending on the area of specialization, history may examine political and economic events, social evolution and cultural developments or a combination of these. The two-year pathway at MDC prepares students for transfer with courses in American, African, Asian and Latin American history as well as surveys of world civilizations and courses covering the Holocaust and Genocide Studies. Professional historians (e.g., museum curators and educators) often pursue the doctoral degree. The bachelor's degree in history can prepare students for graduate work in law or political science, and applies to many careers requiring good writing or analytical skills.

For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>

Hospitality Administration/Travel & Tourism Management

This field combines traditional business and management education with training specific to the hospitality, travel and tourism industries. Careers in the hospitality, travel and tourism industries include hotel and restaurant, food and beverage management, and entry and mid-level positions with cruise lines, airlines, land-based tourism companies, as well as travel agencies.

For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>

Interior Design

Interior Design studies combine architecture, art and design courses, training the student to understand the relation of interior spaces to the total design of structures (including architecture, landscaping and lighting). An interior designer encounters a variety of challenging work, in professional, institutional and private settings.

For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>



International Relations

Students can obtain the coursework necessary to transfer to four-year programs in international relations, which usually includes political science and economics courses. Employment opportunities are available at the baccalaureate level in business, government, journalism and political organizations. Many students, however, go on to pursue graduate work or law school.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Landscape Architecture

The A.A. pathway in landscape architecture prepares students for transfer by offering courses in architecture, horticulture and botany. Landscape architects plan the arrangement of outdoor areas for public use and enjoyment, making recommendations for the types and location of plantings, circulation, drainage and other harmonizing improvements with existing land features and architectural structures. The University of Florida and Florida International University offer the only in-state programs in landscape architecture.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Mass Communication/Journalism

Mass communication examines the role of media in society. Coursework includes media criticism and analysis, U.S. history and government, sociology and a study of the broadcast, cable and Internet industries. Depending upon the student's area of interest, study may also include journalism, and television and radio production. A bachelor's in mass communication equips one to work in journalism, corporate communication, or in certain business or managerial positions in television or radio.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Mathematics

Mathematics is the science and study of numbers and shapes. It originated as a system used to model things in the universe and evolved into an essential tool in many fields of study. The Associate in Arts (A.A.) pathway in Mathematics is recommended for transfer students planning to earn a baccalaureate degree

with a major in mathematics or mathematics education, engineering and the physical sciences. Students who complete this pathway will obtain a broad and enriched background in mathematics and liberal arts, will be able to use contemporary technology to explore mathematical ideas, and will be able to effectively communicate their ideas mathematically. Courses should be selected in consultation with an advisor from the Department of Mathematics.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Music or Music Education

Music or music education students must be proficient in music theory and music history, and must be skilled performers. Careers in music include individual and group performance, conducting, composing and teaching. Music graduates may also have jobs working in ancillary professions such as retail, publishing and recording.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Philosophy

Philosophy investigates the fundamental principles of being, knowledge or conduct. There are numerous systems of philosophical discourse and the two-year program introduces students to many of these. Unless a student wishes to earn a doctorate and teach at the college level, a bachelor's degree in philosophy is generally useful only in indirect ways. It can prepare students for graduate work in other fields such as law or theology, and the study of philosophy usually sharpens a student's analytical skills.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Physical Education Teaching and Coaching

This pathway is designed for students interested in pursuing careers in physical education at the pre-school, elementary, secondary, college or community program level. This curriculum meets the pre-professional and "General Education" course requirements for transfer, but due to variations in prerequisites, students should confer with a departmental advisor. Employment opportunities include teaching, coach-

ing, sports communications, sports psychology, sports history, sports sociology and sports medicine. Target populations include the able-bodied, physically limited and aged, and the environments include educational, governmental, public and/or private settings.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Physics

Physics is the study of the motion and force of energy and matter. This science is applied to different kinds of energy and matter, as in thermodynamics, astrophysics, nuclear physics and wave motion analysis. The pathway provides a fundamental education in mathematics and science topics so that students may transfer to pursue their area of interest. Careers in research are available both in government agencies and private industries, as well as in educational institutions, though in most cases graduate degrees are required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Political Science

Political science examines the role and effects of government actions on society. The A.A. pathway prepares students for transfer with coursework in history, literature, economics and government. Political scientists may work in various government jobs, or may work as lobbyists, researchers, political analysts or journalists. In addition to graduate work in the field, a bachelor's degree in political science also prepares students for law school.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Pre-Bachelor of Arts

The Pre-Bachelor of Arts pathway at MDC is designed for students who seek a general program with greater freedom to explore intellectual fields of their particular interest. This pathway challenges students to assume major responsibility for the direction of their own education. The pathway also provides a broader range of educational opportunities than in specialized pathways. At the upper division, a major theme or area of concentration is usually required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Pre-Law

Although no specific pathway is mandatory for Pre-Law, MDC offers courses in criminal justice, government, history and business to prepare a student for future coursework. Students should work with an advisor to determine the best four-year degree to pursue.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Pre-Medical Science/ Pre-Dentistry/Pre-Physician's Assistant

The A.A. pathway does not prepare students to be eligible to take certification/licensure exams or to practice in the medical science, dentistry or physician's assistant (P.A.) professions. This pathway is designed to meet the first two years of required courses for students planning careers in medicine and dentistry. Pre-medical education should include a foundation in chemistry, biology, mathematics and physics, as well as a broad education in the humanities and social sciences. This pathway enables the student to transfer to colleges or universities that offer a baccalaureate degree in pre-medical degrees such as biology. Admission to a professional school is dependent upon academic coursework and scores on a national test. Applicants should have a minimum "B" average.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Pre-Medical Technology

The A.A. pathway does not prepare students to be eligible to take certification/licensure exams or to practice in the medical technology profession. This pathway provides the science coursework necessary to transfer to a four-year baccalaureate program. Students must transfer to an upper-division institution for the third year. Generally, the fourth year is spent in a clinical setting, usually in a hospital where students learn laboratory techniques. Members of this profession work in clinical laboratories performing the wide variety of tests that aid physicians in the diagnosis and treatment of patients. Most medical technologists work in hospitals, physician's public health laboratories, universities or in industry.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Pre-Nursing

The A.A. pathway does not prepare students to be eligible to take certification/licensure exams or to practice in the nursing profession. The professional nursing courses are taken in the last two years at the upper division. Upper-division programs are limited access, require an above-average academic record, and have widely differing pre-professional course requirements. Therefore, students are advised to check with the nursing department of the senior institution they wish to attend. Most upper-division programs also offer a track for registered nurses (R.N.s) completing an Associate in Science degree to earn a BSN degree.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Pre-Occupational Therapy

The A.A. pathway does not prepare students to be eligible to take certification/licensure exams or to practice in the occupational therapy profession. The pathway prepares students for transfer by offering courses in human anatomy and physiology, human behavior, growth and development, along with more basic science courses. Occupational therapists use creative/recreational activities and manual skills to evaluate and treat physical and mental illnesses. Employment possibilities include civilian, military and government hospitals, rehabilitation centers, long-term and extended-care facilities, community mental health centers and clinics for the physically limited.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Pre-Optometry

The A.A. pathway does not prepare students to be eligible to take certification/licensure exams or to practice in the optometry profession. This pathway provides the fundamental science coursework necessary to transfer to a four-year institution, where students can obtain a degree in an appropriate field, such as biology. To be an optometrist, one must earn the Doctor of Optometry (O.D.) professional degree.

A bachelor's degree with a strong science background is required for admission. Graduates must pass a state licensure exam in order to practice.

Optometrists prescribe glasses, contact lenses and visual therapy, and offer non-surgical treatment of eye diseases and the rehabilitation of patients with visual disabilities.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Pre-Pharmacy

The A.A. pathway does not prepare students to be eligible to take certification/licensure exams or to practice in the Pharmacy profession. The Pre-Pharmacy pathway provides the math and science education needed to transfer to a baccalaureate program. Career opportunities in pharmacy include positions in a hospital or institutional pharmacy, in industry or manufacturing, in a retail or clinical pharmacy, in government service, in pharmacy administration, in laboratories and in pharmaceutical journals. The University of Florida, Florida A&M University and Nova Southeastern University are the only in-state institutions that offer the baccalaureate and/or doctorate in this field.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Pre-Physical Therapy

The A.A. pathway does not prepare students to be eligible to take certification/licensure exams or to practice in the Physical Therapy profession. This pathway prepares students for transfer by providing intensive coursework in mathematics and science. Most upper-division programs have selective admissions and transfer requirements vary, so students should work with an advisor. Physical therapists help rehabilitate individuals who have been disabled by injury or disease. They usually work in health care settings such as hospitals or nursing homes.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Pre-Veterinary Medicine

The A.A. pathway does not prepare students to be eligible to take certification/licensure exams or to practice in the Veterinary Medicine profession.

Veterinary medicine is the study of the diagnosis, treatment and control of disease and injuries among animals. Veterinarians may specialize in the health and breeding of certain animals, performing surgery, prescribing and administering drugs and vaccines and research. Veterinarians may also concentrate on the inspection of meat, poultry and other foods as part of federal and state public health programs. The University of Florida is the only state school that offers a veterinary program.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Psychology

Psychology is the science of human behavior and mental processes that affect mental and physical health. The pathway covers the science and mathematics subjects needed to transfer to a four-year institution. While the bachelor's degree in psychology could be useful in a number of careers, professional psychologists must continue to graduate study. Employment opportunities with a graduate degree include teaching or counseling in a wide variety of settings.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Public Administration

This is an interdisciplinary field combining study of business, government and economics to prepare students for a career in the public sector. Although some students pursue graduate degrees, those with bachelor's degrees may obtain work managing budgets, or developing programs and policies in government, education and nonprofit settings.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Recreation

To prepare for upper-division work in recreation, students take courses in accounting, economics, human anatomy and physiology, and health sciences. This pathway meets the pre-professional and general education course requirements for transfer, but due to variations in upper-division requirements, students should confer with an advisor. Recreation professionals often work in youth agencies, but may also develop

careers in industries such as health care, fitness, and travel and tourism.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Religion

Students may compare religions of the world, study the inherent values of various religions, examine the impact of religion on culture and society and explore one religious system in depth. The two-year curriculum offers basic coursework in world and western religions, as well as an array of history courses. Students who obtain the bachelor's degree may pursue graduate theological studies or a ministerial career or they may seek work immediately in a religious organization.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Social Work

This pathway prepares students for upper-division education in social work by offering courses in science and sociology. Social workers provide the link between organized social services and individuals and families unable to provide for themselves or needing assistance in problem-solving. Potential employers include hospitals, mental health centers, rehabilitation centers, government agencies, schools and correctional institutions.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Sociology

Sociology is the systematic study of human interaction, that is, society, social relationships, social structures and social change. Coursework emphasizes topics such as social norms, values, social change and deviance. Graduates with a bachelor's degree can work within community organizations, government agencies and the criminal justice field. Many students go on to pursue graduate degrees and work in social policy, public administration, law, government or social services.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Speech Pathology and Audiology

This pathway provides fundamental coursework in biology and communications so that students may transfer to a four-year institution. The curriculum leading to the baccalaureate degree is usually designed as pre-professional education for a graduate program. Speech language pathologists and audiologists provide clinical services to individuals with speech, language and hearing impairments. Eligibility for the Certificate of Clinical Competence from the American Speech-Language-Hearing Association and state licensure are not possible until requirements for the graduate degree are met.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Teaching

This pathway prepares students pursuing education by providing a comprehensive curriculum in the areas of science, liberal arts and the pedagogy necessary for transfer to Florida colleges and universities, including Miami Dade's baccalaureate programs offered by the School of Education. Areas of specialization include elementary, pre-elementary/early childhood, exceptional student and secondary education. Available areas of specialization in secondary education are biology, chemistry, earth/space science, English and foreign language, mathematics, physics and social science. Additionally, a specialization in vocational secondary education is available. A curriculum appropriate to each area of specialization is featured in the specific A.A. pathway. Students should work with an advisor to determine the appropriate coursework for transfer. The MDC Bachelor of Science in Education degree, approved by the Florida Department of Education, prepares students to enter the teaching profession. Areas of specialization include: exceptional student education (K-12); secondary mathematics education (6-12) and secondary science education (6-12).

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Associate in Science/Associate in Applied Science Degrees

A.S. College Credit Programs

The two-year Associate in Science degree is designed for individuals looking for specialized study at the college level leading to immediate entry into a career upon graduation. The A.S. degree programs are comprised mostly of courses directly related to the identified career area. The remaining courses are comprised of general education courses such as English, oral communications, math/science, behavioral/social science and humanities. Upon successful completion of all MDC and program requirements, students may be awarded multiple A.S. degrees as appropriate, provided the degrees do not share the same classification of instructional program code (CIP). Several of the A.S. degree programs are covered by a statewide articulation agreement that allows transfer to the corresponding bachelor's degree program at Florida public universities (refer to FLVC.org for the Statewide Articulation Manual information). In addition, many of the other A.S. degree programs have established articulation agreements with selected universities. The general education component of the A.S. degree is transferable to the upper divisions. Allied Health programs are offered at the Medical Campus.

STUDENTS IN ALL PROGRAMS SHOULD CHECK THEIR INDIVIDUALIZED DEGREE AUDIT REPORT TO DETERMINE THE SPECIFIC GRADUATION POLICIES IN EFFECT FOR THEIR PROGRAM OF STUDY. REQUIREMENTS MAY CHANGE BASED ON THE YEAR AND TERM A STUDENT ENTERS MIAMI DADE COLLEGE. THE DEGREE AUDIT REPORT INCLUDES CURRENT GRADUATION REQUIREMENTS. THE FINAL RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS STATED IN THE DEGREE AUDIT REPORT RESTS WITH THE STUDENT.

Accounting Technology Associate in Science

*Total credits required
for the degree: 60*

The Accounting Technology program is designed mainly for students who intend to seek immediate employment in the field of accounting and for those presently employed in business but seeking advancement. Completion of this program prepares the student for employment as a paraprofessional in the accounting field. Instruction emphasizes accounting competencies required at the entry-level while also providing the student with a broad business overview and the required general education courses. The Associate in Arts is also available to the student planning to transfer to a senior institution after graduation from Miami Dade College. Please consult a business advisor about additional courses for such plans.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Advanced Manufacturing Technology

Associate in Science

*Total credits required
for the degree: 64*

The A.S. in Advanced Manufacturing will provide students with the opportunity to acquire the knowledge and skill sets necessary for careers in manufacturing with an emphasis in industrial device and pharmaceutical manufacturing. The program prepares students for employment as a Manufacturing Engineering Technician or Production Technician in manufacturing settings.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Air Conditioning Refrigeration/Heating Systems Technology

Associate in Science

*Total credits required
for the degree: 64*

The Air Conditioning Refrigeration/Heating Systems Technology program prepares the student to perform engineering design of air conditioning environmental control systems. The gradu-

ate will qualify for positions as an engineering technician with a consultant engineer, architect, contractor, project manager, sales engineer, maintenance or operations supervisor, and other similar air conditioning positions. The graduate may apply the degree towards a state of Florida Mechanical Contractor's License. Consult with an air conditioning advisor prior to registration.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Architectural Design and Construction Technology Associate in Science

*Total credits required
for the degree: 66*

The Architectural Design and Construction Technology program offers courses that enable the student to translate the design and systems of the architect into graphic and written form and assists the professional in rendering architectural services. The attainment of these skills qualifies the student for several specialties, such as architectural drafting, cost estimating, material selecting, specification writing and preparing presentations, drawings and models.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Aviation Administration Associate in Science

*Total credits required
for the degree: 60*

The Aviation Administration program is designed to prepare students to succeed in the dynamic aviation industry. The program focuses on the necessary entry-level skills for most aviation employment fields. The air traffic control option provides students with the opportunity to be hired with the Federal Aviation Administration (FAA). Accordingly, graduates find opportunities in airline sales and reservations, air cargo, airport operations and many data-entry positions required by the airline management.

Additional Information: Contact the Aviation Department at 305-237-5950 for information and advisement.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Aviation Maintenance Management Associate in Science

Total credits required for the degree: 83

The Aviation Maintenance Management is a special program in which 45 semester hours are awarded to students who possess the Federal Aviation Administration Aircraft and Powerplant (A&P) certificate. The 38 additional required credits consist of general education and aviation requirements needed by the licensee for the Associate in Science degree.

Additional Information: Contact the Aviation Department at 305-237-5950 for information and advisement.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Biomedical Engineering Technology Associate in Science

Total credits required for the degree: 68

The Biomedical Engineering Technology program prepares students for employment as biomedical engineering technicians/technologists and in related occupations in health-related fields. The program also provides supplemental training for persons currently or previously employed in these occupations. The program focuses on the understanding and applying of concepts in electronics, in addition to trouble-shooting techniques, to digital, microprocessor, or computer-based systems as they relate to medical devices. Assembly, installation, operations maintenance, calibration, trouble-shooting, repairing and elementary design on medical systems are taught using an integrated, applied and theoretical approach.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Biotechnology Associate in Science

Total credits required for the degree: 61

The Biotechnology Program exposes students to a breadth of topics and emphasizes hands-on learning in a variety of techniques and procedures necessary for employment in the bioscience industry. The program includes

modules designed to enhance critical thinking and technical communication skills. It focuses on developing broad transferable skills and stresses understanding and demonstration of laboratory/industry protocols and regulations, bio-safety and safe operating procedures, ethical and environmental issues, product generation/formulation, quality control, validation, instrumentation, and computing.

Building Construction Technology Associate in Science

Total credits required for the degree: 60

The Building Construction Technology program is designed to furnish technically trained personnel for the building construction industry. The graduate may work with a contractor as part of the administrative team in such entry-level job positions as those leading to estimators, job coordinators or project managers. Technical jobs may also be available in the following areas: land and project developers; technical sales for building materials, systems, and equipment; local, state, and federal government agencies as well as various financial institutions.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Business Administration Associate in Science

Total credits required for the degree: 64

This program transfers to four-year

institutions. See department for information.

The Business Administration program trains individuals to assume management or supervisory positions in business, industry, and government. It provides basic skills in a broad range of business functions including accounting, computer usage, management and marketing. Successful completion of this program prepares the student for entry into the State University System Institutions as part of the A.S. to B.S. program.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Business Entrepreneurship Associate in Science

Total credits required for the degree: 60

The A.S. in Business Entrepreneurship prepares students to "start-up" a business or social venture with a foundation in opportunity recognition, analysis, business model development and business plan creation. Graduates will bring a critically-informed eye to their own start-up or as an entrepreneurially-minded employee of a start-up or small-to-medium-sized enterprise.

Business Intelligence Associate in Science

Total credits required for the degree: 60

The Associate in Science in Business Intelligence prepares students for employment as business intelligence analysts and related occupations and/or for upper division studies in data analytics. Students will learn how to build business intelligence applications and how to manipulate massive amounts of data, turning it into useful information and reports.

Civil Engineering Technology Associate in Science

Total credits required for the degree: 63

The Civil Engineering Technology program is designed for those students who wish immediate job placement prior to or after graduation. This program also satisfies many of the civil engineering freshman and sophomore requirements for the Bachelor of



Engineering Technology degree offered by certain universities. Consult your Civil Engineering advisor prior to registration.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Computer Engineering Technology Associate in Science

Total credits required for the degree: 68

The Computer Engineering Technology program prepares students for employment as computer engineering technicians/technologists and in related occupations in electronics. It also provides supplemental training for persons currently or previously employed in these occupations. The program focuses on the understanding and applying of hardware and software concepts, in addition to troubleshooting techniques to digital, microprocessor or computer-based systems. Assembly, installation, operation, maintenance, calibration, troubleshooting, repairing and elementary designs of medical systems are taught using an integrated and theoretical approach.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Computer Information Technology Associate in Science

Total credits required for the degree: 60

The Computer Information Technology program provides an opportunity for students to establish a basic foundation in computer support. Graduates are prepared for positions as microcomputer support specialists, user support specialists, applications system specialists and computer information managers to meet the demands of today's automated offices. In addition, program objectives are designed to assist students in their development of interpersonal and communication skills required by office professionals.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Computer Programming and Analysis Associate in Science

Total credits required for the degree: 63

The Computer Programming and Analysis program provides an opportunity

to establish a basic foundation in computer programming in scientific, commercial, industrial and government information technology applications. Graduates are prepared for positions as entry-level application programmers, programmer specialists, computer programmers and programmer analysts.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Crime Scene Technology Associate in Science

Total credits required for the degree: 60

The Associate in Science degree in Crime Scene Technology prepares students for employment in the field of criminalistics with a specialty in Crime Scene Investigation or Forensic Science. The student can serve as, but is not limited to, positions of Forensic Science Technician (SOC 194092), Crime Scene Technician, Medical Examiner Investigator, Medical Investigator, Insurance Investigator, Legal Investigator, Forensic Paralegal, Crime Scene Investigator, and Laboratory Technician. Students may also continue their formal education with the College and receive a BAS with a major in Public Safety Management.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Criminal Justice Technology: Basic Law Enforcement Associate in Science

Total credits required for the degree: 60

The Associate in Science degree in Criminal Justice Technology: Basic Law Enforcement is a technical degree for the student who wishes to continue his/her education following completion of the Basic Training Academy in Law Enforcement. The Criminal Justice Technology program is designed to provide competencies for the diverse field of criminal justice. Upon successful completion of the courses in the program, the student will be awarded the Associate in Science degree in Criminal Justice Technology. There is only one A.S. program in Criminal Justice Technology. Students may select one of the three options available: basic law enforcement, generic or corrections, but

the degree is awarded only once.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Criminal Justice Technology: Corrections Associate in Science

Total credits required for the degree: 60

The Associate in Science degree in Criminal Justice Technology: Corrections is a technical degree for the student who wishes to continue his/her education following completion of the Basic Training Academy in state corrections or the Basic Training Academy in county corrections. The Criminal Justice Technology program is designed to provide competencies for the diverse field of criminal justice. Upon successful completion of the courses in the program, the student will be awarded the Associate in Science degree in Criminal Justice Technology. There is only one A.S. program in Criminal Justice Technology. Students may select one of the three options available: basic law enforcement, generic or corrections, but the degree is awarded only once.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Criminal Justice Technology: Generic Associate in Science

Total credits required for the degree: 60

The Associate in Science degree in Criminal Justice Technology: Generic is a technical degree for students seeking non-sworn positions in public safety professions. The Criminal Justice Technology program is designed to provide competencies for the diverse field of criminal justice. Upon successful completion of the courses in the program, the student will be awarded the Associate in Science degree in Criminal Justice Technology. The A.S. degree in Criminal Justice Technology: Generic opens up entry-level non-sworn positions in juvenile justice, private sector security, law enforcement, corrections and parole and probations. There is only one A.S. program in Criminal Justice Technology. Students may select one of the three options available: basic

law enforcement, generic or corrections, but the degree is awarded to the student only once.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Culinary Arts Management Associate in Science

Total credits required
for the degree: 64

This Associate in Science degree will groom individuals for careers in the widely varied areas of the culinary industry, including production line and supervisory positions. This competency-based culinary program will provide the student with a unique combination of comprehensive theoretical knowledge and hands-on training. Students will master the fundamentals of culinary production in an environment that builds teamwork while gaining practical individualized experiences. The course content includes food preparation and service; identification, storage, selection and presentation of foods; training in communication, leadership, human relations and employability skills; and sanitation and safe work practices. Earning a degree will enable students to pursue further education at the university level or begin working in the field immediately upon graduation.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Database Technology Associate in Science

Total credits required
for the degree: 60

The Database Technology program is designed to provide an opportunity to establish a basic foundation in the field of database administration for employment in commercial, industrial and government institutions. Graduates are prepared for positions as database administrators and database developers. There is only one A.S. program in Database Technology. Students may select from one of the three options listed, but the A.S. in Database Technology will be awarded to the student only once.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Drafting and Design Technology

Associate in Science

Total credits required
for the degree: 62

Drafting and Design Technology is a highly technical program that will adequately equip the student with the ability and skills necessary for acquisitions and advancement in the engineering technical aid and professional drafting fields. Specialized areas within the program include such specifics as structural steel drafting, welding, piping, technical illustration and computer-aided drafting and design.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Early Childhood Education Associate in Science

Total credits required
for the degree: 60

The Early Childhood Education programs in the School of Education provide training for students who desire to enter the field of early childhood education. The program combines classroom instruction and field work experience with an emphasis on developmentally appropriate practices for young children. Within the program there is the option of earning a Florida Child Care Professional Certificate (formerly CDA-E), College Credit Certificates in Infant-Toddler, Preschool or Administration, or Associate in Science degrees with concentrations in Infant-Toddler, Preschool or Administration. Students may also obtain a Level 1 or Level 2 Director's Credential or complete credential renewal courses. Students who complete the A.S. degree in Early Childhood Education may also earn the A.A. with a pathway with a pathway in Teaching (Pre-Elementary/Early Childhood) with some additional courses and are eligible to enter the baccalaureate programs.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Electrical Power Technology Associate in Science

Total credits required
for the degree: 68

The Electrical Power Technology program prepares students for employment

as an electrical, mechanical, instrumentation and control technician, or in a related occupation in a nuclear power generation facility, or in a related occupation in electrical power. Graduates of this program will be prepared for entry level employment in electrical power technology-related occupations. This program content includes, but is not limited to, DC/AC circuits, power generation, instrumentation and broad, transferable skills and an understanding of the Electrical Power industry.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Electronics Engineering Technology

Associate in Science

Total credits required
for the degree: 68

This program transfers to MDC's Bachelor of Science with a major in Electrical Engineering Technology, as well as other four-year institutions. See department advisor for information.

The Electronics Engineering Technology program prepares students for work as technicians in various fields of electronics technology. No previous experience is required to enter. Courses offered cover basic and advanced electrical circuits, semi-conductors, integrated circuits, pulse circuits, digital computer circuits, electrical machinery, communication systems and industrial control. Theory and laboratory experience is provided.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Fashion Design and Merchandising Associate in Science

Total credits required
for the degree: 60

The Associate in Science degree in Fashion Design and Merchandising offers students a comprehensive education of the fashion business. The program offers students instruction in process, skills, and designs from concept development through production for emergence into the fashion business or fashion design segments of the industry.

Film Production Technology Associate in Science

Total credits required for the degree: 64

The Film Production Technology program teaches students all aspects of the film industry through hands-on training using state-of-the-art equipment and facilities. Students learn motion picture techniques such as cinematography, lighting, audio recording, post production and editing. Students are also exposed to the business aspects of the motion picture industry including independent production, marketing and distribution.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Financial Services Associate in Science

Total credits required for the degree: 64

The Financial Services program is designed to meet the needs of students who plan to seek employment with commercial banks, stock brokerage companies and related financial organizations. It is also planned for students who are currently employed and desire advancement to positions of greater responsibility with financial organizations. This program meets most of the requirements for the American Institute of Banking diploma/certificates. There is only one A.S. program in Financial Services with three specialization options. Students may select from one of the three options, but the A.S. in Financial Services will be awarded to the student only once.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Fire Science Technology Associate in Science

Total credits required for the degree: 60

The Fire Science Technology program prepares students for a wide variety of technical positions in the area of fire prevention and control. Students will learn about safety factors, building code requirements, national and local standards, hazardous materials, supervision and management skills, hydraulics, fire apparatus, tactics and strategy. The program has been designed to meet both the Florida Fire Fighters Pre-Officer Requirements and the NFPA 1021 Fire Officer Level Two Requirements.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Funeral Services Associate in Science

Total credits required for the degree: 72

Students in the Funeral Service program are given a broad understanding of all phases of funeral home operations as well as the public health responsibilities of the funeral director and embalmer. The Associate in Science degree in Funeral Service Education at Miami Dade College is accredited by the American Board of Funeral Service Education Inc. (ABFSE), 3414 Ashland Ave., Suite G, St. Joseph, MO 64506; Office: 816-233-3747; www.abfse.org and approved by

The Florida Board of Funeral, Cemetery and Consumer Services. Students who plan Funeral Service licensure in other states must register as student trainees with their respective state boards prior to enrollment at Miami Dade College in the Funeral Service Education curriculum. The Funeral Service Education program requires all students to pass both sections of the National Board Examination (administered by the International Conference of Funeral Service Examining Boards) with a score of 75 or higher as a requirement for graduation from Miami Dade College. The annual passage rate of first-time takers on the National Board Examination (NBE) for the most recent three-year period for this institution and all ABFSE accredited funeral service education programs is posted on the ABFSE website.

For more information please visit <http://www.mdc.edu/main/academics/credit.aspx>

Graphic Arts Technology Associate in Science

Total credits required for the degree: 64

The Graphic Arts Technology Associate in Science degree program is designed to give students a comprehensive background and the skills necessary to succeed in the printing and publishing industry. Miami Dade College's graphic communications department offers one of the most extensive electronic publishing teaching facilities in the United States. Students take coursework on production workflow processes from the design concept to the finished printed product. Students will get hands-on experience with graphic design, estimating, color theory, electronic scanning, page makeup, imposition, electronic color retouching and presswork. This A.S. degree may transfer to upper-division universities offering a Bachelor of Science degree in Graphic Arts or Graphic Communications.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Graphic Design Technology Associate in Science

Total credits required for the degree: 64

The Graphic Design Technology



Associate in Science degree program offers students a comprehensive background in the printing and publishing industry. Students gain the skills necessary for securing employment upon successfully completing the program. Coursework includes the production workflow process from the design concept to the finished printed product. Students will get hands-on experience with graphic design, estimating, color theory, electronic scanning, page makeup and imposition, electronic color retouching and presswork. This A.S. degree may transfer to upper-division universities offering a Bachelor of Science degree in Graphic Arts or Graphic Communications.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Graphic Internet Technology Associate in Science

Total credits required for the degree: 62

The Graphic Internet Technology program is designed to prepare creative students for a rewarding and challenging career as a Web designer. Students will develop a wide variety of Internet communications skills and will learn to design, produce and distribute communications with the Internet. Graduates will work in major corporations, Web design studios, Internet service providers, government departments and various types of communications organizations.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Hospitality and Tourism Management

Associate in Science

Total credits required for the degree: 64

The Hospitality and Tourism Management program provides professional preparation for a career in the hospitality industry. Hospitality management is presented as a core curriculum with emphasis on hotel, cruise-line, resorts, conventions and institutional management. An internship program is required to provide practical experience in the field of the student's choice. The Associate in Arts is also available to the student planning to transfer to a four-year institution after graduation from

MDC. Consult an advisor about which additional courses are included in that program. This program transfers to four-year institutions. See department for information.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Human Services - Addiction Studies Associate in Science

Total credits required for the degree: 60

The Human Services program with a specialization in Addiction Studies is designed to prepare students for employment as human services specialists, human services practitioners, chemical dependency practitioners, addiction specialists, mental health and social services practitioners, or to provide supplemental training for persons previously or currently employed in these occupations. The program is also designed to provide most of the general academic and addiction specific requirements of the Certification Board for Addiction Professionals of Florida.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Human Services - Generalist Associate in Science

Total credits required for the degree: 60

The Generalist Human Services program prepares students for employment in the network of programs and agencies that provide a vast array of human needs. These include areas such as child care, criminal justice, education, health, housing, income maintenance, mental health and retardation, among others. These needs are provided for in a variety of settings, such as clinics, hospitals, nursing homes, rehabilitation centers and social agencies.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Industrial Management Technology Associate in Science

Total credits required for the degree: 60

The Industrial Management Technology program is primarily

designed to provide additional competencies for administrative, managerial, supervisory and technical discipline areas for personnel who have mastered technical proficiencies from prior training programs or work experiences. In addition, general education courses will be required to ensure good communication and computational skills. Most of the coursework required will enhance the prior technical skills mastered and prepare the graduate for supervisory and/or advanced technical positions.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Instructional Services Technology Associate in Science

Total credits required for the degree: 63

The Instructional Services Technology program provides training for students who desire to enter the field of education as paraprofessionals. Competencies covered in this program prepare paraprofessionals to support and extend instruction and services effectively, further increasing student learning. These competencies address instructional strategies in math, science, technology, behavior management, and human growth and development, as well as principles of language acquisition and literacy development. Students who complete the A.S. degree in Instructional Services Technology may also obtain an A.A. through appropriate course selection (please consult with your advisor).

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Interior Design Technology Associate in Science

Total credits required for the degree: 75

The Interior Design Technology program is planned to develop ability in the design of interiors, to encourage originality and to foster talent in this field. It includes theoretical and technical aspects of interior design. The program is open to those who study for pleasure and those preparing for a career.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Landscape & Horticulture Technology Associate in Science

Total credits required for the degree: 60

The purpose of this program is to prepare students for employment in horticulture and landscape industries. The students will learn about plant growth, nutrition and fertilization, plant classification and identification, propagation, pest control, pruning, maintenance and drainage. Students will also gain business management and job skills. Students pursuing the Horticulture Specialization will obtain the skills necessary for protecting, processing, shipping and marketing of commercially viable plants. Students pursuing the Landscape Specialization will obtain the skills necessary for landscape design and installation (Note: The degree is awarded only once.).

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Marketing Management Associate in Science

Total credits required for the degree: 60

The Marketing Management program is designed mainly for students who intend to seek immediate employment in the fields of marketing, international business and trade, or real estate; also for those desiring to work in a nonprofit institution and those presently employed in marketing but seeking advancement. The A.A. pathway is also available to the student planning to transfer to a senior institution after graduating from Miami Dade College. Consult an advisor about additional courses for such plans. There is only one A.S. program in Marketing Management. Students may select one of the five specializations, but the degree in Marketing Management will be awarded only once.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>.

Music Business Associate in Science

Total credits required for the degree: 64

The Music Business program is designed for students who intend to seek employment within the music business industry. Students can choose from three career track options including: Business

Management, Creative Performance and Creative Production. The Associate in Science degree in Music Business combines a traditional music curriculum with industry-related courses and experiences with a hands-on approach using state-of-the-art music technologies and facilities. Music business majors will take courses in general academics, music business, music theory, sound engineering, music ensemble, marketing, business entrepreneurship, accounting and computer applications. Students will also complete a professional internship at a music firm involved in some facet of the music industry. The Music Business curriculum includes copyright, publishing, artist development, the recording industry, sales, retailing, live concert promotion and management. Although students may choose from three career tracks within the program, only one A.S. degree in Music Business will be awarded.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>.

Networking Services Technology Associate in Science

Total credits required for the degree: 63

The Networking Services Technology program provides an opportunity to establish a basic foundation in the field of network design and administration for employment in commercial, industrial and government institutions. Graduates are prepared for positions as information technology specialists, help desk specialists, network specialists and network systems analysts.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>.

Paralegal Studies (ABA Approved) Associate in Science

Total credits required for the degree: 64

The Paralegal Studies program prepares students to obtain entry-level employment in law offices, government agencies, corporations or other business organizations. It also enables people working in the field without a degree to upgrade their paralegal skills and receive a degree. The Paralegal Studies

program is approved by the American Bar Association. A paralegal or legal assistant as defined by the American Bar Association is "a person qualified by education, training or work experience who is employed or retained by a lawyer, law office, corporation, governmental agency or other entity and who performs specifically delegated substantive legal work for which a lawyer is responsible." Paralegals cannot give legal advice, set fees, negotiate or represent clients in court as these activities involve the actual practice of law. While paralegals work under the supervision of attorneys, they are so much more than just "document preparers." They are valued members of the legal profession. Only courses taken from an approved ABA program and that are consistent with the competencies of equivalent legal specialty courses offered at Miami Dade College can be transferred into the program. The course(s) must be equivalent in contact hours and have been taken at an accredited college or university. No other courses are accepted.

Additional Information: It is necessary to see an advisor prior to beginning the program and before registering each term. For more information please contact the Paralegal Studies program at 305-237-7813 or visit our website at www.mdc.edu/wolfson/academic/LegalAssistant/default.asp

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>.

Photographic Technology Associate in Science

Total credits required for the degree: 64

The Photographic Technology program is designed to meet individual students' needs for either further study or immediate employment in the field of commercial and industrial photography. Students develop a wide variety of photographic and art-related skills and the ability to use these skills to produce commercially viable photographs. Instruction covers portrait photography, still photography, fashion photography, illustrative photography as well as the business skills needed to manage a photographic enterprise. Various internships such as in biomedical and forensic technology are available to students.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>.

Professional Pilot Technology Associate in Science

*Total credits required
for the degree: 64*

The Professional Pilot Technology program is primarily developed to meet the challenging commercial and regional airline requirements for pilots; therefore, graduates of the program will earn the following Federal Aviation Administration (FAA) Certificates: Instruments, Commercial Pilot with Single and Multi-Engine Ratings. In addition, these certificates can be applied toward a Certified Flight Instructor (CFI) Certificate.

Additional Information: Cost of flight training is in addition to normal tuition costs. Contact the Aviation Department at 305-237-5950 for information and advisement.

Radio and Television Broadcasting Programming Associate in Science

*Total credits required
for the degree: 64*

The Radio and Television Broadcasting program is designed for students who intend to seek employment in radio and/or television production. The curriculum provides for hands-on experience using state-of-the-art facilities essential to gaining successful employment in the highly competitive fields of radio and television production. Students will have the opportunity to participate in professional internship programs including the College's Web-based radio station MDCradio.org and its television network, MDC-TV. Students will use professional cameras, lighting, sound and editing equipment in order to build their professional broadcast-quality reel of work.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>.

Security Management and Administration Associate in Science

*Total credits required
for the degree: 60*

The Associate Science Degree in Security Management and Administration is a technical degree designed to pro-

vide competencies for students seeking positions in Homeland Security and/or Private Security. The degree opens up opportunities for positions with the government in Transportation Security Administration and in the growing field of Private Security.

Sign Language Interpretation Associate in Science

*Total credits required
for the degree: 72*

The Sign Language Interpretation program is designed to develop the skills and knowledge necessary to interpret the communications between deaf or hard of hearing persons and hearing individuals in an accurate and effective manner. Also developed is a practical understanding of aspects of deaf studies and deaf culture and community. Graduates should be able to interpret at a basic level, and to achieve a minimum of Level 1 on the Quality Assurance Screening of the Florida Registry of Interpreters for the Deaf, which is traditionally required for employment as an interpreter in the state. In addition, the program will provide a foundation, especially with an accompanying A.A. pathway for those persons who wish to pursue advanced degrees in preparation for careers in special education, vocational rehabilitation or other human service fields.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>.

Telecommunications Engineering Technology Associate in Science

*Total credits required
for the degree: 64*

The Telecommunications Engineering Technology program prepares students for work as technicians in the field of telecommunications engineering. No previous experience is required to enter. The program focuses on the understanding and applying of new techniques in electronic technology for the purpose of testing, maintaining, repairing and upgrading digital as well as analog communication systems. The program is designed to be an integrated educational curriculum taught using an integrated, applied and theoretical approach.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Theatre and Entertainment Technology Associate in Science

*Total credits required
for the degree: 64*

The Theatre and Entertainment Technology program is designed to prepare students for employment as theatre and entertainment technicians, sound controllers, grips, dressers, prop makers, lighting equipment operators, high riggers, lighting technicians, stage hands or to provide supplemental education for persons currently employed in these occupations. An internship is required in order to provide practical, hands-on experience.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>.

Translation & Interpretation Studies Spanish/English Track or Haitian-Creole/English Track

Associate in Science

*Total credits required
for the degree: 63*

This program is designed to provide bilingual students with the knowledge and skills necessary to carry out the work associated with areas of translation (written) and interpretation (oral) in the workplace. Graduates are prepared for positions as court translators/interpreters, hospital translators/interpreters, telephone interpreters, freelance translators/interpreters, in-house translators/interpreters for the private sector (such as translation/interpreting agencies), translators for government entities and/or organizations as well as the entertainment industry. There is a strong emphasis on the use of computer hardware and software as essential tools for translators. Included in the program is ample use of an interpretation lab for interpreting classes and practice. Prospective students are required to pass a written entrance exam in both languages to determine linguistic competence and general culture preparation.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>.



Other College Credit and Vocational Credit Programs

Associate of Applied Science (A.A.S.)

The two year Associate of Applied Science degree is similar to the Associate in Science degree in that it prepares individuals for entry into a career upon graduation. The A.A.S. was established to prepare individuals for careers requiring specialized study at the college level. The A.A.S. degree does not usually articulate or transfer to the upper divisions. The A.A.S. degree programs are comprised mostly of courses directly related to the identified career area. With the remaining courses comprised of general education classes such as English, oral communications, math/science, behavioral/social science and humanities.

STUDENTS IN ALL PROGRAMS SHOULD CHECK THEIR INDIVIDUALIZED DEGREE AUDIT REPORT TO DETERMINE THE SPECIFIC GRADUATION POLICIES IN EFFECT FOR THEIR PROGRAM OF STUDY. REQUIREMENTS MAY CHANGE BASED ON THE YEAR AND TERM A STUDENT ENTERS MIAMI DADE COLLEGE. THE DEGREE AUDIT REPORT INCLUDES CURRENT GRADUATION REQUIREMENTS. THE FINAL RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS STATED IN THE DEGREE AUDIT REPORT RESTS WITH THE STUDENT.

Automotive Service Technology Associate of Applied Science

*Total credits required
for the degree: 68*

The Automotive Service Management Technology program is offered for students who have completed or are concurrently enrolled in a nationally certified and approved 1,440 contract-hour automotive mechanics program.

Advanced Technical Certificate Programs (ATC)

The Advanced Technical Certificate is available to students who have been awarded an Associate in Science degree and wish to upgrade their skills. Students must successfully complete a prescribed set of courses at the advanced level in order to be awarded the ATC.

STUDENTS IN ALL PROGRAMS SHOULD CHECK THEIR INDIVIDUALIZED DEGREE AUDIT REPORT TO DETERMINE THE SPECIFIC GRADUATION POLICIES IN EFFECT FOR THEIR PROGRAM OF STUDY. REQUIREMENTS MAY CHANGE BASED ON THE YEAR AND TERM A STUDENT ENTERS MIAMI DADE COLLEGE. THE DEGREE AUDIT REPORT INCLUDES CURRENT GRADUATION REQUIREMENTS. THE FINAL RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS STATED IN THE DEGREE AUDIT REPORT RESTS WITH THE STUDENT.

Biotechnology Advanced Technical Certificate

*Total credits required
for the Certificate: 33*

A fast-track certification program in biotechnology is available for students with bachelor's degrees, or having at least an associate degree and a strong background in college-level math and science courses. This background, combined with selected courses in the biotechnology program, will provide students with the necessary skills to seek employment in biotechnology and related industries.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Certified Flight Instructor Advanced Technical Certificate

*(Homestead Campus Only)
Total credits required
for the Certificate: 13*

The Certified Flight Instructor (CFI) Advanced Technical Certificate program includes theory, flight and lab instruction. The program meets FAA requirements for a CFI. In addition to the FAA requirements, each student will learn to develop lesson plans and learn how to communicate effectively using a variety of instructional materials and feedback techniques. Students wishing to enroll in this program must possess a Commercial Pilot's License. Upon successful completion of this program, students will be able to demonstrate knowledge of private and commercial pilot certification; fundamentals of instruction in a single engine airplane; ability to recognize, analyze and provide correction of common student errors; and knowledge of the responsibilities of Certified Flight Instructors (CFI). Contact the Aviation Department at 305-237-5900 for information and advisement.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Medical Interpretation - Language Neutral Advanced Technical Certificate

*(Homestead Campus Only)
Total credits required
for the Certificate: 15*

The Medical Interpreting - Language Neutral Advanced Technical Certificate (ATC) will provide professional training in medical interpreting for speakers of widely-spoken languages other than Spanish. Students will meet the criteria to sit for the National Certified Medical Interpreters Exam (CMI).

College Credit Certificate Programs (CCC)

College Credit Certificate programs are subsets of selected Associate in Science/Associate in Applied Science degrees. The CCC meets the Florida Department of Education Certified College Credit program requirements and the student receives an institutional

College Credit Certificate upon completion of the program, and the college credits granted in these programs will apply toward the related Associate in Science degree. The program's title is added to the student's transcript.

STUDENTS IN ALL PROGRAMS SHOULD CHECK THEIR INDIVIDUALIZED DEGREE AUDIT REPORT TO DETERMINE THE SPECIFIC GRADUATION POLICIES IN EFFECT FOR THEIR PROGRAM OF STUDY. REQUIREMENTS MAY CHANGE BASED ON THE YEAR AND TERM A STUDENT ENTERS MIAMI DADE COLLEGE. THE DEGREE AUDIT REPORT INCLUDES CURRENT GRADUATION REQUIREMENTS. THE FINAL RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS STATED IN THE DEGREE AUDIT REPORT RESTS WITH THE STUDENT.

Accounting Applications College Credit Certificate

Total credits required for the College Credit Certificate: 27

The Accounting Applications College Credit Certificate program is designed to prepare students for employment as accounting clerks, data processing clerks, junior accountants and assistant accountants, or to provide supplemental training for persons previously or currently employed in these occupations. The program prepares individuals in the principles, procedures and theories of organizing and maintaining business and financial records, and the preparation of accompanying financial reports.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Addiction Studies College Credit Certificate

Total credits required for the College Credit Certificate: 24

The Addiction Studies Certificate prepares the student for employment as chemical dependency practitioners, addiction specialists or mental health professionals, or to provide supplemental training for people previously or currently employed in these occupations.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Air Cargo Agent College Credit Certificate

Total credits required for the College Credit Certificate: 16

The Air Cargo Agent College Credit Certificate program is designed to give students the skills required to gain employment as an air cargo agent. The program can be completed in one or two semesters with classes offered during the day or evening hours. All of the credits earned can be applied towards an A.S. degree in Aviation Administration. Contact the Aviation Department at 305-237-5950 for information and advisement.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Airline/Aviation Management College Credit Certificate

Total credits required for the College Credit Certificate: 16

The Airline/Aviation Management College Credit Certificate program will provide the student with aviation management skills in an accelerated time frame. These include areas such as airline/aviation industry knowledge, management skills, marketing, law and operations. Students will learn how to take industry concepts and apply them both individually and as a team. They will be able to gain insight into the actual issues involved in running an airline at both the micro and macro levels, from a leadership perspective. They will also acquire up-to-date knowledge about airline/aviation technologies and law, and the latest management concepts and practical application of theories to real-life aviation scenarios.

Additional Information: Contact the Aviation Department at 305-237-5950 for information and advisement.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Airport Management College Credit Certificate

Total credits required for the College Credit Certificate: 16

The Airport Management College credit certificate program provides the student with the skills required to advance to management positions at airport (city and government) and/or airline terminal operations. Students

will understand the cost centers, design processes and financial considerations required to be an effective manager in the aviation industry.

Additional Information: Contact the Aviation Department at 305-237-5950 for information and advisement.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Automation College Credit Certificate

Total credits required for the College Credit Certificate: 15

This certificate prepares students for initial employment with an occupational title as an Automation or Applied Automation Specialist in various specialized areas. It can also provide supplemental training for persons previously or currently employed in these occupations. These courses can be applied toward the Associate of Science in Advanced Manufacturing.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Banking Management College Credit Certificate

Total credits required for the College Credit Certificate: 27

The Banking Management College Credit Certificate is designed to provide students with core knowledge and skills necessary for a successful pre-career in commercial lending. The intended audience includes entry-level commercial lenders, credit management trainees, employees from other banking areas who seek a career pathway to commercial lending and others who desire a broader understanding of banking and how to service the needs of a bank's corporate clients more effectively. Generally, positions could include first line banking supervisors, managers, administrators or financial management.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Banking Operations College Credit Certificate

Total credits required for the College Credit Certificate: 18

The Banking Operations College Credit Certificate program is designed to provide students with the knowledge to analyze companies and their ability to repay loans. The intended audience

includes lending support personnel, junior credit analysts and others who seek a pathway to lending. Generally, positions could also include first line banking supervisors. Positions that could be available based upon this training include Credit Analyst and Financial Analyst. This program also meets the requirements for the Center for Financial Training national industry diploma.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Banking Specialist College Credit Certificate

*Total credits required for the
College Credit Certificate: 12*

The Banking Specialist College Credit Certificate program provides students with both general knowledge and specific competencies that establish a foundation for a successful financial services career. Because the required courses provide an ideal foundation upon which to build banking-specific knowledge and skills, the certificate is well-suited for individuals planning to make banking their long-term career. In that regard, candidates for the certificate include career entry employees with clerical, administrative or customer service responsibilities who are establishing career pathways through professional development and related job experience, professionals who recently entered banking from other industries and management trainees who desire a broader understanding of the financial services industry. Generally, positions would include banking managerial support workers. Positions that could be available based upon this training include Customer Service Representative and Financial/Banking Specialist. This program also meets the requirements for the Center for Financial Training national industry diploma.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Biotechnology College Credit Certificate

*Total credits required for the
College Credit Certificate: 19*

The College Credit Certificate in Biotechnology seeks to prepare students for immediate entry-level employment in the biotechnology, pharmaceutical or medical device manufacturing industry.

The program prepares individuals in the principles, procedures and practices used in the bioscience industries. The college credits granted in this program will apply toward an Associate in Science degree in Biotechnology.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Business Entrepreneurship College Credit Certificate

*Total credits required for the
College Credit Certificate: 12*

The C.C.C. in Business Entrepreneurship prepares students to "start-up" a business or social venture with a foundation in opportunity recognition, analysis, business model development and business plan creation. Graduates will bring a critically-informed eye to their own start-up or as an entrepreneurially-minded employee of a start-up or small-to-medium-sized enterprise.

Business Entrepreneurship - Social Entrepreneurship College Credit Certificate

*Total credits required for the
College Credit Certificate: 12*

The C.C.C. in Business Entrepreneurship prepares students to "start-up" a business or social venture with a foundation in opportunity recognition, analysis, business model development and business plan creation. Graduates will bring a critically-informed eye to their own start-up or as an entrepreneurially-minded employee of a start-up or small-to-medium-sized enterprise.

Business Intelligence Professional College Credit Certificate

*Total credits required for the
College Credit Certificate: 20*

The Business Intelligence Professional College Credit Certificate prepares students for employment manipulating and analyzing massive amounts of data and turning it into useful information and reports. Students are prepared for employment, or continued studies in lower and upper division programs.

Business Management College Credit Certificate

*Total credits required for the
College Credit Certificate: 24*

The Business Management College Credit Certificate program is the third in a series of three College Credit Certificate programs designed to prepare students for the positions of manager trainee, supervisor or small business owner. It also provides supplemental training for people previously or currently engaged in these activities. The program prepares individuals to become proficient in the planning, organizing, directing and controlling of business, including organizational and human aspects, with emphasis on various theories of management, managing economic resources and decision-making. Emphasis is given to the ownership of small business enterprises. There is only one College Credit Certificate in Business Management. Students may select one of the two specializations (Management or Small Business Management), but the certificate in Business Management is awarded only once.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Business Operations College Credit Certificate

*Total credits required for the
College Credit Certificate: 18*

The Business Operations College Credit Certificate program is the second in a series of three College Credit Certificate programs designed to prepare students for employment and advancement in the following areas: accounting/budgeting, business/management, customer service, finance, human resources, international business, marketing, nonprofit, real estate, retail and small business. There is only one College Credit Certificate in Business Operations. Students may select one of the 11 options, but the certificate is awarded only once.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Business Specialist College Credit Certificate

*Total credits required for the
College Credit Certificate: 12*

The Business Specialist College Credit Certificate program is the first in a series of three College Credit Certificate programs designed to prepare students for employment in entry-level positions in the following areas:

accounting/budgeting, business/management, customer service, finance, human resources, international business, marketing, nonprofit, real estate, retail and small business. There is only one College Credit Certificate in Business Specialist. Students may select one of the 11 options, but the certificate is awarded only once.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Chef Apprentice College Credit Certificate

Total credits required for the
College Credit Certificate: 12

The Chef Apprentice Certificate is designed to prepare students with a theoretical and practical foundation for a successful career in the culinary industry. Credits earned can be applied to Associate in Science degree in Culinary Arts Management, which may be transferable to upper division public institutions. Students will be given opportunity to take the Food Safety exam for ServSafe Florida State Certification (State mandated for food handlers in Florida).

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Cisco Certified Network Associate (CCNA) College Credit Certificate

Total credits required for the
College Credit Certificate: 16

The Cisco Network Associate College Credit Certificate program is designed to provide an opportunity to estab-

lish a basic foundation in the field of Cisco network design and implementation, leading to certification as a Cisco Certified Network Associate (CCNA).

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Computer-Aided Design Assistant College Credit Certificate

Total credits required for the
College Credit Certificate: 14

The Computer-Aided Design Assistant College Credit Certificate program is designed to prepare students to work as CAD assistants in an architectural office by acquiring a basic understanding of the architectural graphic skills needed to produce working and presentation drawings.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Computer-Aided Design Operator College Credit Certificate

Total credits required for the
College Credit Certificate: 22

The Computer-Aided Design Operator College Credit Certificate program is designed to prepare students for architectural offices by developing their intermediate skills in architectural graphics to produce working and presentation drawings. After successfully completing the following courses, students can obtain employment assisting architects and drafters with computer-

aided drawings and design presentations.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Computer Programming College Credit Certificate

Total credits required for the
College Credit Certificate: 36

The Computer Programming College Credit Certificate program is designed to provide an opportunity to establish a basic foundation in computer programming for employment in scientific, commercial, industrial and government information technology applications. Graduates are prepared for positions as entry-level programmers, programmer specialists, computer programmers and senior programmers.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Computer Specialist College Credit Certificate

Total credits required for the
College Credit Certificate: 27

The Computer Specialist College Credit Certificate program is designed to prepare students to work as Computer Repair Assistants in a computer repair shop or the computer maintenance division of a corporation, by acquiring a basic understanding of computer internal architecture and operations.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>



Crime Scene Technician College Credit Certificate

*Total credits required for the
College Credit Certificate: 12*

The College Credit Certificate in Crime Scene Technician will prepare students for employment in the field of criminalistics with a specialty in Crime Scene Investigation or Forensic Science. The student can serve as, but is not limited to Forensic Science Technician (SOC 194092), Crime Scene Technician, Medical Examiner Investigator, Medical Investigator, Insurance Investigator, Legal Investigator, Forensic Paralegal, Crime Scene Investigator and Laboratory Technician. Students may also continue their formal education with an A.S. in Crime Scene Technology.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Culinary Arts Management Operations College Credit Certificate

*Total credits required for the
College Credit Certificate: 18*

The Culinary Arts Management Operations College Credit Certificate is designed to prepare students with an in-depth study of food production, and a practical foundation in international cuisine for a successful career in the culinary industry. Credits earned can be applied to an Associate in Arts degree or an Associate in Science degree in Culinary Arts Management, which may be transferrable to upper division public institutions. *Note: Students will be given opportunity to take the Food Safety exam for ServSafe Florida State Certification (State mandated for food handlers in Florida).*

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Early Childhood Education - Administrator College Credit Certificate

*Total credits required for the
College Credit Certificate: 12*

This is a College Credit Certificate in early childhood education with a specialization in Child Care Management. The purpose of this program is to prepare students as early childhood education administrators with the knowledge and skills to effectively manage a quality childcare program or to provide supple-

mentary training for persons previously or currently employed in these occupations. This CCC will allow its holder to apply for a Advanced Director's Credential or continue their education.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Early Childhood Education - Preschool College Credit Certificate

*Total credits required for the
College Credit Certificate: 12*

This is a College Credit Certificate in early childhood education with a specialization in Preschool. The purpose of this program is to prepare students as early childhood education preschool care providers, or to provide supplementary training for persons previously or currently employed in these occupations. Students will learn essential components of quality care and education including guidance techniques, establishing and maintaining a safe and healthy learning environment, rules and regulations, family interactions, nutrition, child growth and development, and professional responsibilities with a focus on preschool ages. This CCC will allow its holder to apply for a National Child Development Associate credential in Preschool, enabling this student to pursue work as a child care provider nationally or continue their education. With an additional course, the student may apply for the Florida Child Care Professional Credential.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Entrepreneurship College Credit Certificate

*Total credits required for the
College Credit Certificate: 12*

The College Credit Certificate in Entrepreneurship prepares students to become successful entrepreneurs by providing the fundamentals of starting and operating a business. Coursework covers small business management, sales and presentation skills, the development of a business plan, and essential elements of electronic commerce. The four classes that comprise the CCC in Entrepreneurship can be used as electives in an AA degree program and also to fulfill requirements for the Associate in Science degree in Marketing

Management - Entrepreneurship.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Food and Beverage Management College Credit Certificate

*Total credits required for the
College Credit Certificate: 30*

The Food Service Management College Credit Certificate program is designed to prepare students with a theoretical and practical foundation for a successful career in the food and beverage industry. Students enrolled in this program are prepared for positions such as Catering/Banquet Manager, Food & Beverage Manager, Restaurant Manager and Bar/Lounge Manager. Credits earned can be applied to an Associate in Applied Science degree in Hospitality and Tourism Management.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Food and Beverage Operations College Credit Certificate

*Total credits required for the
College Credit Certificate: 18*

The Food and Beverage Operations College Credit Certificate is designed to prepare students with an in-depth and practical foundation in management for a successful career in the food and beverage industry. Students enrolled in this certificate are prepared for positions such as Shift Supervisor, Restaurant Supervisor or Bar/Lounge Supervisor. Credits earned can be applied to an Associate in Science degree in Hospitality Management, which is fully transferable to public universities within the state of Florida.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Food and Beverage Specialist College Credit Certificate

*Total credits required for the
College Credit Certificate: 12*

The Food and Beverage Specialist College Credit Certificate is designed to prepare students with a theoretical and practical foundation for a successful career in the food and beverage industry. Students enrolled in

this certificate are prepared for positions such as Restaurant Server, Room Service Attendant or Banquet Set-Up Staff. Credits earned can be applied to an Associate in Science degree in Hospitality Management, which is fully transferable to public universities within the state of Florida.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Help Desk Support Technician College Credit Certificate

Total credits required for the
College Credit Certificate: 16

The Help Desk Support Technician College Credit Certificate is designed to prepare students with the technical knowledge and skills for employment as entry-level computer help desk and support technicians in commercial, industrial and government institutions. Graduates are also prepared for industry A+ certification.

Homeland Security College Credit Certificate

Total credits required for the
College Credit Certificate: 15

The College Credit Certificate in Homeland Security is designed to enhance student knowledge in the areas of counter-terrorism/intelligence, national security or governmental security. Students may apply these courses to the associated A.S. degree in Criminal Justice Technology.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Horticulture Professional College Credit Certificate

Total credits required for the
College Credit Certificate: 18

The College Credit Certificate in Agriscience for the Horticulture Professional is an advanced certificate for managerial positions in nursery and landscape technology industries. The certificate will prepare students for employment in horticulture and landscape industries as nursery managers, landscape and grounds keeping managers, nursery supervisors, landscape gardeners and parks workers. Students will learn concepts of plant physiology and growth, plant classification, plant identification and plant care and main-

tenance to satisfy the growing needs of the nursery industry with an additional emphasis on management skills. If a student should choose to continue their education in Agriscience, the college credits granted in this program will apply toward an A.S. degree in Landscape and Horticulture Technology.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Horticulture Specialist College Credit Certificate

Total credits required for the
College Credit Certificate: 12

The College Credit Certificate in Agriscience for the Horticulture Specialist is an introductory certificate designed to prepare students for positions in the nursery and landscape industries at the entry level. The certificate will prepare students for employment as supervisors in grounds keeping, nursery and greenhouse production, landscape gardeners and parks workers. Students will learn plant physiology and growth, plant classification, plant identification and plant care and maintenance to satisfy the growing needs of the nursery industry. If a student should choose to continue their education in Agriscience, the college credits granted in this program will apply toward an A.S. degree in Landscape and Horticulture Technology.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Infant/Toddler Specialization College Credit Certificate

Total credits required for the
College Credit Certificate: 12

This is a College Credit Certificate in early childhood education with a specialization in Infant/Toddler. The purpose of this program is to prepare students as early childhood education Infant/Toddler care providers, or provide supplementary training for people previously or currently employed in these occupations. Students will learn essential components of quality care and education including guidance techniques, establishing and maintaining a safe and healthy learning environment, rules and regulations, family interactions, nutrition, child growth and development, and professional responsibilities with a focus on Infants/Toddlers. This CCC

will allow its holder to apply for a National Child Development Associate credential in Infant/Toddler, enabling students to pursue work as a child care provider nationally or continue their education. With an additional course, the student may apply for the Florida Child Care Professional Credential.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Information Technology Support College Credit Certificate

Total credits required for the
College Credit Certificate: 28

The Information Technology Support College Credit Certificate program is designed to provide an opportunity to establish a basic foundation in computer applications for employment in scientific, commercial, industrial and government institutions. Graduates are prepared for positions as data-entry specialists, software applications specialists and office systems specialists to meet the demands of today's automated offices.

Additional Information: Certificate Prerequisite: CGS1060 or a working knowledge of the Microsoft Operating System and Microsoft Office Application Suite. Operational understanding of the following microcomputer topics: Operating systems, memory, hard disks, types of central processing units (CPUs), communications ports, printer ports, display adapters and pointing devices.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Interpretation Studies: Spanish/English or Haitian- Creole/English Tracks College Credit Certificate

Total credits required for the
College Credit Certificate: 30

The Interpretation Studies College Credit Certificate program is designed to provide bilingual students with the knowledge and skills necessary to carry out the work associated with areas of interpretation (oral). Students who complete the program are prepared for positions or freelance work as court interpreters, in-house interpreters for the private sector (such as interpretation agencies), hospital interpreters

and telephone interpreters. The program provides ample instruction and practice in an interpretation lab. Prospective students are required to pass a language proficiency exam to demonstrate fluency in both languages of program study.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Lean Manufacturing College Credit Certificate

Total credits required for the
College Credit Certificate: 12

This certificate prepares students for initial employment with an occupational title as a Quality Specialist or Lean Specialist in various specialized areas. It also can provide supplemental training for persons previously or currently employed in these occupations. These courses can be applied toward the Associate of Science in Advanced Manufacturing.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Marketing Operations College Credit Certificate

Total credits required for the
College Credit Certificate: 24

The Marketing Operations College Credit Certificate program is designed to prepare students for employment as advertising and display specialists; marketing; advertising; and public relations managers; managers, public relations specialists or to provide supplemental training for people previously or currently employed in these occupations.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Microcomputer Repairer/Installer College Credit Certificate

Total credits required for the
College Credit Certificate: 15

The Microcomputer Repairer/Installer College Credit Certificate program is designed to prepare students to work as Computer Repair Assistants in a computer repair shop or the computer maintenance division of a corporation, by acquiring a basic understanding of computer internal architecture and operations.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Microsoft Database Administrator College Credit Certificate

Total credits required for the
College Credit Certificate: 16

The Microsoft Database Administrator College Credit Certificate program is designed to provide an opportunity to establish a basic foundation in the field of database administration for employment in commercial, industrial and government institutions. Graduates are prepared for positions as database administrators and database developers.

Additional Information: Certificate Prerequisite: CGS 1060 and CGS 1560 or a working knowledge of the Microsoft operating system and Microsoft Office applications suite. Operational understanding of the following microcomputer topics: operating systems, memory, hard disks, types of central processing units (CPUs), communications ports, printer ports, display adapters and pointing devices.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Mortgage Finance College Credit Certificate

Total credits required for the
College Credit Certificate: 31

The Mortgage Finance College Credit Certificate program applies toward an Associate in Science in Financial Services degree. It is designed to develop entry-level professionals to work in Mortgage Finance, with an emphasis in Affordable Housing. A major goal of this program is to increase the role and level of minorities in the Mortgage Finance industry.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Network Systems Developer College Credit Certificate

Total credits required for the
College Credit Certificate: 41

The Network Systems Developer College Credit Certificate is designed to prepare students to work as Computer Repair Technicians in a computer repair shop or the computer maintenance division of a corporation, by acquiring an in-depth understanding of computer internal architecture, operations and digital systems design operations.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Oracle Database Administrator College Credit Certificate

Total credits required for the
College Credit Certificate: 16

The Oracle Database Administrator College Credit Certificate program is designed to provide an opportunity to establish a basic foundation in the field of database administration for employment in commercial, industrial and government institutions. Graduates are prepared for the position of Oracle Database Administrator.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Oracle Database Developer College Credit Certificate

Total credits required for the
College Credit Certificate: 16

The Oracle Database Developer College Credit Certificate program is designed to provide an opportunity to establish a basic foundation in the field of database development for employment in commercial, industrial and government institutions. Graduates are prepared for positions as Oracle database developers.

Additional Information: Certificate prerequisite: CGS 1060, CGS 1541, CGS 1560, COP 1170, COP 2171, COP 2700 and COP 2740 or a working knowledge of the Microsoft Operating Systems and Microsoft Office Applications Suite. Operational understanding of the following microcomputer topics: operating systems, memory, hard disks, types of central processing (CPUs), communication ports, printer ports, display adapters and pointing devices. Operational understanding of the following programming concepts: advanced Microsoft visual basic application development, and analysis, design and programming of database systems.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Passenger Service Agent College Credit Certificate

Total credits required for the
College Credit Certificate: 16

The Passenger Service Agent College Credit Certificate program is designed to give students the skills required to gain employment as a passenger service agent, including gate and ramp respon-

sibilities. Students will be required to do an internship with a commuter or major airline.

Additional Information: Contact the Aviation Department at 305-237-5950 for more information and advisement.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Rooms Division Management College Credit Certificate

Total credits required for the College Credit Certificate: 30

The Rooms Division Management College Credit Certificate program is designed to prepare students with a theoretical and practical foundation for a successful career in the hotel sales and marketing industry. Students enrolled in this certificate are prepared for positions such as Front Desk Manager, and Guest Relations Manager. Credits earned can be applied to an Associate in Applied Science degree in Hospitality and Tourism Management.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Rooms Division Operations College Credit Certificate

Total credits required for the College Credit Certificate: 19

The Rooms Division Operations College Credit Certificate is designed to prepare students with a theoretical and practical foundation for a successful career in the lodging industry. Students enrolled in this certificate are prepared for positions such as Front Desk Supervisor or Guest Relations Supervisor. Credits earned can be applied to an Associate in Science degree in Hospitality Management, which is fully transferable to public universities within the state of Florida.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Rooms Division Specialist College Credit Certificate

Total credits required for the College Credit Certificate: 13

The Rooms Division Specialist College Credit Certificate is designed to prepare students with a theoretical and practical foundation for a successful

career in the lodging industry. Students enrolled in this certificate are prepared for positions such as Front Desk Agent, Guest Relations Agent or Reservation Clerk. Credits earned can be applied to an Associate in Science degree in Hospitality Management, which is fully transferable to public universities within the state of Florida.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Translation Studies: Spanish/English or Haitian-Creole/English Tracks College Credit Certificate

Total credits required for the College Credit Certificate: 30

The Translation Studies College Credit Certificate program is designed to provide bilingual students with the knowledge and skills necessary to work in areas of translation (written). Students who complete the program are prepared for positions or freelance work as in-house translators for the private sector (such as translation agencies), government agencies, international corporations, law firms or health care industry. There is a strong emphasis on the use of computer hardware and software as essential tools for translators. Prospective students are required to pass a language proficiency exam to demonstrate fluency in both languages of program study.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Web Development Specialist College Credit Certificate

Total credits required for the College Credit Certificate: 36

The Web Development Specialist College Credit Certificate program is to provide an opportunity to establish a basic foundation in the field of website design and programming for employment in commercial, industrial and government institutions. Graduates are prepared for positions as Web technicians, Web administrators and website developers.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Career Technical Education Programs (CTE)

Career Technical Education (CTE) Programs prepare students to enter a specific career or vocation. To complete a program, students must demonstrate that they have mastered specific job-related performance requirements as well as communication and computation competencies and will be awarded a CTC upon the completion of a program. CTE programs vary in length depending on the complexity of the individual program. Students entering programs greater than 450 hours (effective January, 2003) will be tested for basic communication, computation and reading skills. Students who score below the required Department of Education grade level designated for each program will be required to take appropriate basic skills training prior to the completion of their respective programs (§233.0695, F.S.).

Career Technical Certificate students are eligible for financial aid provided they are enrolled in programs greater than 600 credit hours.

Allied Health programs are offered at the Medical Campus only.

Accounting Operations Career Technical Certificate

Minimum TABE Grade Level Required for Certificate and Graduation:

Mathematics: 9; Language: 9; Reading: 9

Program Length: 900 contact hours (30 vocational credits)

The total contact hours required for Career Technical Certificate: 900

The purpose of the Accounting Operations program is to prepare students for employment as indicated in the occupational exit points. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Air Conditioning, Refrigeration, and Heating Technology Apprenticeship Program Career Technical Certificate

Mathematics: 10; Language: 9; Reading: 9

Program Length: 10,000 contact hours
(333.33 vocational credits)

*The total contact hours required for
Career Technical Certificate: 10,000*

The Air Conditioning, Refrigeration, and Heating Technology (HVAC) Apprenticeship Program is offered by Miami Dade College in partnership with an industry apprenticeship organization. Students receive a combination of classroom instruction and on-the-job training where they learn the practical and theoretical aspects of the highly skilled occupation of Air Conditioning, Refrigeration and Heating Technician. This is a four-year program, for a total of 10,000 hours that, upon successful completion, awards the student a Journey Level credential from the trade, as well as a Career Certificate from the College. In order to participate in the apprenticeship program, the student must be employed full-time with a participating sponsor. Test of Adult Basic Education (TABE) is required.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Bail Bond Agent Career Technical Certificate

Program Length: 120 contact hours
(4 vocational credits)

*The total contact hours required for
Career Technical Certificate: 120*

The Bail Bonding program includes introduction to the criminal justice system, duties of surety and bail bonding agents, bail bonding process, bail bond laws and regulations.

Additional Information: This course is offered through the Law Center.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Business Computer Programming Career Technical Certificate

Minimum Grade Level Required for
Certificate and Graduation:

Mathematics: 9; Language: 9; Reading: 9
Program Length: 1,200 contact hours
(40 vocational credits)

*The total contact hours required for
Career Technical Certificate: 1,200*

The Business Computer Programming program offers a broad foundation of knowledge and skills expand-

ing the traditional role of the Junior Programmer. The content includes converting problems into detailed plans; writing code in computer languages, testing, monitoring, debugging, documenting and maintaining computer programs; and designing programs for specific uses and machines. Test of Adult Basic Education (TABE) is required.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Business Supervision and Management Career Technical Certificate

Minimum Grade Level Required for
Certificate and Graduation:

Mathematics: 9; Language: 9; Reading: 9
Program Length: 900 contact hours
(30 vocational credits)

*The total contact hours required for
Career Technical Certificate: 900*

The purpose of the Business Supervision and Management program is to prepare students for employment

as indicated in the occupational exit points. Test of Adult Basic Education (TABE) is required.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Commercial Art Technology Career Technical Certificate

Program Length: 1500 contact hours
(50 vocational credits)

*The total contact hours required for
Career Technical Certificate: 1500*

The purpose of the Commercial Art Technology program is to prepare students for employment as artists, illustrators, or commercial designers and to provide supplemental training for persons employed in these occupational areas. This program articulates with the Associate in Science in Graphic Design Technology. Test of Adult Basic Education (TABE) is required.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*



CMS Law Enforcement BRT Career Technical Certificate

Program Length: 760 contact hours
(25.3 vocational credits) Required for
Certificate and Graduation

*The total contact hours required for
Career Technical Certificate: 760*

The Law Enforcement Officer program prepares students for certification as Police Officers in the state of Florida. All criminal justice standards and training, Department of Education and local standards will be met. Graduates are eligible for employment with any law enforcement agency in the state upon graduation from the program and successful completion of the State Certification Exam. Topics include law, human issues, patrol, traffic, investigations and communications. There is an emphasis on practical applications and competency-based performance. This program is offered at the School of Justice. Students seeking entrance into the MDC School of Justice basic recruit training programs for a career in law enforcement are required to pass a physical screening, physical agility, Voice Stress Analysis Test, psychological test, fingerprinting and background check and the Florida Basic Abilities Test (FBAT). For more information, please contact the School of Justice, FBAT Department and/or visit the FBAT website at www.mdc.edu.north.fbat.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Community Service Officer/ Police Service Aide Career Technical Certificate

Minimum Grade Level Required for
Certificate and Graduation:

Mathematics: 10; Language: 10;
Reading: 10

Program Length: 206 contact hours
(6.87 vocational credits)

*The total contact hours required for
Career Technical Certificate: 206*

The Community Service Officer/Police Service Aide program prepares students for employment as parking enforcement specialists, traffic accident investigators and community service officers/police service aids in accordance with Chapters 316 and 943 of the Florida Statutes (F.S.). Emphasis is placed on parking enforcement, traffic acci-

dent and property crimes investigations, basic law, human skills and communication. Students are required to demonstrate skills acquired through practical exercises in traffic enforcement, traffic crash scene management and preparing reports about property crimes. Students are employed by departments and then sent to the academy for training. Awards of participation are available for completion of the parking enforcement specialist and traffic accident investigator portions of the program. Upon completion of the entire program, a Career Technical Certificate will be awarded in Community Service Officer/Police Service Aide. The program is limited to School of Justice students only.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Correctional Officer - County Career Technical Certificate

Program Length: 532 contact hours
(17.73 vocational credits) Required for
Certificate and Graduation

*The total contact hours required for
Career Technical Certificate: 532*

The Correctional Officer - County program prepares students for certification as Correctional Officers in Miami-Dade County in accordance with Rule 11B-35, E.A.C., and Chapter 943, F.S. All Criminal Justice Standards and Training Commission, Department of Education and Region XIV training standards will be met. Graduates are eligible for employment with any correctional agency in the state upon successful completion of the program and passing the State Officer Certification Exam for Corrections. Topics include human behavior, law, communications, facility operations, first aid and other related topics. There is an emphasis on practical applications and competency-based performance. This program is offered at the School of Justice. Students seeking entrance into the MDC School of Justice basic recruit training programs for a career in corrections are required to pass a physical screening, physical agility, fingerprinting and background check, and a Florida Department of Law Enforcement-approved basic abilities test, such as the Florida Basic Abilities Test (FBAT). For more information on the FBAT test, please contact the School

of Justice FBAT Department at 305-237-1722 and/or visit the FBAT website, at <http://www.mdc.edu/north/fbat/>.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Correctional Officer - State Career Technical Certificate

Program Length: 532 contact hours
(17.73 vocational credits) Required for
Certificate and Graduation

*The total contact hours required for
Career Technical Certificate: 532*

The Correctional Officer - State program prepares students for certification as Correctional Officers in the state of Florida. All criminal justice standards and training, Department of Education and local standards will be met. Graduates are eligible for employment with any correctional agency in the state upon graduation from the program and successful completion of the State Certification Exam. Topics include human behavior, law, communications, facility operations, first aid and other related topics. There is emphasis on practical applications and competency-based performance. This program is offered at the School of Justice. Students seeking entrance into the MDC School of Justice basic recruit training programs for a career in corrections are required to pass a physical screening, physical agility, Voice Stress Analysis Test, psychological test, fingerprinting and background check and the Florida Basic Abilities Test (FBAT). For more information please contact the School of Justice, FBAT Department and/or visit the FBAT website, at <http://www.mdc.edu/north/fbat/>.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Crossover from Correctional Officer to Law Enforcement Officer Career Technical Certificate

Program Length: 434 contact hours
(14.47 vocational credits) Required for
Certificate and Graduation

*The total contact hours required for
Career Technical Certificate: 434*

This program provides training to Florida Certified Correctional Officers in good standing who seek certification as

full-time or part-time law enforcement officers. All criminal justice standards and training, Department of Education and local standards will be met.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Customer Assistance Technology Career Technical Certificate

Minimum TABE Grade Level Required for Certificate and Graduation:

Mathematics: 9; Language: 9; Reading: 9

Program Length: 450 contact hours (15 vocational credits)

The total contact hours required for Career Technical Certificate: 450

The purpose of the Customer Assistance Technology program is to prepare students for employment as indicated in the occupational exit points. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Electricity Apprenticeship Program Career Technical Certificate

Mathematics: 9; Language: 9; Reading: 9

Program Length: 10,000 contact hours (333.33 vocational credits)

The total contact hours required for Career Technical Certificate: 10,000

The Electricity Apprenticeship program is offered by Miami Dade College in partnership with an industry apprenticeship organization. Students receive a combination of classroom instruction and on-the-job training where they learn the practical and theoretical aspects of the highly skilled occupation of Commercial Electrician. This is a four-year program, for a total of 10,000 hours that, upon successful completion, awards the student a Journey Level credential from the trade, as well as a Career Technical Certificate from the College. In order to participate in the apprenticeship program, the student must be employed full-time with a participating sponsor. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Electronic Technology Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 10; Language: 9; Reading: 9

Program Length: 1,400 contact hours (46.67 vocational credits)

The total contact hours required for Career Technical Certificate: 1,400

The Electronic Technology program prepares individuals to assemble, install, operate, maintain, troubleshoot and repair electronic equipment used in industry and related to the design theory and analysis of electronic systems and application. To complete this program, students should be able to use the various types of equipment found in general use throughout the electronic industry. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Fire Fighter Minimum Standards Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 10; Language: 10; Reading: 10

Program Length: 450 contact hours (15 vocational credits)

The total contact hours required for Career Technical Certificate: 450

The purpose of the Fire Fighting program is to prepare students for employment and certification as a firefighter in accordance with Chapter 633, F.S. The program is approved by the division of state fire marshal, bureau of fire standards and training. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Fire Sprinkler Apprenticeship Program Career Technical Certificate

Mathematics: 9; Language: 9; Reading: 9

Program Length: 10,000 contact hours (333.33 vocational credits)

The total contact hours required for Career Technical Certificate: 10,000

The Fire Sprinkler Apprenticeship

program is offered by Miami Dade College in partnership with an industry apprenticeship organization. Students receive a combination of classroom instruction and on-the-job training where they learn the practical and theoretical aspects of the highly skilled occupation of Fire Sprinkler System Installer. This is a four-year program, for a total of 10,000 hours that, upon successful completion, awards the student a Journey Level credential from the trade, as well as a Career Technical Certificate from the College. In order to participate in the apprenticeship program, the student must be employed full-time with a participating sponsor. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Insurance Marketing Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 9; Language: 9; Reading: 9

Program Length: 450 contact hours (15 vocational credits)

The total contact hours required for Career Technical Certificate: 450

The purpose of the Insurance Marketing program is to prepare students for employment in the customer service area of the insurance industry. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

National Parks Service - Seasonal Law Enforcement Training Program (SLETP)

Program Length: 408 contact hours (13.60 vocational credits)

The total contact hours required for Career Technical Certificate: 408

The CTC Seasonal Law Enforcement Training Program (SLETP) was developed to prepare a student to perform law enforcement duties in areas administered by the National Park Service. A successful graduate becomes eligible to receive a Type II law enforcement commission once a background investigation, drug testing and medical screening are completed.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Network Support Services Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 9; Language: 9; Reading: 9

Program Length: 1,050 contact hours (35 vocational credits)

The total contact hours required for Career Technical Certificate: 1,050

The Network Support Services program offers a broad foundation of knowledge and skills to prepare students for employment in network support services positions. The content includes instruction in computer literacy, software application support, basic hardware configuration and troubleshooting, networking technologies, security, and administration and customer service. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

PC Support Services Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 9 Language: 9; Reading: 9

Program Length: 900 contact hours (30 vocational credits)

The total contact hours required for Career Technical Certificate: 900

The PC Support Services program offers a broad foundation of knowledge and skills to prepare students for employment in PC support services positions. The content includes software applications and operating systems including the use of advanced software/system features and programs; computer networking and network administration. The 900 contact hours include both microcomputer and general business courses. Hands-on experience is an integral part of the program. Activities include the use of microcomputers, and peripheral equipment with widely used business applications software, database and other applications. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Plumbing Apprenticeship Program Career Technical Certificate

Mathematics: 9; Language: 9; Reading: 9

Program Length: 10,000 contact hours (333.33 vocational credits)

The total contact hours required for Career Technical Certificate: 10,000

The Plumbing Apprenticeship program is offered by Miami Dade College in partnership with an industry apprenticeship organization. Students receive a combination of classroom instruction and on-the-job training developed to meet the standards established by the Bureau of Apprenticeship and Training (B.A.T.). The Plumber Apprentice Training program features courses in mechanics, chemistry and electricity, as well as heating, ventilation, pipefitting and welding. Students learn the practical and theoretical aspects of the highly skilled occupation of Plumber. Pretechnical skills training in math, measurements and safety give students the preliminary knowledge base to get started. Students will also become familiar with the latest National Standard Plumbing codes. This is a four-year pro-



gram, for a total of 10,000 hours, that, upon successful completion, awards the student a Journey Level credential from the trade, as well as a Career Certificate from the College. In order to participate in the apprenticeship program, the student must be employed full-time with a participating sponsor. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Private Investigator Intern Career Technical Certificate

Program Length: 40 contact hours
(1.33 vocational credits) Required for Certificate and Graduation

The total contact hours required for Career Technical Certificate: 40

The purpose of this program is to prepare students for employment as Private Investigator Interns as required by Section 493.6203(6)(b) Florida Statutes, offered in a 24-contact hour course and a 16-contact hour course.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Private Security Officer Career Technical Certificate

Program Length: 68 contact hours
(2.3 vocational credits) Required for Certificate and Graduation

The total contact hours required for Career Technical Certificate: 68

The Private Security Officer program consists of two courses required by the state of Florida prior to licensing as a Security Officer. The Basic Phase A course allows the officer to obtain a temporary license. Officers must complete the Basic Phase B course within two years to maintain their license.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Real Estate Broker Career Technical Certificate

Program Length: 72 contact hours
(2.40 vocational credits) Required for Certificate and Graduation

The total contact hours required for Career Technical Certificate: 72

The purpose of the Real Estate Marketing program is to prepare students for employment as Real Estate Brokers.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Real Estate Sales Agent Career Technical Certificate

Program Length: 63 contact hours
(2.10 vocational credits) Required for Certificate and Graduation

The total contact hours required for Career Technical Certificate: 63

The purpose of the Real Estate Sales Agent program is to prepare students for employment as Real Estate Sales Agents.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Sheet Metal Fabrication Technology Apprenticeship Program

Career Technical Certificate

Mathematics: 9; Language: 9; Reading: 9
Program Length: 10,000 contact hours
(333.33 vocational credits)

The total contact hours required for Career Technical Certificate: 10,000

The Sheet Metal Apprenticeship Program is offered by Miami Dade College in partnership with an industry apprenticeship organization. Students receive a combination of classroom instruction and on-the-job training where they learn the practical and theoretical aspects of the highly skilled occupation of Sheet Metal Welder. This is a four-year program, for a total of 10,000 hours that, upon successful completion, awards the student a Journey Level credential from the trade, as well as a Career Technical Certificate from the College. In order to participate in the apprenticeship program, the student must be employed full-time with a participating sponsor. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Television Production Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 9; Language: 9; Reading: 9
Program Length: 1,650 contact hours
(55.0 vocational credits)

The total contact hours required for Career Technical Certificate: 1,650

The Television Production program is a practical, hands-on introduction to the

policies and procedures, equipment and tasks that must be understood by the entry-level television broadcast technician. In addition to the laboratory simulations that each course contains, extensive internship experience is provided to prepare the participant for successful job entry. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Travel and Tourism Industry Operations Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 9; Language: 9;
Reading: 9

Program Length: 600 contact hours
(20 vocational credits)

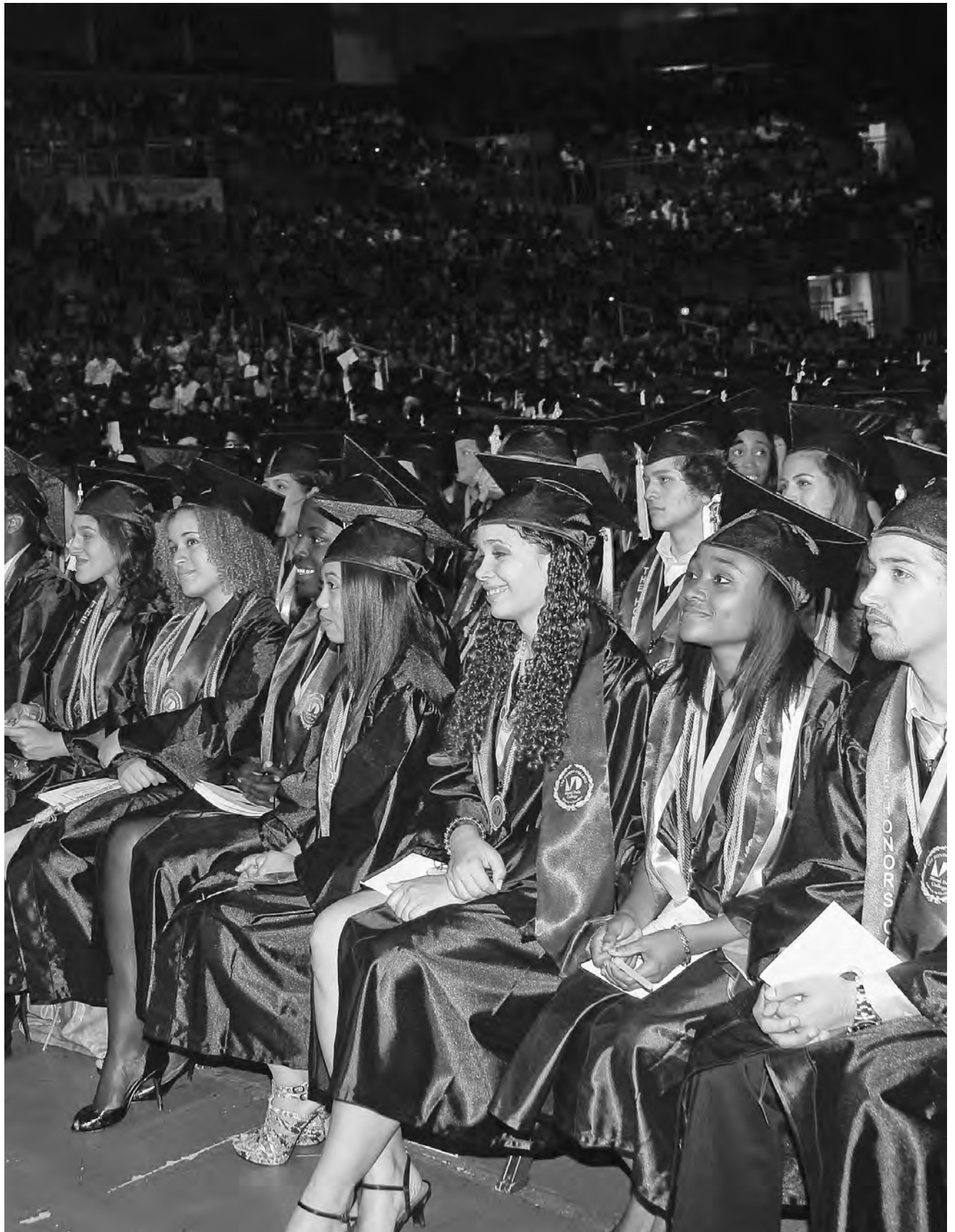
The total contact hours required for Career Technical Certificate: 600

The purpose of this program is to prepare students for employment in the travel industry and to provide continuing workforce education for those persons previously or currently employed in this industry. The program consists of three areas of specialization that include a core and one area of specialization that does not include the core. Upon completion of the program, the student will be credentialed as a Tour Escort.

The content should include, but is not limited to, selling, transporting, advertising, displaying and planning travel services. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>





Allied Health/Nursing Programs

Medical Campus

The College offers a variety of educational opportunities for those who wish to prepare for health care careers. Each nursing and health science program is designed to offer a combination of technical and general education courses. The technical courses are both didactic and clinical, requiring students to apply their knowledge in a health care setting. The programs are usually two years in length and lead to an Associate in Science or Associate in Applied Science degree. The College also offers shorter College Credit Certificate and Career Technical Education programs in the health care fields.

Any students interested in any of the Health Science programs are encouraged to consult advisors in the New Student Center to receive the most current information regarding program admission.

Program Admission

Students should not interpret acceptance into the College as automatic eligibility to enter the nursing or health science programs. Those desiring enrollment in a program must first consult with an advisor in the New Student Center at Medical Campus. The College encourages all interested students to attend program information sessions. There are basic admission requirements. Students must:

1. Be high school graduates or have a GED credential
2. Complete an Application for Admission to Miami Dade College.
3. Submit the completed program application by the due date to the Medical Campus.
4. Complete the Postsecondary Education Readiness Test (PERT) if required, and any required developmental education courses

5. Successfully complete HSC 0003.
6. Have a minimum grade point average (GPA) of 2.0 for all college work attempted unless waived by the program chairperson/director. (The minimum GPA may be higher for some programs.)
7. Have achieved a grade of C or higher in any general education or natural science courses required for program selection.

Individual programs may require additional testing.

An applicant who has ever been convicted of a felony or is the subject of an arrest pertaining to a controlled substance should confer with an authorized representative of the regulatory/licensing agency to determine eligibility for future credentialing and practice. Graduates are subject to the laws, policies and procedures of their respective regulatory/licensing boards. The College cannot assure licensure/certification.

Students are subject to the policies and procedures of affiliating agencies.

Admission requirements are subject to revision. Students should obtain the most current program information from the New Student Center on the Medical Campus. A program may have additional published selection criteria.

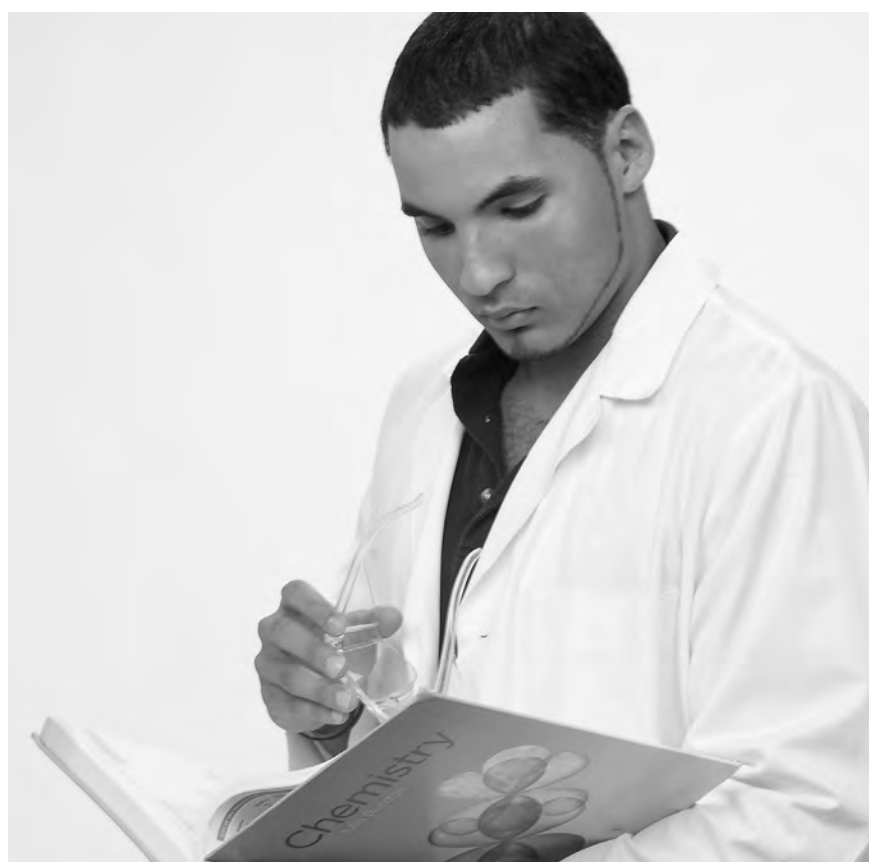
Student Selection/Progression

Most health science and nursing programs at the Medical Campus are limited in the number of students they can enroll. These enrollment limits are based on:

1. Accreditation criteria/essentials and/or state licensure regulations
2. Clinical site availability
3. On-campus clinic and/or laboratory facilities
4. Employment opportunities.

Programs will make student selection decisions on the basis of published criteria. Applicants with comparable non-collegiate preparation in nursing or an health science field may be awarded credits through examination and validation.

In keeping with its mission and goals,



and in compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act, the Medical Campus promotes an environment of respect and support for persons with disabilities and will make reasonable accommodations in accordance with these laws. The definition of individuals with disabilities are those who currently have, possess a record of having or are regarded as having a physical or mental impairment that substantially limits one or more major life activities.

Major life activities include caring for one's self, performing manual tasks, walking, seeing, hearing, breathing and working.

Individuals applying for admission, progression to clinical courses and graduation from a program in nursing or health science must be able to meet the physical and emotional requirements of the academic program. In addition, students admitted to programs in nursing and health sciences must possess:

- The emotional maturity and stability to approach highly stressful human situations in a calm and rational manner
- The ability to make clinical judgments using critical thinking
- The ability to adhere to ethical standards of conduct as well as applicable state and federal laws
- The ability to communicate effectively, orally and in writing, with patients and their families, colleagues, health care providers and the public.

An individual who poses a direct threat to the health or safety of others or themselves may be denied admission, progression and graduation. The College's determination that a person poses a direct threat will be based on an individualized assessment that relies on current medical evidence or on the best available evidence. This evidence will be used to assess 1) the nature, duration and severity of the risk and 2) the probability that the potential injury will actually occur. For additional information about specific, job-related standards, a student should consult the program of his or her choice.

Due to the unique responsibilities involved in the nursing and health science professions, each program reserves the right to require a student to withdraw. The programs will assert this right for the

student who does not meet all of the published technical/performance standards, and the student will be guided into another curriculum of study at the College.

Special and Additional Requirements to Specific Associate in Science Degree Programs

Emergency Medical Services

1. Entry into any Emergency Medical Services (EMS) course is restricted to students who have met with an EMS advisor and have received approval to enter the class.
2. If a student wishes to take any EMS class, he or she should note that the classes must be taken in order. Students must complete First Responder (EMS 1059, EMS 1059L), then Emergency Medical Technician (EMS 1119, 1119L, 1431) and finally, Paramedic (separate courses).
3. If a student wishes to enter Emergency Medical Technician (EMT) or paramedic courses, he or she must have passing scores on the Postsecondary Education Readiness Test (PERT) or have satisfactorily completed the required developmental education courses. Students may be exempt from the PERT as per the College catalog. Applicants must test out of the first level of developmental education on the PERT test for First Responder.
4. Students must demonstrate comprehension and proficiency in the English language at the college level.
5. Students may (at the discretion of the chairperson) receive credit for certain classes (EMS 1059, 1059L, 1119, 1119L or 1431) taken at other accredited institutions. However, students may not skip any required courses under any circumstances.
6. To enter the paramedic program, students must have successfully completed BSC 2085 and 2085L.
7. Once the paramedic prerequisites are met, students must submit applications by the deadline for the specific term desired and complete the Paramedic Entrance Exam.

Health Information Management

Students must:

1. Demonstrate comprehension and proficiency in the English language at the College level.
2. Satisfactorily complete an end-of-program competency assessment examination.

Nursing, Associate Degree, R.N. (Three Options)

Interested students should submit an application to the School of Nursing indicating their desired date of entry and desired nursing option. Late applications may be considered if space is available. Students should contact the New Student Center on the Medical Campus for specific, detailed information.

To be eligible for selection into a nursing option, all applicants must meet previously stated criteria and have:

1. Current status as a Miami Dade College degree-seeking student with all required developmental education courses successfully completed
2. Cumulative GPA of 2.5 or higher for any college-level courses completed and a grade of C or above for any course required for the Nursing program
3. No more than a total of three grades of D, F or W in the natural science courses required for the program
4. No more than two enrollments (one D, F or W) for any individual science course required for the program.

The School of Nursing reserves the right to add, withdraw, revise or substitute courses as necessary to maintain the quality of the nursing programs.

Generic Option

This is the basic option for the student who seeks a career in nursing. The following descriptions of options are for students with specific educational or nursing backgrounds. Students can choose any option for which they are eligible. The full-time track takes four semesters to complete. Classes begin each August and January. The part-time track takes eight semesters and begins in August. Refer to the School of Nursing Information website for specific information.

Bridge Option

This is designed for licensed practical nurses (LPN) or other individuals with health care education and licensure or certification. Detailed information about eligibility requirements is found in the School of Nursing Information Booklet. The full-time track takes one year to complete. Classes begin each August and January. The part-time track takes two years and begins in January. Refer to the School of Nursing Information Booklet for specific information.

In addition to the requirements for all nursing applicants, students interested in the Bridge Option's full-time track must also, before beginning, complete all but three of the general education and science course requirements.

Furthermore, all applicants to the Bridge Option must:

1. Have LPN licensure (or have educational background in another select health career)
2. Complete Nurse Skills Update course

Accelerated Option

This option is designed for those who hold a bachelor's degree or higher from an accredited institution in any field of study and seek a career change to nursing providers. This intensive, full-time program takes one year to complete. Classes begin August and January.

In addition to the requirements for all nursing applicants, students interested in the Accelerated Option must complete the following additional requirements to be eligible for selection:

1. Hold a bachelor's degree from an accredited institution
2. Earn a score of 106 or above on the Postsecondary Education Readiness Test (PERT).
3. Complete 15 natural science/mathematics credits, including BSC 2085, 2085L, 2086, 2086L, with a C or higher. Accelerated Option candidates are exempt from the general education core, but will be required to complete the health career core or equivalent to be eligible.
4. Individuals who hold degrees from institutions outside the United States must refer to the School of Nursing Information Booklet for more specific information about their eligibility for this nursing option.

Radiologic Technology

This program is designed for the radiologic technologist who is already a graduate of an accredited hospital radiographer program. Upon presentation of satisfactory evidence of such graduation, and proof of current registration with the American Registry of Radiologic Technologists, students may be granted 57 credits and will be able to earn the Associate in Science degree by completion of 20 additional credit hours.

Further information may be obtained by calling the Radiologic Sciences Department at Medical Campus.

Additional Offerings

Health Sciences and Related Studies Department

The Health Sciences and Related Studies Department offers many of the required college credit and vocational credit courses and labs students need for admission and graduation from the health care programs offered at Medical Campus. The natural sciences and general education courses offered by the College include:

BSC 2085/6	Human Anatomy and Physiology & Labs
CLP 1006	Psychology of Personal Effectiveness
CHM 1033	Chemistry for Health Sciences
DEP 2000	Human Growth and Development
MCB 2010	Microbiology
MNA 1345	Effective Supervision
PHI 2604	Critical Thinking and Ethics
SLS 1310	Introduction to Health Careers

These Miami Dade College courses are taught at other campuses and offered at local health care organizations.

Community Education, Medical Campus

Medical Campus provides professional continuing education for the health care community by offering courses in many of the nursing and health science disciplines. Health care providers matriculate in these courses to meet state licensure, national registry or certification requirements for their respective

board or association. Students take these courses to maintain and update competence, learn new skills in their field and/or to become multiskilled/cross-trained.

Contract Education and Custom Designed Courses

Courses can be developed on a contract-for-services basis with local and state agencies. Individual courses, or a series of offerings, can be custom designed to meet an agency's specific educational and training needs.

Refresher Courses

These courses are designed to keep health care professionals updated in their fields and to meet re-licensure or certification requirements.

Remediation Courses

These are 10-week Florida Board of Nursing-approved remediation courses designed to prepare individuals for the National Council Licensing Examinations for registered nurses (NCLEX-RN) and practical nurses (NCLEX-PN).

Licensing Examination Review Courses

These courses prepare Health Sciences and Nursing graduates for licensing examinations.

Contact Hours for Re-Licensure

These courses focus on topics relevant to health care professionals, with contact hours being provided for licensure.

The courses include CPR, ACLS, preventing medical errors, HIV/AIDS and domestic violence.

Cross-Training/Multi-Skilling

These courses build on current expertise and expand interpretation practice possibilities. The courses include EKG, phlebotomy, basic X-ray machine operator, MRI and IV therapy for LPNs.

Internships/Preceptorships

Clinically oriented programs are offered to cross-train registered nurses to assume new challenges. These programs are offered in several disciplines,

including perioperative, childbirth education, emergency room and critical care nursing.

Community Education

The College provides community-based organizations (e.g. schools, churches and nonprofit organizations) with seminars, workshops, short courses, lectures and health fairs. These events cover a broad range of health-related topics.

Associate in Science

Clinical Laboratory Science Associate in Science

Total credits required for Associate in Science degree: 76

The Clinical Laboratory Science program prepares the graduate to work as part of the health care delivery team in a nonprofit clinical laboratory or research laboratory. Clinical practice is conducted in local health care facilities

under the supervision of qualified, registered professional personnel. Graduates are eligible for Florida state licensure and registry with the American Society of Clinical Pathologists and equivalent licensure.

Additional Information: Due to the limited number of students who can be accepted into the Clinical Laboratory Science program, it is important that applicants be properly informed. For information, advisement, application forms and deadline dates, interested students should contact the Department of Clinical Laboratory Science at Medical Campus.

Dental Hygiene Associate in Science

Total credits required for Associate in Science degree: 88

The dental hygienist is a licensed member of the dental health team dedicated to helping patients maintain good oral health and prevent dental disease

and disorders. The dental hygienist performs dental cleaning, teaches patients proper oral care, takes X-rays and provides nutritional counseling for optimal oral health.

Additional Information: Due to the limited number of students who can be accepted into the Dental Hygiene program, it is important that applicants be properly informed. For information, advisement, application forms and deadline dates, interested students should contact the Department of Dental Hygiene at Medical Campus.

Diagnostic Medical Sonography Technology Associate in Science

Total credits required for Associate in Science degree: 72

The Diagnostic Medical Sonography Technology program prepares the student to become a diagnostic medical sonographer. The diagnostic medical sonographer provides patient services using diagnostic ultrasound under the supervision of a doctor of medicine or osteopathy who is responsible for the use and interpretation of ultrasound procedures. The sonographer assists the physician in gathering sonographic data necessary to reach diagnostic decisions.

Emergency Medical Services Associate in Science

Total credits required for Associate in Science degree: 73

The Emergency Medical Services program is designed according to national and state standards. Graduates will perform as advanced practitioners and as leaders in the technical supervisory and managerial aspects of advanced emergency care. Graduates will be prepared primarily for employment in agencies providing pre-hospital emergency medical care and secondarily, for jobs in emergency and other acute care areas of the hospital.

Additional Information: It is important that applicants be properly informed. For information, advisement, application forms, selection criteria and deadline dates, interested students should contact the Department of Emergency Medical Services at Medical Campus.



Health Information Technology Associate in Science

Total credits required for Associate in Science degree: 67

The Health Information Management program prepares the individual for employment as a health information technician in a variety of health care facilities. The technician may function in various capacities, having responsibilities such as coding of diagnoses and procedures; processing of health information; storage and retrieval of health information and statistical reporting. Other aspects of the curriculum include medical/legal aspects, quality assessment and supervision of the daily operations of a Health Information Department. Management of computerized health information is emphasized. Clinical experiences are provided under the supervision of qualified professionals to enhance classroom instruction and demonstrate current advances in health information practice. A grade of C or better is required in all program courses.

Histologic Technology Associate in Science

Total credits required for Associate in Science degree: 76

The Histologic Technology program prepares the student for employment in a wide variety of practice settings including: hospitals, clinics, clinical laboratories, veterinary pathology and forensic pathology. A histotechnologist will be able to freeze, embed and cut tissues, mount tissue samples on slides and stain them with dyes to make the cell details visible under the microscope. Graduates are eligible to sit for the Florida state licensure and registry with the American Society of Clinical Pathologists and equivalent licensure.

Additional Information: Due to the limited number of students who can be accepted into the Histologic Technology program, it is important that applicants be properly informed. For information, advisement, application forms and deadline dates, interested students should contact the Department of Histologic Technology at Medical Campus.

Nuclear Medicine Technology Associate in Science

Total credits required for Associate in Science degree: 75

The Nuclear Medicine Technology program is designed to prepare selected students to qualify as nuclear medicine technologists in hospitals, outpatient diagnostic imaging centers and private physician offices. These contributing members of the Allied Health team prepare and administer the tracer radio pharmaceuticals to patients and record the image using computerized detection systems for medical diagnosis. Successful completion of this two-year program qualifies graduates to apply for the American Registry for Radiologic Technologists examination in Nuclear Medicine and/or the Nuclear Medicine Technology Certification Board Examination leading to certification as a registered Nuclear Medicine Technologist and gainful employment as such.

Additional Information: Due to the limited number of students who can be accepted into the Nuclear Medicine Technology program, it is important that applicants be properly informed. For information, advisement, application forms and deadline dates, interested students should contact the Department of Nuclear Medicine Technology at Medical Campus.

Nursing, R.N. (Accelerated) Associate in Science

Total credits required for Associate in Science degree: 72

**This program transfers to four-year institutions. See department for information.*

The Accelerated Option in Nursing is designed to prepare the student with a baccalaureate or higher in other disciplines for a career as a Registered nurse (R.N.) at the associate degree level. The content and clinical experiences are designed to meet the learning and professional socialization needs of this special category of student. The program is accredited by the Accreditation Commission for Education in Nursing (ACEN) (3343 Peachtree Road NE, Suite 850 Atlanta, Georgia 30326, 404-975-5000, www.acenursing.org) and approved by the Florida Board of Nursing. Graduates are

eligible to apply to the National Council Licensing Examination for Registered Nurses (NCLEX-RN).

Selection is based on the student's cumulative grade point average (GPA) and successful completion of all prerequisite courses for the nursing program option to which they are applying. See a School of Nursing Information Booklet for more specific details about admission requirements.

Program admission requirements:

- Current status as a Miami Dade degree-seeking student with all required developmental education courses successfully completed
- Earn a score of 106 or above on the Postsecondary Education Readiness Test (PERT).
- Cumulative GPA of 2.5 or higher and a grade of C or above for any course required for the Nursing Program
- No more than a total of three grades of D, F or W in the Natural Science courses required for the program
- No more than two grades of D, F or W in any individual Natural Science course required for the program.

Additional Information: Due to the limited number of students who can be accepted into the School of Nursing associate degree programs, it is important that applicants be properly informed. For information, advisement, application forms and deadline dates, interested students should contact the New Student Center, Medical Campus.

Note: Anatomy & Physiology grades must be earned within 10 years of admission into the associate degree Nursing program. If these grades are more than 10 years old, please see an academic advisor.

The Florida Board of Nursing requires disclosure of arrests (except traffic violations) upon application to nursing programs. Upon completion, graduates are eligible to apply to write the NCLEX-RN. Final determination to become licensed rests with the Board of Nursing.

Nursing, R.N. Generic - (Full-Time Track) Associate in Science

Total credits required for Associate in Science degree: 72

** This program transfers to four-year institutions. See department for information.*

The Generic Nursing option is designed to prepare students without previous health care education for careers as registered nurses. This program is accredited by the Accreditation Commission for Education in Nursing (ACEN) (3343 Peachtree Road NE, Suite 850 Atlanta, Georgia 30326, 404-975-5000, www.acenursing.org) and approved by the Florida Board of Nursing. Graduates are eligible to apply to write the NCLEX-RN.

Selection is based on the students' cumulative grade point average (GPA) and successful completion of all prerequisite courses for the nursing program option to which they are applying. See a School of Nursing Information Booklet for more specific details about admission requirements.

Program admission requirements:

- Current status as a Miami Dade College degree-seeking student with all required developmental education courses successfully completed
- Cumulative GPA of 2.5 or higher and a grade of C or above for any course required for the Nursing program
- No more than a total of three grades of D, F or W in the Natural Science courses required for the program
- No more than two grades of D, F or W in any individual Natural Science course required for the program.

Additional Information: Due to the limited number of students who can be accepted into the School of Nursing Associate Degree Programs, it is important that applicants be properly informed. For information, advisement, application forms and deadline dates, interested students should contact the New Student Center, Medical Campus.

Note: Anatomy & Physiology grades must be earned within 10 years of admission into the associate degree Nursing program. If these are more than 10 years old, please see an Academic advisor.

The Florida Board of Nursing requires disclosure of arrests (except traffic violations) upon application to nursing programs. Upon completion, graduates are eligible to apply to write the NCLEX-RN. Final determination to become licensed rests with the Board of Nursing.

Nursing, R.N. Generic - (Part-Time Track) Associate in Science

*Total credits required for
Associate in Science degree: 72*

** This program transfers to four-year institutions. See department for information.*

The Generic Nursing Option is designed to prepare students without previous health care education for careers as Registered Nurses. This program is accredited by the Accreditation Commission for Education in Nursing (ACEN) (3343 Peachtree Road NE, Suite 850 Atlanta, Georgia 30326, 404-975-5000, www.acenursing.org), and approved by the Florida Board of Nursing. Graduates are eligible to apply to write the NCLEX-RN. The part-time track is designed for individuals who must work while they attend school.

Selection is based on the student's cumulative grade point average (GPA) and successful completion of all prerequisite courses for the nursing program option to which they are applying. See a School of Nursing Information Booklet for more specific details about admission requirements.

Program admission requirements:

- Current status as a Miami Dade degree-seeking student with all required developmental education courses successfully completed
- Cumulative GPA of 2.5 or higher and a grade of C or above for any course required for the Nursing program
- No more than a total of three grades of D, F or W in the Natural Science courses required for the program
- No more than two grades of D, F or W in any individual Natural Science course required for the program.

Additional Information: Due to the limited number of students who can be accepted into the School of Nursing associate degree programs, it is important that applicants be properly informed. For information, advisement, application forms and deadline dates, interested students should contact the New Student Center at Medical Campus.

Note: Anatomy & Physiology grades must be earned within 10 years of admission into the associate degree Nursing program. If these are more than 10 years old, please see an academic advisor.

The Florida Board of Nursing requires disclosure of arrests (except traffic viola-

tions) upon application to nursing programs. Upon completion, graduates are eligible to apply to write the NCLEX-RN. Final determination to become licensed rests with the Board of Nursing.

Nursing, R.N., Bridge - (Full-Time Track) Associate in Science

*Total credits required for
Associate in Science degree: 72*

** This program transfers to four-year institutions. See department for information.*

The Bridge Option in Nursing is designed to prepare Licensed Practical Nurses (LPN) and selected other individuals with National Licensure or Certification for practice as a Registered Nurse (R.N.). The content and clinical experiences are designed to meet the learning and professional socialization needs of this special category of student. The program is accredited by the Accreditation Commission for Education in Nursing (ACEN) (3343 Peachtree Road NE, Suite 850 Atlanta, Georgia 30326, 404-975-5000, www.acenursing.org), and approved by the Florida Board of Nursing. Graduates are eligible to apply to write the NCLEX-RN. www.fldoe.org/CC/Educators/bach_app.asp

Selection is based on the student's cumulative grade point average (GPA) and successful completion of all prerequisite courses for the nursing program option to which they are applying. See a School of Nursing Information Booklet for more specific details about admission requirements.

Program admission requirements:

- Non-Licensed Practical Nurse (LPN) applicants must take NRG 051 before applying to the program.
- Licensed Practical Nurse (LPN) applicants who have been out of practice for five or more years must take NRG 051 before applying.
- Current status as a Miami Dade degree-seeking student with all required developmental education courses successfully completed
- Cumulative GPA of 2.5 or higher and a grade of C or above for any course required for the Nursing program
- No more than a total of three grades of D, F or W in the Natural Science courses required for the program
- No more than two grades of D, F or W in any individual Natural Science course required for the program

Additional Information: Due to the limited number of students who can be accepted into the School of Nursing associate degree programs, it is important that applicants be properly informed. For information, advisement, application forms and deadline dates, interested students should contact the New Student Center, Medical Campus.

Note: Anatomy & Physiology grades must be earned within 10 years of admission into the associate degree Nursing program. If these are more than 10 years old, please see an Academic advisor.

The Florida Board of Nursing requires disclosure of arrests (except traffic violations) upon application to nursing programs. Upon completion, graduates are

eligible to apply to write NCLEX-RN. Final determination to become licensed rests with the Board of Nursing.

Nursing, R.N., Bridge - (Part-Time Track) Associate in Science

*Total credits required for
Associate in Science degree: 72*

**This program transfers to four-year institutions. See department for more information.*

The Bridge Option in Nursing is designed to prepare licensed practical nurses (LPN) and selected other individuals with national licensure or certification for practice as a registered nurse (R.N.). The content and clinical experiences are designed to meet the

learning and professional socialization needs of this special category of student. The program is accredited by the Accreditation Commission for Education in Nursing (ACEN) (3343 Peachtree Road NE, Suite 850 Atlanta, Georgia 30326, 404-975-5000, www.acenursing.org) and approved by the Florida Board of Nursing. Graduates are eligible to apply to write the NCLEX-RN. The part-time track is designed for individuals who work full time. Selection is based on the student's cumulative grade point average (GPA) and successful completion of all prerequisite courses for the nursing program option to which they are applying. See a School of Nursing Information Booklet for more specific details about



admission requirements.

Program admission requirements:

- Non-licensed practical nurse applicants must take NRG 051 before applying to the program.
- Licensed practical nurse (LPN) applicants who have been out of practice for five or more years must take NRG 051 before applying.
- Current status as a Miami Dade degree-seeking student with all required developmental education courses successfully completed
- Cumulative GPA of 2.0 or higher and a grade of C or above for any course required for the Nursing program
- No more than a total of three grades of D, F or W in the Natural Science courses required for the program
- No more than two grades of D, F or W in any individual Natural Science course required for the program

Additional Information: Due to the limited number of students who can be accepted into the School of Nursing associate degree programs, it is important that applicants be properly informed. For information, advisement, application forms and deadline dates, interested students should contact the New Student Center, Medical Campus.

Note: Anatomy & Physiology grades must be earned within 10 years of admission into the associate degree Nursing program. If these are more than 10 years old, please see an Academic advisor.

The Florida Board of Nursing requires disclosure of arrests (except traffic violations) upon application to nursing programs and upon application to write NCLEX-RN. Final determination to become licensed rests with the Board of Nursing.

Opticianry Associate in Science

*Total credits required for
Associate in Science degree: 72*

The Opticianry program simultaneously prepares students for three ophthalmic health care careers: optician, optometric technician and ophthalmic medical assistant. A concentrated presentation of general education courses combined with career development and clinical experience accomplishes this multidisciplinary approach. Among the

marketable skills acquired are clinical data collection, ophthalmic fabrication and ophthalmic dispensing. The student begins working with patients during the third semester in clinics staffed by ophthalmologists, optometrists and opticians. A student must maintain a grade point average of 2.0 or better in each course with an "OPT" prefix in order to advance within the program. The successful completion of this program offers the graduate a challenging and rewarding career on an ophthalmic health care team. Graduates are eligible to sit for the Opticianry Licensure Examination and the Optometric Technician Registration Examination. After one year of work experience with an ophthalmologist, graduates may sit for the Ophthalmic Medical Assistant Certification Examination. The Opticianry program is approved by the Council on Optometric Education and the Commission on Opticianry Accreditation.

Additional Information: Due to the limited number of students who can be accepted into the Opticianry program, it is important that applicants be properly informed. For information, advisement, application forms and deadline dates, interested students should contact the Department of Vision Care at Medical Campus.

*For more information please visit
<http://www.mdc.edu/main/academics/credit.aspx>*

Physical Therapist Assistant Associate in Science

*Total credits required for
Associate in Science degree: 74*

The Physical Therapist Assistant program prepares students for employment in hospitals, rehabilitation centers, nursing homes, private practices or other qualified health agencies. Graduates will work under the supervision of a physical therapist in the promotion of optimal human health and function through the application of scientific principles to prevent, identify, correct or alleviate acute or prolonged physical disability of anatomic or physiologic origin. Externship or clinical practice is conducted in local health care facilities under the supervision of qualified professional personnel. The program is accredited by the Commission

on Accreditation in Physical Therapy Education. Graduates of the program are eligible to take the State Board Examination and receive an Associate in Science degree.

Additional Information: Due to the limited number of students who can be accepted into the Physical Therapist Assistant program, it is important that applicants be properly informed. For information, advisement, application forms and deadline dates, interested students should contact the Department of Physical Therapist Assistant at Medical Campus.

Physician Assistant Associate in Science

*Total credits required for
Associate in Science degree: 88*

Graduates of the Physician Assistant program are prepared for employment as part of the health care delivery team to work under the direct supervision of a licensed physician. Students are instructed in various aspects of medical care, theory, instrumentation, diagnosis and treatment including prescribing and administration of drugs. There is a concentration of general education and Physician Assistant courses combined with hospital and office practice under the supervision of a licensed physician. Graduates will be eligible to sit for the Commission on Education for the Physician Assistants exam.

Additional Information: Due to the limited number of students who can be accepted into the Physician Assistant program, it is important that applicants be properly informed. For information, advisement, application forms and deadline dates, interested students should contact the Department of Physician Assistant at Medical Campus.

Respiratory Care Associate in Science

*Total credits required for
Associate in Science degree: 76*

The Respiratory Care program prepares the successful graduates for employment in health agencies where they will work with physicians and other professionals in treating patients with respiratory ailments or injuries affecting the respiratory function. Emphasis will be placed on supervised clinical instruction and practice in local

health care facilities. Completion of this two-year accredited program enables the graduate to apply for entry into the examination Process of the National Board of Respiratory Care. A grade of C or better is required in each course.

Additional Information: Due to the limited number of students that can be accepted into the Respiratory Care program, it is important that applicants be properly informed. For information, advisement, application forms and deadline dates, interested students should contact the Department of Respiratory Care at Medical Campus.

Radiography Associate in Science

*Total credits required for
Associate in Science degree: 77*

The Radiography program is an Associate in Science degree, which provides a broad base of education and performance-based clinical experience in all technical aspects of work as a Radiographer. Experience is provided in all routine general and fluoroscopic procedures, special procedures and in

the use of the specialized equipment and techniques available in the affiliated clinical education centers. The graduate is eligible to apply to take the Registry Examination of the American Registry of Radiologic Technologists. The application deadline is Feb.15 for the class beginning the following summer term.

Additional Information: All applicants must attend an Information Session before acceptance into the Radiography program. Applicants must pass a physical, meet physical requirements, must complete an approved CPR course and an approved HIV/AIDS course before beginning the Radiography program.

Due to the limited number of students that can be accepted into the Radiography program, it is important that applicants be properly informed.

For information, advisement, application forms and deadline dates, interested students should contact the Department of Radiologic Sciences at Medical Campus.

*For more information please visit
<https://sisvsr.mdc.edu/ps/sheet.aspx>*

Veterinary Technology Associate in Science

*Total credits required for
Associate in Science degree: 73*

The Veterinary Technology program prepares students to assist veterinarians in their daily practice, working with all types of animals and in various disciplines within the realm of veterinary medicine. Tasks include providing total nursing care to the sick or injured patient, handling and restraint, assisting during examinations and surgical procedures, performing dental hygiene and radiographic exams and collection and analysis of diagnostic specimens. Graduates are eligible to apply to take the Veterinary Technician National Examination (VTNE) and the Florida Practical Exam (FPE).

College Credit Certificates

College Credit Certificate programs are subsets of selected Associate in Science/Associate in Applied Science degrees. The CCC meets the Florida



Department of Education Certified College Credit program requirements and the student receives an institutional College Credit Certificate upon completion of the program. The college credits granted in these programs will apply toward the related Associate in Science/ Associate in Applied Science degree. The program's title is added to the student's transcript.

STUDENTS IN ALL PROGRAMS SHOULD CHECK THEIR INDIVIDUALIZED DEGREE AUDIT REPORT TO DETERMINE THE SPECIFIC GRADUATION POLICIES IN EFFECT FOR THEIR PROGRAM OF STUDY. REQUIREMENTS MAY CHANGE BASED ON THE YEAR AND TERM A STUDENT ENTERS MIAMI DADE COLLEGE. THE DEGREE AUDIT REPORT INCLUDES CURRENT GRADUATION REQUIREMENTS. THE FINAL RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS STATED IN THE DEGREE AUDIT REPORT RESTS WITH THE STUDENT.

Emergency Medical Technician - Basic College Credit Certificate

Total credits required for the Certificate: 11

The Emergency Medical Technician

- Basic College Credit Certificate is a one-semester program, which prepares students to function in the hospital and pre-hospital environment. Graduates of this program can perform clinical data collection, patient assessment and provide immediate care and safe relocation of the acutely ill. Satisfactory completion of this program will qualify the graduate to sit for the state and/or national EMT certification examination. This program is approved by the Florida Department of Health and Rehabilitative Services.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Healthcare Informatics Specialist College Credit Certificate

Total credits required for the College Credit Certificate: 24

Healthcare Informatics Specialists are an important liaison between healthcare providers and data reporting. This program provides learning experiences that enable the student to acquire and simulate the necessary technical competencies to function effectively as a supportive health care provider in the health care informatics profession. To facilitate the clinical portion of the program, students are assigned to clinical facilities within South Florida.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Nuclear Medicine Technology Specialist College Credit Certificate

Total credits required for the College Credit Certificate: 48

Students in this track must have an earned degree (minimum A.S./AAS), and must have completed CHM1033, CHM1033L, MAC1105 and PHY1004 prior to admission into the Nuclear Medicine Technology Specialist College Credit Certificate program.

The Nuclear Medicine Technology program is designed to prepare selected students to qualify as nuclear medicine technologists in hospitals, outpatient diagnostic imaging centers, and private physicians' offices. These contributing members of the Allied Health team prepare and administer the tracer radio pharmaceuticals to the patients and record the image using computerized detection systems for medical diagnosis. Successful completion of this one-year program qualifies graduates to apply to take the American Registry for Radiologic Technologists examination in nuclear medicine and/or the nuclear medicine technology certification board examination leading to certification as a registered nuclear medicine



technologist and gainful employment as such.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Paramedic College Credit Certificate

Total credits required for the College Credit Certificate: 42

The Paramedic College Credit Certificate program prepares students as paramedics who are health care professionals in addition to the responsibilities of an emergency medical technician (EMT). A graduate paramedic can perform certain invasive procedures under the direction of a physician. Satisfactory completion of the program will qualify the graduate to sit for the state and/or national paramedic certification examination. This program is accredited by the Committee on Allied Health Education and Accreditation.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Career Technical Education Programs

Career Technical Education (CTE) Programs prepare students to enter a specific career or vocation. To complete a program, students must demonstrate that they have mastered specific job-related performance requirements as well as communication and computation competencies and will be awarded a CTC upon the completion of a program. CTE programs vary in length from 63 to 1,905 contact hours depending on the complexity of the individual program. Students entering programs greater than 450 hours (effective January, 2003) will be tested for basic communication, computation and reading skills. Students who score below the required Department of Education grade level designated for each program will be required to take appropriate basic skills training prior to the completion of their respective programs (§233.0695, FS). Career Technical Certificate students are eligible for financial aid provided they are enrolled in programs greater than 600 credit hours. Health Science programs are offered at the Medical Campus.

Massage Therapy - Accelerated Option Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 9; Language: 10;

Reading: 10

Program Length: 750 contact hours (25 vocational credits)

The total contact hours required for Career Technical Certificate: 750

The two-semester program prepares individuals to provide various techniques of massage of the back, head and feet, including reflexology, rolling and trigger point therapy. There is an emphasis on the therapist/client relationship and records management for clients and payment. Upon successful completion of this program, the graduate is eligible to sit for the Florida Massage Therapy licensure examination. Test of Adult Basic Education (TABE) is required.

Additional Information: MSS0995 will be awarded to individuals who are licensed Physical Therapists or Physical Therapist Assistants. MSS0995 provides for credit for the following exempt courses: HSC0003, MSS0156, MSS0156L, MSS0300, MSS0300L and MSS0803C.

Due to the limited number of students who can be accepted into the Massage Therapy Program, it is important that applicants be properly informed. For information, advisement, application forms, selection criteria and deadline dates, interested students should contact the New Student Center at Medical Campus.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Massage Therapy - Generic Option Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 9; Language: 10;

Reading: 10

Program Length: 750 contact hours (25 vocational credits)

The total contact hours required for Career Technical Certificate: 750

The two-semester program prepares individuals to provide various techniques of massage of the back, head and feet, including reflexology, rolling and trigger point therapy. There is an empha-

sis on the therapist/client relationship and records management for clients and payment. Upon successful completion of this program, the graduate is eligible to sit for the Florida Massage Therapy licensure examination. Test of Adult Basic Education (TABE) is required.

Additional Information: Due to the limited number of students who can be accepted into the Massage Therapy Program, it is important that applicants be properly informed. For information, advisement, application forms, selection criteria and deadline dates, interested students should contact the New Student Center, Medical Campus. HSC0003 - Introduction to Health Care or its equivalent will be required for admission into the Massage Therapy Program.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Massage Therapy - Transitional Option Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 9; Language: 10;

Reading: 10

Program Length: 750 contact hours (25 vocational credits)

The total contact hours required for Career Technical Certificate: 750

The two-semester program prepares individuals to provide various techniques of massage of the back, head and feet, including reflexology, rolling and trigger point therapy. There is an emphasis on the therapist/client relationship and records management for clients and payment. Upon successful completion of this program, the graduate is eligible to sit for the Florida Massage Therapy licensure examination. Test of Adult Basic Education (TABE) is required.

Additional Information: MSS0996 will be awarded to individuals who are licensed in an Allied Health profession and/or Nursing (associate degree or higher). MSS0996 provides for credit for the following exempt courses: HSC0003, MSS0156 and MSS0156L.

Due to the limited number of students who can be accepted into the Massage Therapy Program, it is important that applicants be properly informed. For information, advisement, application forms, selection criteria and deadline dates, interested students should con-

tact the New Student Center at Medical Campus.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Medical Assisting Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 10; Language: 10;

Reading: 10

Program Length: 1,300 contact hours

(43.3 vocational credits)

The total contact hours required for Career Technical Certificate: 1,300

The Medical Assisting program, which is one year (3 semesters) in length, prepares individuals to provide health services in ambulatory out-patient facilities, including medical offices and clinics. Medical assistants participate in diagnostic, clinical and administrative functions. Diagnostic functions include drawing blood, performing basic laboratory tests and taking EKGs and X-rays. Clinical functions include obtaining vital signs, preparing patients for and assisting with examinations and procedures, administering medications and performing treatments. Administrative functions include serving as receptionists, scheduling appointments and diagnostic procedures, managing records, completing insurance coding and providing for billing and collecting. Medical assistants use computer technology to manage records, billing and other aspects of a medical office or clinic. Students participate in an externship each semester to gain experience in every aspect of the medical assistant's practice. Test of Adult Basic Education (TABE) is required.

Additional Information: Due to the limited number of students that can be accepted into the Medical Assisting program, it is important that applicants be properly informed. For information, advisement, application forms, selection criteria and deadline dates, interested students should contact the New Student Center at Medical Campus 305-237-4374.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Medical Coder/Biller Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 9; Language: 11;

Reading: 11

Program Length: 1,110 contact hours

(37 vocational credits)

The total contact hours required for Career Technical Certificate: 1,000

The Medical Coder/Biller program prepares individuals for employment as Medical Coder/Billers. The student will learn to translate diagnoses and procedures into numerical designation (coding) using the International Classification of Diseases (ICD-9-CM) and Current Procedural Terminology (CPT-4). The program involves coding, classifying and indexing diagnoses and procedures for purposes of standardization, retrieval and statistical analysis. The student will also be trained to prepare and file medical insurance claim forms for reimbursement. Electronic claims transmission is included. There is special emphasis on ethical and legal responsibilities, data quality, financial reimbursement, Diagnosis Related Groups (DRGs) and Ambulatory Patient Classification (APCs). Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Medical Record Transcribing Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 9; Language: 11;

Reading: 11

Program Length: 1,200 contact hours

(40 vocational credits)

The total contact hours required for Career Technical Certificate: 1,200

The Medical Record Transcribing program prepares individuals to transcribe medical records from recorded dictation. The individual prepares and types reports in appropriate format for use by health care facilities, physicians, insurance companies, legal proceedings and research specialists. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Pharmacy Technician Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 11; Language: 10;

Reading: 10

Program Length: 1,050 contact hours

(35 vocational credits)

The total contact hours required for Career Technical Certificate: 1,050

The Pharmacy Technician program prepares individuals for employment as Pharmacy Technicians. The Pharmacy Technician works primarily in retail and hospital pharmacies under the supervision of a registered pharmacist in the packaging and distribution of medication. Test of Adult Basic Education (TABE) is required.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Phlebotomy Career Technical Certificate

Minimum Grade Level Required for Certificate and Graduation:

Mathematics: 9; Language: 10;

Reading: 10

Program Length: 165 contact hours

(5.5 vocational credits)

The total contact hours required for Career Technical Certificate: 165

The Phlebotomy program is designed to prepare students for employment in a hospital laboratory, blood center or other health care facility to draw blood by venipuncture and capillary puncture. Students are taught safe and efficient work practices in obtaining adequate and correct blood specimens, labeling specimens and transporting specimens correctly to the appropriate laboratory sections. The Center for Disease Control (CDC) guidelines for HIV/AIDS, Hepatitis B and other diseases are stressed.

Additional Information: Due to the limited number of students who can be accepted into the Phlebotomy program, it is important that applicants be properly informed. For information, advisement, application forms, selection criteria and deadline dates, interested students should contact the New Student Center at Medical Campus.

For more information please visit <https://sisvsr.mdc.edu/ps/sheet.aspx>

Collegewide Schools

The College has adopted a management approach to the delivery of occupational and technical education, including respective transfer options through a system of collegewide schools. The primary objective is to serve students more effectively and efficiently, provide more accessible programs countywide, and be more responsive to the needs of business and industry.

School of Architecture and Interior Design

The School of Architecture and Interior Design is a collegewide entity administered at Wolfson Campus. Academic programs are offered throughout the College to provide outstanding educational opportunities and state-of-the-art training to students in the architecture, interior design and construction fields.

The School of Architecture and Interior Design offers the Associate in Arts pathways in architecture, building construction, interior design and landscape architecture. Upon completion, graduates transfer to upper-division programs at state institutions and elsewhere.

For students desiring intensive training leading to employment in a variety of occupations in the above fields, the School of Architecture and Interior Design offers the Associate in Science in architectural design and construction technology, building construction technology and interior design technology. In addition, students can also graduate with a College Credit Certificate as a computer-aided design assistant and as a computer-aided design operator.

The disciplines of architecture and interior design are very similar in relation to the type of learning that students must acquire in the two years of study at the College. There are also widely diverging outcomes regarding the different areas of specialization in advanced courses. These disciplines are task-driven and task-intensive. Consequently, assessments are done in every studio class on a continuing basis, project by project, and at predetermined stages during the semester.

The core of the Architecture and Interior Design pathways is comprised of the Design Studio courses. Design problems are given to students with a specific set of parameters and time frame. A series of progress benchmarks are established and the students are assessed as they complete those steps. A studio set-up allows for individual attention to each student and constant feedback from the instructor and other students as they work individually and in teams.

Other important areas of study include courses in graphic expression and representation, computer-aided technical drafting, history and theory, technical courses in construction materials, structures and environmental technology.

Building construction students learn to interpret construction working drawings to derive practical information necessary to initiate a construction job. Courses in cost estimating, financial and legal aspects, and building codes are also included.

The disciplines of architecture, construction and interior design have a long-established history. Many principles basic to these disciplines are as applicable today as they were in the past. Learning these principles and assimilating current professional practices demand discipline and hard work from the students.

In order to transfer to upper-division programs or to seek employment, students must produce a portfolio of work. This portfolio is made up of work from all four levels of design courses and some graphic courses as well. This way, the portfolio demonstrates not only the best work produced by the student, but also the progress made over two years, which shows the intellectual and creative development of the students. A specific portfolio class is offered, where

students utilize cutting-edge digital photography and computer graphics to produce outstanding portfolios.

School of Health Sciences

The Medical Campus is committed to assisting qualified students interested in pursuing careers in the health science professions. Health Science professionals provide more than 60 percent of all health care administered in the United States. The School of Health Sciences offers more than 20 challenging vocational, certificate and degree programs, such as respiratory care, opticianry, clinical laboratory sciences and health information management.

Programs in the School of Health Sciences prepare students for employment in a wide variety of settings including hospitals, clinics, research centers, long term care facilities, physician's offices and wellness centers. In collaboration with more than 300 health care facilities throughout Miami-Dade County, students receive the necessary theory, laboratory experience and clinical practice. Students use state-of-the-art equipment and are supervised by licensed professional faculty. Health Science programs are fully accredited through their respective state and national associations. Most programs have limited access. Program completion affords the graduate the opportunity to seek employment in high-demand professions while receiving a competitive salary. Interested students are encouraged to contact the Medical Campus at 305-237-4141 to receive current information regarding program requirements, application procedures and selection process for the specific Health Science program of interest.

School of Aviation

The mission statement of MDC Eig-Watson School of Aviation is to provide the greatest opportunities for our students to achieve success by meeting the professional and educational needs of the aviation industry.

The MDC Eig-Watson School of Aviation provides students with the education and skills required for a successful aviation career. Associate in Science degrees include Aviation Administration, Aviation Maintenance Management and Professional Pilot Technology. Related College Credit Certificates include Air Cargo Management, Airline/Aviation Management, Airport Management, and Passenger Service Agent; an Advance Technical Certificate (Certified Flight Instructor) is also offered. Additionally the School offers an aircraft dispatcher course and flight simulation training.

The Eig-Watson School of Aviation uses various training techniques and simulation equipment to provide students with a hands-on approach to their education. The School has classrooms at Miami International Airport and Kendall-Tamiami Executive Airport, where students are immersed in the world of aviation. Classes are also offered at Homestead Campus where the state-of-the-art air traffic control simulation lab is provided. The following flight training courses are offered through contracted flight providers:

- ATF 2210 Commercial Pilot Flight (3 credits)
- ATF 2305 Instruments Pilot Flight (3 credits)

- ATF 2400 Multi-Engine Pilot Flight (1 credit)
- ATF 2501 Flight Instructor-Flight Training (3 credits)

School of Business

The School of Business offers a full range of academic programs to prepare students for careers in business or to start a successful business of their own. Course offerings are available in a wide number of disciplines including accounting, business administration, economics, entrepreneurship, management, marketing, international business, supply chain and logistics, and financial services. The School of Business has a long tradition of preparing students to meet the needs of the local workforce and partnering with industry to offer students cutting-edge instruction in various fields. The School has become known for excellence in providing customized training to meet industry needs. School of Business courses are offered at the North, Kendall, Wolfson, Homestead, InterAmerican and Hialeah campuses and West Campus, as well as through Virtual College. Academic options include:

- Bachelor of Applied Science (BAS) in Supervision and Management with emphasis on critical thinking and problem solving, skills in high demand among employers worldwide. The BAS in Supervision and Management provides knowledge in a range of organizational settings such as personnel management, organizational behavior, international and small business, finance, business

ethics, and leadership. Graduates in this field will develop effective interpersonal skills, foster decision-making and entrepreneurial thinking, and become familiar with diverse business environments.

- Bachelor of Applied Science (BAS) in Supply Chain Management provides knowledge to the supply chain and explores the risks, logistics, economics, regulatory issues, resource allocation, production planning, inventory management and other functions basic to business. Due to the globalization of business, graduates in this field can find employment within the supply chain, logistics and transportation fields.

- Associate in Arts (AA) with a pathway to a degree in accounting, business administration or economics. The Associate in Arts degree is designed for students wishing to transfer to colleges or universities for upper-division coursework. The areas of concentration parallel university coursework and prepare students to enter their junior year at four-year institutions upon completion of the AA degree.

- Associate in Science (AS) in a broad range of business functions including accounting, entrepreneurship, management and marketing. The Associate in Science is designed to prepare students for immediate employment. Credits earned for many courses in these programs are acceptable to upper-division colleges or universities should the student decide to pursue a four-year degree.

College Credit Certificates including accounting and financial services, entrepreneurship, international business, management and marketing. Focusing on a specific job or set of skills, these programs require fewer credits than an associate degree and are Florida Department of Education Certified College Credit programs. The credits granted will apply to the related AS degree.

School of Continuing Education and Professional Development

The School of Continuing Education and Professional Development's mission is to make the College more accessible to the public and to meet commu-



nity needs not served by traditional college programs. Through the Continuing Education departments located on each campus, the school offers noncredit courses in recreational, continuing workforce education and adult education categories. Recreational courses cover a huge range of topics from aerobics to Zen, and they serve individuals wanting to enrich their cultural experiences, pursue interests or learn alongside others with similar interests.

Continuing workforce education courses are just-in-time courses intended to help students improve their professional or occupational skills. The topics covered include computer workshops, certification courses, preparing oral presentations, building contractor license exam preparation, as well as several hundred work-related topics. Adult education courses prepare the student to pass the GED test or master the basic skills needed for success in one of the College's accredited programs.

The School of Continuing Education & Professional Development endeavors to provide classes both on and off campus. The majority of classes are conducted in the evenings and on weekends at times that are most convenient to the students enrolling. In its effort to meet the diverse needs of a large, multifaceted community, the school also welcomes suggestions and requests for courses that are not being offered.

School of Education

Teaching is a vital and dynamic profession. A career in teaching offers the opportunity to influence children and shape the future. Trends in population growth, an aging teacher workforce and the demand for class size reduction will result in ample professional opportunities for prospective teachers. The School of Education provides training and professional development opportunities for pre-service teachers as well as practicing professionals.

The School offers a wide variety of programs in Early Childhood Education, Teacher Education preparation, alternative pathways to certification and teacher recertification.

Early Childhood Education:

Students may earn College Credit Certificates with an Infant/Toddler Specialization or Preschool Specialization that may lead to the National Child Development Associate credential. Students may earn a College Credit Certificate with an Administrator Specialization that may lead to the Director's Credential Level 1 or 2. Students may also prepare for the Florida Child Care Professional Certificate (FCCPC). Students may earn an Associate in Science degree in early childhood education. The A.S. degree will prepare students for immediate employment as early childhood professionals or paraprofessionals in both the public school system or private school sector.

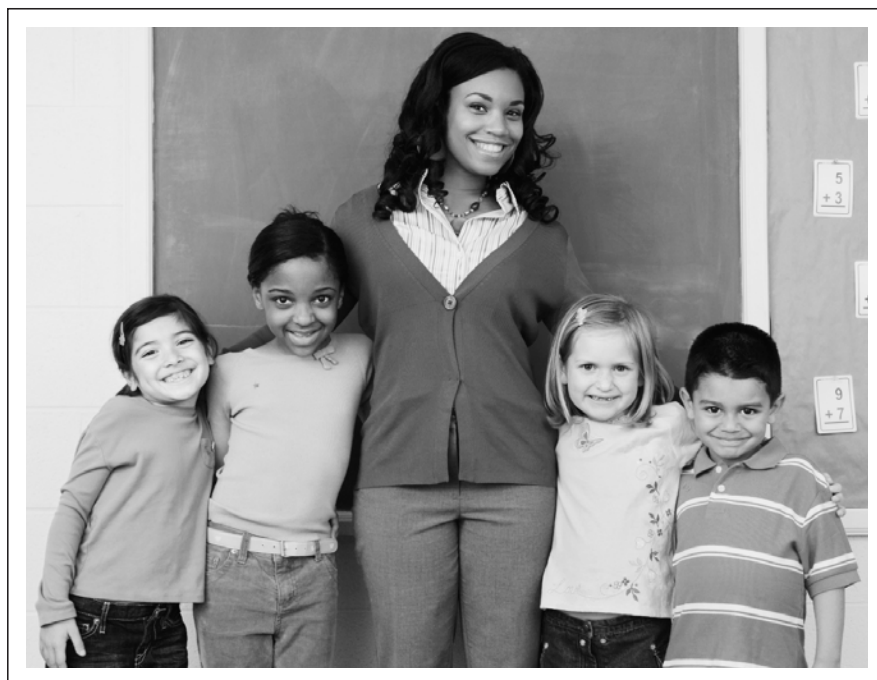
Teacher Education Programs:

Students may earn an Associate in Arts with the requisite courses needed for a baccalaureate degree in teaching. Students may complete a Bachelor of Science degree in ESE, secondary math or secondary biology, chemistry, earth/space science, or physics. The School's courses meet state certification and recertification requirements. Students who complete the A.A. with requisite courses needed for a baccalaureate degree in teaching may transfer to state university colleges of education with junior-level standing. Most private institutions will grant A.A. holders the same status.

The School of Education offers four-year baccalaureate degrees in Early Childhood Education, Education in Exceptional Student Education and Secondary Education. The baccalaureate degree may be earned in the following specialties:

- Early Childhood Education
- Exceptional Student Education (Kindergarten - 12th grade)
- Mathematics Education (Grades 6-12)
- Biology Education (Grades 6-12)
- Chemistry Education (Grades 6-12)
- Earth/Space Science Education (Grades 6-12)
- Physics Education (Grades 6-12).

The baccalaureate programs in education are designed to prepare future teachers to enter the teaching profession immediately after graduation. Upon program completion students meet all Florida Department of Education requirements including the successful completion of the certification exams, an e-Portfolio of artifacts that demonstrate Florida Educator Accomplished Practices, clinical experience in a variety of settings and grade levels, and a semester-long internship. Professional development workshops also are provided.



School of Engineering Technology

The School of Engineering and Technology provides the dynamic knowledge, skill, hands-on training and industry connection to turn your dreams and imagination into solutions for success. Technology touches every area of our lives and is one of the most in-demand industries for the 21st century. The Miami Dade College curriculum has been strategically designed to enhance your potential for success. With more than 30 degrees, our students have access to a wide variety of career paths and opportunities from nuclear engineering to information technology management.

The school offers baccalaureate, Associate in Arts pathways and Associate in Science degrees, as well as College Credit and Career Technical Education Certificates. Among the programs offered are: Air Conditioning, Building Construction Management, Computer Programming and Database Development, Electronics/Computer Repair, Engineering, Internet Technologies, Network Technologies, Telecommunications and others.

The School of Engineering and

Technology offers courses at the Hialeah, Homestead, InterAmerican, Kendall, North, Wolfson campuses and West Campus. The School is headquartered in The Emerging Technologies Center of the Americas (ETCOTA) on the Wolfson Campus. This dynamic state-of-the-art facility houses 19 high-tech classrooms and labs, a 120-seat auditorium and offices for faculty and staff. ETCOTA has more than 400 high-end computers and wireless Internet access throughout the facility. The latest in audio-visual equipment is installed in each classroom for maximum connectivity to the Internet. The facility provides every student with the best resources in technology education.

In addition, comparable equipment and facilities are available at the other campuses to permit students to complete courses at their convenience. The School's major partners in various technologies include: Microsoft, Oracle, Dell, IBM and FPL. The School is a Cisco Regional Networking Academy offering CCNA classes on most campuses, and also provides instruction using official Microsoft curriculum. Furthermore, articulation agreements with prestigious four-year universities permit students to transfer credits for baccalaureate degrees.

School of Entertainment & Design Technology

The mission of the School of Entertainment & Design Technology (SEDT) is to effectively inspire and train students to lead the next generation of high-tech media producers. As creative and successful alumni, graduates will provide the entertainment industry with a highly skilled workforce. Bringing dreams to life through high-tech digital training, the School of Entertainment & Design Technology emphasizes "real world" instruction in the cutting-edge technologies driving the film, television and radio, graphic and web design, photography, computer animation and music business industries. As workforce development programs, SEDT is focused on providing those skills and experiences necessary for students to succeed in gaining employment in the highly

competitive entertainment and design industries. The School of Entertainment & Design Technology is a cluster of design and media production programs including:

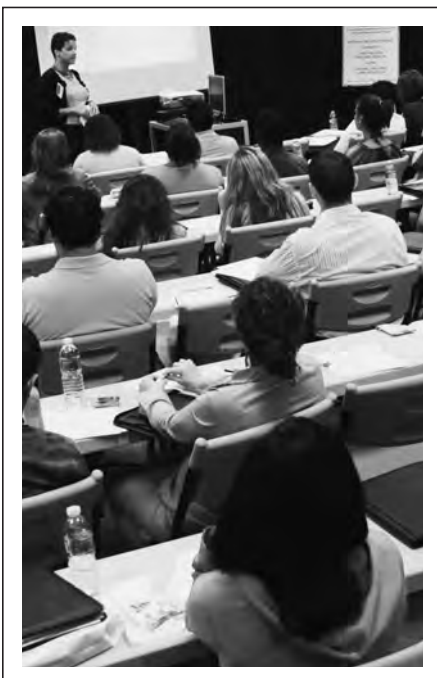
- B.A.S. with a major in Film, Television & Digital Production
- A.S. in Film Production Technology
- A.S. in Radio & Television Broadcast Programming
- A.S. in Music Business
- A.S. in Graphic Design Technology
- A.S. in Web Design Technology
- A.S. in Photographic Design Technology
- A.A. Pathway to a Major in Computer Art Animation

All of the programs offered consist of general education courses, the program core requirements and electives that prepare students for immediate employment in the field.

Students who earn an A.S. in Film Production Technology or in Radio & Television Broadcast Programming can transition into the B.A.S. degree program and immediately enroll in the upper-division coursework. The baccalaureate degree program trains students for employment and/or for continuing their education towards earning a master's degree or higher.

Miami Dade College created programs of study as the use of new production technologies evolved. The Television & Radio, and Music Business programs were created in the early 1970s, followed by the Film Production program in the early 1990s. Most of the courses taught are revised in response to increased reliance on digital technologies and an expanding South Florida entertainment industry.

The recent renovations of the production facilities and labs at the College's North, Kendall, Wolfson and Homestead campuses include a state-of-the-art Sound Recording Studio equipped with the SSL mixing console, a Motion Picture Screening Room with 5.1 Dolby® Surround Sound, new lecture and performance halls, a sound and lighting stage, two High Definition (HD) television studios, post-production editing suites and a 24/7 College cable network, MDC-TV with a television viewing audience of over 500,000 households throughout the County - all designed to offer students industry-specific learning environments.



School of Justice

The School of Justice, located on the North Campus, is a cooperative project between federal, state, county and local government agencies and Miami Dade College. The mission of the Miami Dade College School of Justice is to offer valuable academic programs to degree-seeking students and provide high quality workforce education to public safety professionals.

The School of Justice academic programs consist of an:

- A.A. pathway to Criminal Justice Administration
- A.S. in Criminal Justice Technology - Generic
- A.S. in Criminal Justice Technology - Law Enforcement
- A.S. in Criminal Justice Technology - Corrections
- BAS with a major in Public Safety Management.

The A.A. pathway in Criminal Justice Administration is transferable. It prepares students for upper-division studies, such as transfer into the Bachelor of Applied Science Program. Students wishing to attend law school find this degree an important first step toward achieving their goal.

The A.S. degrees in criminal justice technology are for those students who wish to continue their education following completion of one of the basic training academies.

The BAS is a workforce education degree that combines rigorous academic training with hands-on, practical experience. It is a 120-credit-hour program incorporating lower- and upper-division coursework, including the required 45 credit hours of electives and general education requirements, 30 credit hours of lower-division requirements, 30 credit hours of upper-division requirements, and 15 credit hours in one of ten tracks. Qualified students choosing to enter either the Basic Law Enforcement Academy or Basic Corrections Academy spend the last semester of their four-year program in one of our basic recruit training programs. Students completing either academy track will find that in four years they have earned a BAS and are eligible to sit for the State Officer Certification Exam in either law enforce-

ment or corrections.

The School of Justice workforce education programs are designed to develop and/or improve the knowledge, skills and abilities of public safety officers and individuals who aspire to hold positions in public safety including law enforcement officer, corrections officer, public service aide and private sector security officers.

Basic Recruit Training: The School of Justice offers Basic Recruit Training Programs (BRTP) in the areas of law enforcement, corrections and public service aide. Students who successfully complete one of the BRTP in Law Enforcement or Corrections, and who pass the State Officer Certification Exam, are eligible to receive up to 34 credits toward an A.S. degree in criminal justice technology. Credit conversion occurs in two separate phases.

Private Sector Security Training: Private sector training is provided to those who seek D (Security Officer), G (Statewide Firearm) and E (Recovery Agent) class licensing.

School of Nursing

The Benjamín León School of Nursing is accredited by the Accreditation Commission for Education in Nursing (ACEN) (3343 Peachtree Road NE, Suite

850, Atlanta, Georgia 30326, 404-975-5000, info@acenursing.org) and offers a Bachelor of Science in Nursing (BSN) degree to provide students and practicing nurses with a high-quality, accessible, cost-effective and seamless academic program designed to meet the critical workforce need for baccalaureate-prepared nurses in the state of Florida. Students entering the BSN program must have an earned Associate in Science in Nursing (ASN) from a regionally accredited institution/regionally accredited ASN program and an active license as a registered professional nurse (RN).

The School of Nursing also offers the Associate in Science degree in Nursing, leading to eligibility to apply for the licensing examination for registered nurse practice (NCLEX-RN). The Associate in Science program offers four options designed to meet the needs of individual learners (generic, transitional bridge and accelerated and part-time tracks) and all combine class work with clinical nursing experiences in local hospitals and agencies. Students entering the associate degree program should possess college-level cognitive, communication and computational skills. Specific general education and science courses are included in the curriculum; selected courses are required before admission to these health care programs.





Special Academic and Other Programs

In meeting its commitment to serve the community, Miami Dade College offers a variety of programs, both on and off campus, to meet the specific educational needs of the groups involved. These may take the form of specially structured programs on campus, courses, seminars or workshops offered at times and locations that best serve public interests and needs.

For example, MDC offers:

1. Assistance to companies and governmental agencies in conjunction with their own training programs;
2. Workshops, seminars and institutes in cooperation with business, professional or other groups;
3. Recreation, personal improvement and cultural activities;
4. Postsecondary occupational career offerings to serve business, industry, the professions and governmental agencies.

Apprenticeship Programs

The College provides apprenticeship training programs in partnership with state-registered and approved Apprenticeship Sponsor Agencies. These programs provide classroom instruction and on-the-job training for employees of Apprenticeship Sponsor Agency companies. Currently approved apprenticeship programs prepare successful graduates to work as journeymen in the areas of electrical, fire sprinkler, heating, ventilation, air conditioning, plumbing and sheet metal.

Center for Economic Education

(Wolfson Campus)

The mission of the Center for Economic Education is to work closely with the educational communities in Miami-Dade and Monroe counties to develop greater awareness for economic literacy. Among the most popular of the Center's programs are the four recertification credit courses offered to area teachers in grades K-12. Of these, the national Stock Market Game is played in grades 5-12 in each of the major semesters. The Free Enterprise Bank Program, available to grades K-12, provides real money for class business activities. The Center works with area educational administrators to create and assist in the development of curriculum materials. These materials have included a tourism and development program, a Civics Teachers Resource Guide, Elementary Program of the Economics of the Stanford Achievement Test and

many more program examples at each of the major grade levels.

It is the Center's goal to provide the latest and best materials and programs in economic education to our schools. Through these opportunities the Center seeks to promote greater understanding on the part of our young people about the economy in which they live and the economic climate in which they will work.

Center of Electronics Emphasis and Electronics Specialization

(North Campus)

The Center of Electronics Emphasis program is a partnership program developed by the Florida High Technology and Industry Council, the Florida Legislature, the Division of Vocational, Adult, and Community Education, the Florida College System and the private electronics industry. The purpose of this program is to promote a climate of excellence in education, assure a supply of quality teachers, strengthen educational partnerships and prepare students for competitive careers through state-of-the-art training using modern industry guidelines.

The primary objective of the Center of Electronic Emphasis is to ensure that all centers with this title designation have the seven CORE classes in basic electronics, thus ensuring consistency of information transfer. The Center of Electronics Specialization has the mandate of instruction in the areas of micro-computer service and maintenance.

Center of Excellence in High Technology/ Electronics

(North Campus)

The Center of Excellence in High Technology/Electronics at the North Campus is an interdisciplinary program that presently incorporates the departments of engineering and architecture. The Center has programs in computers and computer-assisted drafting. Courses are run in different formats depending on need.

Center for Financial Training

(Wolfson Campus)

The Center for Financial Training Southeastern (CFTSE) is a local training provider of the American Bankers Association (ABA). As the largest industry-sponsored adult education program in the world for financial services professionals, CFTSE benefits more than 3,500 financial services professionals locally and is one of 20 centers located throughout the United States.

CFTSE is a unique source for commercial banking and financial industry training and education. CFTSE is a nonprofit educational organization that conducts college credit courses (live classes, guided self-study and online), seminars, webinars, computer workshops and customized and contract training.

Students can earn CFTSE and/or American Bankers Association (ABA) diplomas and certificates that are recognized throughout the industry and

accepted as college credit. Students can also earn Banking College Credit Certificates. CFTSE has established an academic partnership with Miami Dade College, enabling CFTSE students to achieve degree status while completing their financial services studies. CFTSE courses are offered at all MDC campuses, and at certain financial institutions. All courses are open to the public however, special fees are charged by CFTSE for certification and materials. The fee structure varies depending on whether the student is a member or nonmember of CFTSE. The fee is charged in addition to MDC tuition and is paid to CFTSE. CFTSE also offers special programs in partnership with MDC, to include financial literacy workshops and the Future Bankers' Camp. The Future Bankers' Camp is a partnership between CFTSE, MDC - School of Business and Miami Dade County Public Schools - Academy of Finance.

Computer Institute

The Computer Institute (CI) meets the computer-related training needs of business, labor and industry. Courses are offered both on-campus and at on-site training locations. The CI offers a comprehensive program that includes classes in most of the commonly used software packages. Classes are available to all age groups, including senior citizens. During the summer, a comprehensive Kids/Teen Program is offered. A limited schedule of classes is available in Spanish. The CI offers state-of-the-art computers and software, small class sizes in a workshop format (a hands-on environment), a competitive fee structure and quality instruction from industry professionals.

Confucius Institute

Miami Dade College (MDC) has long been committed to strengthening educational ties with China. MDC, in partnership with Xuzhou Normal University (XNU), was selected for the honor of hosting the only Confucius Institute in South Florida and has been offering classes since 2010.

MDC's Confucius Institute is committed to building bridges of understanding

through furthering knowledge of the Mandarin language and the Chinese culture. The Institute is sponsored by the Chinese Language Council, a non-governmental affiliate of the Chinese Ministry of Education.

For further information, please contact the Director of the Confucius Institute.

Continuing Education

The School of Continuing Education and Professional Development is committed to the philosophy that learning is a lifetime process and that the many years spent in formal education do not complete our learning experience. This philosophy serves as the foundation of our learning experience and values the knowledge we acquire daily and use for the rest of our lives.

Campuses offer recreation and leisure courses and activities for those who wish to enrich their cultural lives or improve their personal efficiency and professional skills. No record of previous education is necessary and little or no homework is required. No grades are given through Continuing Education, no academic credit gained and attendance standards are voluntary.

Continuing Workforce Education training courses are offered to improve employment-related skills for postlicensing and for professional licensing. Training is listed on a student's transcript. The transcript can be used in lieu of continuing education units (CEU) to show evidence of participation in professional development to employers, and licensing or certification agencies (see below). For additional information, contact the campus Continuing Education department.

The Adult Education program offers students the opportunity to learn basic skills to earn a GED or to pursue further training through the College's vocational programs.

The College offers courses both on and off campus to meet the needs of the community, and makes every effort to begin a course when an adequate number of people request it.

Continuing Education Units (CEU)

Miami Dade provides students with

the opportunity to obtain continuing education units (CEUs) for certain noncredit courses. The CEU program encourages long-range education goals and lifelong learning, and permits adult students to aggregate a number of continuing education courses to meet their personal needs.

The CEU is used as the basic means for recognizing an individual's participation in, and for recording an institution's offering of continuing workforce education courses. A CEU is defined as 10 contact hours of participation in an organized, continuing education experience under responsible sponsorship, capable direction and qualified instruction. Transcripts indicating completion of continuing workforce education courses designated for CEUs will be provided.

Contract Training for Business and Industry

Through the School of Continuing Education and Professional Development, business, industry and government can benefit from workshops and courses offered at the job site or at any of our campuses. These contract training programs are designed to meet the educational and training needs of community businesses and organizations by reaching beyond traditional academic curriculum and offering courses and workshops that focus on practical application. Offered in credit and noncredit formats, these programs are available at times and locations convenient to the participants.

Program topics include computers, management, customer service, communications, foreign languages and English as a Second Language, business English, writing and math and many others. All programs may be customized to the specific needs of the client, with job-related materials included in the curriculum.

Cooperative Education

Cooperative Education provides an opportunity for students to obtain career-related work experience and academic credit for such work. It enables students to apply classroom theory to actual work situations. In many instances, it helps

students earn needed cash to meet education costs. It gives students work experience that employers look for and it may turn into permanent employment.

Job opportunities are available in many career fields. Transfer students may continue their Cooperative Education program at many four-year colleges and universities. While enrolled at MDC, this work experience may be part time or full time, paid or voluntary, and may continue for one or two terms. The program is flexible and tailored to meet student and employer needs. The volunteer plan provides for one term of six hours or more per week for 12 weeks minimum, and for 10 hours or more per week for 12 weeks during a second term.

Through Cooperative Education, students may earn three elective credits per term for two terms. Application for the program should be made to the Cooperative Education liaison at each campus discipline. A minimum GPA of 2.0 is required.

Earth Ethics Institute

(Collegewide; Located on Wolfson Campus)

Earth Ethics Institute (EEI) is an Earth Literacy and sustainability academic initiative at Miami Dade College (MDC) offering workshops, conferences, courses, and support for MDC administrators, faculty, staff and students as well as the greater South Florida community.

The mission of the Earth Ethics Institute is to foster Earth Literacy in the course objectives of each discipline and all campus operations at Miami Dade College, as well as in the South Florida Community and the extended Earth community beyond. Earth Literacy includes an understanding of cosmology and ecological principles as the basis for sustainable living. The cosmological context is the story of the universe, as contemporary science describes the developmental process out of which Earth and all life emerge.

The Global Sustainability and Earth Literacy Studies (GSELS) Learning Network is EEI's most recent initiative. GSELS provides inclusive educational opportunities for the Miami Dade College community to explore global citizenship, ecological sustainability, and civic engagement, through under-

standing planetary challenges and limits and by developing values, skills, and behaviors that promote prosperity and communities of well-being. In addition, the GSELS project is replicable, requires very little funding, and hopes to serve as a national model of best practices.

GSELS acknowledges the interconnections and interdependence of the personal, social, economic, cultural, environmental, and political aspects of our world. Collaboratively, students, faculty, administrators, and staff explore the significance of human activity within an evolving Universe and Earth. Through shared leadership, this nurturing learning community facilitates the emergence of awareness, knowledge, skills and solutions necessary to create sustainable systems that support a healthy and just economy, society, culture and environment, while fostering values of Earth ethics, social justice, cultural diversity, and civic engagement.

GSELS draws on several international documents, including the four pillars of life-long learning detailed by UNESCO,

The Earth Charter, and Thomas Berry's "12 Principles of Understanding the Universe and the Role of the Human in the Universe Process." Additionally, GSELS is grounded in the principles of ecology, and environmental, sustainability and global education concepts. GSELS course criteria provide the basics to acquire the knowledge and skills needed to cope and constructively engage with the 21st century, including these eight guiding principles of global citizenship (from a consensus of experts in nine countries, East and West, as cited in Sustainable Education by Stephen Sterling):

1. looking at problems in a global context
2. working cooperatively and responsibly
3. accepting cultural differences
4. thinking in a critical and systemic way
5. solving conflicts non-violently
6. changing lifestyles to protect the environment
7. defending human rights



- participating in the political process

EEI Programs for Faculty and Staff

GLOBAL SUSTAINABILITY AND EARTH LITERACY STUDIES

Earth Ethics Institute grew out of two earlier Miami Dade College programs, Life Lab and the Environmental Demonstration Center. It now offers a series of professional development workshops and programs for Miami Dade College administrators, faculty and staff interested in infusing ecological concepts and a cosmological context into their professions. Through Earth Literacy, one deepens his or her understanding of the interdependent human-Earth relationship and thus broadens the sense of responsibility inherent in the practice of every profession and vocation. Hundreds of MDC faculty and staff have participated in EEI workshops, featuring topics such as incorporating sustainability in existing and new curriculum, biophilia, culture and cosmology, ethics, technology and sustainability, and regenerative, interactive and sustainable design. MDC administrators, faculty and staff are also invited to participate in immersion field trips to explore

the unique ecology and hydrology of South Florida. The Institute also collaborates with Genesis Farm in New Jersey, Narrow Ridge Earth Literacy Center in Tennessee, St. Thomas University and Florida International University in Miami in offering courses in Earth Literacy.

Earth Ethics Institute certifies faculty who wish to participate in the GSELS Learning Network. Miami Dade College faculty, who currently hold a Master's Degree and have taken an EEI professional development workshop or course are encouraged to participate and begin exploring GSELS in their courses. Faculty who currently hold a Master's Degree can become GSELS-certified faculty in one of four ways:

- 36 EEI CTD Professional Development hours
- 3 Graduate Credits (one course) in Earth Literacy or Sustainability Leadership/Sustainable Education Studies

Environmental Center

(Kendall Campus)

The Environmental Center provides noncredit courses to children and adult community members and to our workforce. Enrollment is open to everyone,

and there are no prior education levels, transcripts or tests required. Most classes meet weekends or evenings and are scheduled on and off campus for convenient access. The Center has many programs:

- Landscape/gardening/home improvement courses encourage the public to utilize environmentally appropriate landscape materials and to maintain their home and landscape in ways that minimize environmental impact. Short-term training certification preparation and opportunities to participate in segments of credit courses improve the skill of landscape professionals.
- Hands-on, interactive environmental education field trip programs are available for school groups, Kindergarten - grade 9.
- Nature-based teacher-planning day/holiday camps serve the needs of working parents while sensitizing children in pre-kindergarten through seventh grade to the natural world. Children participate in nature games, crafts, outdoor activities and cooperative games.
- Scout Days provide Boy and Girl Scout groups opportunities to participate in nature-based activities designed to meet badge require-



ments as well as to implement Eagle Scout and Gold Award projects.

Field trips, day camps and scout days are held at our Environmental Center, which includes a pine rockland, a lake, a floating dock, chickee huts, butterfly gardens, a butterfly house, organic vegetable sand gardens, a composting demonstration exhibit and an Everglades waterflow demonstration exhibit.

The Center also offers courses on the use of natural/alternative healing methods, skills for life change and courses in nontraditional spirituality. Initiatives include Native American cultural programs, expanded pine rockland research, development of community service project opportunities for high school students, weekend recreational and educational programs for adults and families.

The Center @ MDC

(Wolfson Campus)

The Center @ MDC is a cultural and academic initiative that promotes reading, writing and theater throughout the year by consistently presenting high-quality literary activities open to all in South Florida.

Housed at the Wolfson Campus, The Center serves MDC and K-12 students, as well as the larger South Florida community. Center programs include many reading and writing initiatives, in addition to the prominent Teatro Prometeo, a community theater, and Miami Book Fair International, the largest literary gathering in the U.S.

Center initiatives:

- Visiting Writers participate in readings, teach workshops and conduct residencies that help students and others to deepen their understanding of literature and sharpen their creative writing abilities.

- The Center's reading campaigns for children, students and adults include The Big Read (a national program funded by the National Endowment for the Arts), One Picture Book, One Community and Story Time! All encourage an appreciation for books, while enhancing the reading and comprehension skills of people of all ages. Within the College, Current Voices in Literature provides thousands of free books every year, along with supporting materials, to

students in various disciplines.

- Noncredit Creative Writing Courses are offered throughout the year, giving aspiring writers the opportunity to receive critique and encouragement from published authors with extensive teaching experience. The twice-yearly Miami Writers Institute is a conference that features workshops with bestselling and award-winning authors and publishing professionals.

- The Miami Writers Institute is a twice-yearly conference for writers featuring three and four days of intensive workshops with bestselling and award-winning authors and publishing professionals.

- The Center's Miami: City of Refuge program provides a safe haven for writers persecuted or threatened with imprisonment or death in their home countries.

- The 28-year-old Miami Book Fair International is the largest and finest literary gathering in the U.S. Over eight days in November, more than 400 authors from all over the world present books, and dozens of events and activities celebrate literature and encourage literacy. The Book Fair features a country each year, organizing symposia and festivities that promote cultural understanding.

- Teatro Prometeo is a community theater with the mission of preserving the Spanish language and Hispanic culture. It offers a conservatory-style program that features a rigorous, well-rounded curriculum of study. Prometeo presents full productions and dramatic readings throughout the year. Courses and workshops are offered year-round.

Creative Writing Workshops

Creative writing workshops offer writers in our community a chance to share their work with a supportive, yet critical community of writers whose goal is continual development. All workshops are noncredit and open to everyone in the community.

Twice a year, the Center's Writers Institute offers four days of intensive workshops on poetry, fiction, nonfiction, publishing and more. These are complemented by readings and festive gatherings.

Literacy Initiatives

The Center's literacy-based initiatives include One Book, One Community; One

Picture Book, One Community; First Readers; El Club de Lectores; and The Big Read, a nationwide reading initiative funded by the National Endowment for the Arts in partnership with Arts Midwest and the Institute of Museum and Library Services. They encourage an appreciation for books with the goal of fostering dialogue in the community and enhancing the reading skills of children and adults.

Miami Book Fair

Teatro Prometeo at Miami Dade College is the Nation's only Spanish-language theatre program under an academic institution, celebrating over 40 years as part of the Miami Dade community with the mission is to preserve and promote the Spanish language through theatre. Under Executive Director Joann Maria Yarrow, Teatro Prometeo serves more than 500 theatre arts students as well as produces an average of 12-16 productions and projects every year, transforming the landscape of Spanish theatre in Miami along the way.

Our **Professional Actor Training Program** presents the opportunity of Conservatory-style courses in Spanish and our **Adult Vocational program** offers tri-semester classes for beginners. Classes include Acting, Voice, Movement, Singing, Playwriting and Camera-acting technique and Voice-over. During the year specialized labs and workshops are offered in Stage Combat, Commedia del'Arte, Contact Improvisation, Acrobatic stilt performance, as well as the Miami Hispanic Showcase which prepares actors to audition for local and national casting directors, agents and industry professionals.

The **Children and Teen** theatre component, the "Prometeitos" and "Prometeens" is a Saturday Theatre Arts Program that runs during the academic year. Our summer Spanish-language Theatre Camp is created as an extension to our Saturday theatre program providing a creative way for children to develop language skills, presentation technique and self-discipline.

Funeral Service Education

(North Campus)

The Funeral Service Education program was the first public community

college program in the southeastern United States to offer a degree in funeral service education. The school has embalming and restorative arts laboratories enabling students to do all training on campus. More than 150 decedents are embalmed and cosmetically prepared in the campus laboratories each academic year. An on-campus chapel gives students a unique opportunity to work in all aspects of funeral preparation, including embalming, dressing, cosmeticizing and casketing decedents for viewing and final services. The Associate in Science degree in Funeral Service Education is accredited by the American Board of Funeral Service Education Inc. (ABFSE), 3414 Ashland Ave., Suite G, St. Joseph, MO 64506 (phone: 816-233-3747; www.abfse.org). The ABFSE requires that all students take the National Board Exam (administered by the International Conference of Funeral Service Examining Boards) prior to graduation. Miami Dade College requires that students pass both sections (arts and sciences) of the National Board Exam with a grade of 75 or higher in order to graduate from the Funeral Service Education program. The annual passage rate of first-time takers for the most recent three-year period for this institution and all ABFSE-accredited funeral service education programs is posted on the ABFSE website (www.abfse.org). Funeral service graduates from MDC are qualified to practice in most states provided they have met the requirements for licensure in the given state of choice. For further information students may contact the Funeral Service Education program at 305-237-1244 or via email at wpowell@mdc.edu. The school provides continuing education required for license renewal of Florida funeral directors, embalmers and direct disposers, and conducts special seminars for the enrichment of funeral services personnel.

The Honors College

The Honors College is a college-wide community of student and faculty scholars who collaborate in an intellectually stimulating, enriching, challenging and supportive environment. Housed at Wolfson, North, Kendall and InterAmerican campuses, The Honors

College provides an academically rich curriculum with special scholarship, and social and service opportunities. The Honors College encourages critical thinking and intellectual curiosity in an array of programs and disciplines. The InterAmerican Campus offers the Honors Dual Language Program, which mirrors the rigorous curriculum of the other campuses. This program offers courses in English or Spanish for students who demonstrate mastery of both languages. Students study in small class settings and work closely with Honors faculty. The Honors College expects its students to take advantage of the many enrichment opportunities provided. These include cultural and community activities, leadership development programs, internships, national tours, study abroad programs and colloquia.

Students receive personalized guidance in preparing applications for competitive scholarship awards and transfer admission to prestigious private and public universities. In addition, the Honors College offers exemplary models of learning, an impressive speakers series, discipline-specific honors seminars and student forums. Components of the program include:

1. Merit scholarships for superior students, including the Honors College Fellows award for students who meet The Honors College eligibility criteria;
2. Opportunities to attend an array of cultural events featuring the performing and visual arts;
3. Attendance and participation of students and faculty at the annual meetings of the National Collegiate Honors Council, as well as the Regional and Florida Collegiate Honors Council meetings;
4. Transfer admission and scholarship opportunities by upper-division colleges and universities awarded to graduates of The Honors College;
5. Membership in campus chapters of Phi Theta Kappa International Honor Society for students with a GPA of 3.5 or higher;
6. Opportunities to participate in international study experiences and internships abroad;
7. Recognition as a graduate of The Honors College at commencement and designation on transcript and

diploma with 36 credits in honors courses and a 3.5 GPA or higher;

8. Internships and Service Learning opportunities provided in related fields of study.

Additionally, the Honors Dual Language program offers:

1. A global perspective in all classes
2. Proficiency in two languages
3. Requirement of a global experience as an exchange student or intern.

All of the activities associated with The Honors College are designed to inspire and challenge students in their studies and to provide support and encouragement in their quest for knowledge. Students should contact the Dean of The Honors College or the Honors Director on the corresponding campus for specific information. Students may also visit the website for additional information at www.mdc.edu/honorscollege.

Independent Studies

(Kendall Campus)

The Independent Studies Program offers an interdisciplinary academic program including more than 40 college credit courses in a broad array of disciplines. The program includes all general education core courses and a wide variety of distribution and elective classes. This program is particularly well-suited to students wanting flexible schedules, as it requires only a minimal number of campus visits. Courses offered in the Independent Studies Program are ideal for motivated students who want to choose where and when to study; who enjoy working at their own pace; who have good time management skills; who are unable to attend classes on a routine basis; and who are committed to their academic goals. Faculty dedicated to student success are available day, evening and weekend hours to provide individualized instruction and to extend Miami Dade College's resources beyond the campus. Students respond positively to the flexible, convenient and supportive environment.

Courses are available in the natural sciences, English composition and literature, humanities, history, social science, sociology and psychology. All courses offered mirror traditional classroom style courses in that they are instructor-led, feature specific start and end

dates, require textbooks and provide the same levels of academic or professional credit. The program expands course offerings every term; students should consult the current term's class listing for the present schedule. Each course in Independent Studies establishes its own curricular procedures and suggested deadlines for testing and work submittal. In addition, all courses in this academic program include varied learning activities, timely feedback and the opportunity for accelerated completion.

For more information call 305-237-2337.

MEED Program

The MEED Program (Model for Enhanced Employment Development) has served students with disabilities in Miami-Dade County with distinction for more than 20 years and has received a congratulatory Proclamation from the Office of the Mayor saluting its success. The Program has been redesigned as a national model in employability training, enhanced with the development of digital technology

skills and achievement of excellence in professional skills.

The MEED Program's goal is to open doors to competitive employment opportunities. There are three distinct elements of the Program which include (1) employment assistance; e.g., effective résumé development, strategic job searching, defining accommodative needs in the workplace, etc., (2) employment development; e.g., working with business and industry and agencies throughout the County to expand inclusive employment opportunities, and (3) The MEED Academy; which features the MEED Digital Tech Studio and a Professional Studies Institute (featuring workshops and seminars in the study of employability and professional qualities and skills). Students are issued digital equipment and software that enhances accessible learning and work experiences as they participate in internships that provide application of technology and polish professional skills. The length of the Academy Program depends upon the needs of the individual student.

To learn more about the MEED Program, students are invited to call 305-237-3997.

New World School of the Arts

(Wolfson Campus)

New World School of the Arts is a comprehensive college program and full-time high school preparing students for professional careers in dance, music, theater and the visual arts. The program, created by the Florida Legislature in 1984 as a Center of Excellence in the Arts, is an educational partnership of the University of Florida, Miami Dade College and the Miami-Dade County Public Schools. Through its sponsoring institutions, New World School of the Arts awards the Bachelor of Music, Bachelor of Fine Arts degrees and Associate in Arts, as well as high school diplomas. Students are admitted on the basis of talent and commitment as demonstrated through audition or portfolio presentation. The school is located at Wolfson Campus in downtown Miami.

Outreach Program

The College endeavors to provide college credit and noncredit classes to residents of Miami-Dade County who



find it more convenient to attend a neighborhood center than to travel to a campus. These courses are fully accredited and follow the same curriculum as on-campus courses. Classes are held in community schools, businesses, municipal agencies and other close-to-home locations. The smaller classes provide opportunities for increased interaction with instructors. Students who attend outreach classes also find a strong network of support from fellow classmates.

Reserve Officers Training Corps

Miami Dade College, in cooperation with the University of Miami and Florida International University, permits students to enroll in Air Force ROTC (through the University of Miami) and Army ROTC (through Florida International University). An application for admission to the ROTC program, including eligibility information for new and currently enrolled students, may be obtained from the ROTC offices at the University of Miami or Florida International University. MDC credit is awarded for successful completion of ROTC courses. For further information, students should see "Military Science" in the Course Description section. For more information please visit the Web at www.mdc.edu/armyrotc.

Servicemembers' Opportunity College

In 1972, a nationwide program sponsored by the U.S. Department of Defense and the American Association of Community Colleges designated MDC a servicemembers' opportunity college (SOC). The designation was awarded in recognition of the College's commitment to providing programs and special services to meet the unique educational needs of active-duty service personnel. The following services are offered:

As a SOC consortium institution, academic residency requirements for graduation purposes is limited to no more than 25 percent of the undergraduate degree program.

For further information concerning SOC services please visit the web at <http://www.soc.aasu.org>.

In addition, service personnel and

their dependents may meet the College's graduation requirements by completing six credits of the last 30 credits applied to a degree at MDC.

Virtual College

The Virtual College, the College's Distance Education program, offers students an alternative way to attend MDC through its quality Web-based courses. Students who may have schedule conflicts, personal situations that prevent campus-based attendance, or who are too far away to commute, will find that taking courses in the Virtual College is an excellent solution and opportunity. Our mission at the Virtual College is to ensure that students who enroll in our courses receive a quality online education that equals that of a traditional campus-based experience.

To be able to complete courses successfully in the Virtual College, students need access to a computer and the Internet and must have basic computer, Internet and word processing skills. Students are encouraged to complete the Virtual College Student Orientation. This orientation helps students evaluate whether they possess the knowledge and skills necessary for success in online courses; whether their computer system meets minimum hardware and software standards; and also explains requirements related to online courses, such as communications, participation, testing.

Each semester, the Virtual College's course offerings expand as more courses are developed, and these Web-based courses contain many features that make learning enjoyable and effective. The Virtual College's learning community consists of students who are motivated and disciplined in their pursuit of knowledge, and faculty who are eager to teach and guide online learning. The interaction and sharing of knowledge in the online classroom promotes intellectual and professional growth. Frequent online communication is a major part of every Virtual College course. There are options for discussion forums, online chat sessions and email; students can easily communicate with both their teachers and their virtual classmates. In each course, students find a syllabus, a class calendar, course content, activities and tests. The content is enriched with

multimedia, glossary, self-tests, images, linked web resources, interactive exercises and more. Participation in the course is required from the first day of class.

To learn more about online education and to view course offerings, students should visit the Virtual College's website at virtual.mdc.edu. Before enrolling in a Virtual College course, a student may view the syllabus, contact the teacher with questions concerning the course, and learn what textbook and other instructional materials are required. MDC offers registration and other services online for Virtual College students.

Weekend College

Weekend College is designed for students unable to attend weekday or evening classes, but it is not restricted to these individuals; students wishing to complement their schedules with additional courses are encouraged to enroll. Weekend College offers a selection of core, distribution and elective credit courses to satisfy degree and certification program requirements.

Wellness Center

(North, Kendall and Wolfson Campuses)

The College has several Wellness Centers, located on the North, Kendall and Wolfson campuses. These programs are designed to meet the wellness needs of faculty/staff, students and the community. The centers have the capability to perform a complete health/fitness assessment, including sub-maximal cardiovascular, blood pressure measurement, body composition, muscular strength and flexibility. Each center also has a variety of cardiovascular and strength training equipment as well as an array of free-weights.

Study Abroad Programs

Miami Dade College is one of the leading institutions of the College Consortium for International Studies (CCIS). As a CCIS sponsoring member

institution, the College is responsible for semester and summer programs in France and Costa Rica. A cooperative consortium arrangement affords reciprocal access for MDC students to take college credit programs in additional countries sponsored by other member institutions. The CCIS is a nationwide partnership of more than 160 membership colleges and universities, including two- and four-year, public and private. This partnership offers American undergraduates a choice of more than 70 study-abroad programs in more than 30 countries. CCIS semester programs are available in the following countries, many of which also offer summer programs:

1. Argentina (Buenos Aires)
2. Australia
3. Bulgaria
4. Canada
5. China (Nanjing and Shanghai)
6. Costa Rica (Santa Ana and San José)
7. Czech Republic (Prague)
8. Denmark
9. Dominican Republic
10. Ecuador
11. England (London and Lancashire)
12. France (Aix-en-Provence, Nice, Annecy, Chambéry, Angers, Paris)
13. Germany (Berlin, Heidelberg)
14. Ghana
15. Greece
16. India
17. Ireland (Maynooth, Limerick, Galway)
18. Italy
19. Japan
20. Mexico
21. Morocco
22. New Zealand
23. Portugal
24. Russia
25. Scotland
26. Spain
27. Switzerland

Miami Dade College also offers faculty-led short-term study abroad programs, such as European Architecture, Economic Effects of Scientific Discoveries, Medical Immersion program in the Dominican Republic, and Study Abroad in Seville. Participation is not automatic. Students must apply through the MDC Office of International Education located at the Wolfson Campus. Most programs require a minimum 2.5 GPA. No previous study or knowledge of another language is

required for most programs. If a student is eligible for financial aid, this aid may be used for study abroad. After acceptance to a program, the restricted registration for courses abroad is completed with the assistance and authorization of the Office of International Education (Campus Code 285). Most programs offer a "homestay" option (living with a local family or individual), which accelerates language acquisition and provides in-depth knowledge of the host culture. Course content is usually country-based and many courses are fully compatible with the MDC curriculum. Course descriptions and information on the classes offered in each program are detailed during the application process. For more information about the study abroad programs, please visit www.mdc.edu/mdcglobal.

Time-Saving Degree Opportunities

Miami Dade College encourages students to accelerate their education by providing time-saving programs to shorten the time necessary to complete an Associate degree. The articulated acceleration mechanism includes dual enrollment, early admission, advanced placement, credit by examination and the International Baccalaureate Program among others. These accelerated options can save a student valuable time and money because they provide an alternative way of earning credit at MDC and the opportunity to earn a degree more quickly. Prior Learning Assessment (PLA) is a term used to describe learning gained outside a traditional academic environment. Put another way, it is learning and knowledge your students acquire while living their lives: working, participating in employer training programs, serving in the military, studying independently, volunteering or doing community service, and studying open source courseware. In short, PLA is the evaluation and assessment of an individual's life learning for college credit, certification, or advanced standing toward further education or training.

Dual Enrollment and Early Admission

(See Special Admissions Categories, page 16)

The Dual Enrollment program allows high school students (or home education students) to earn simultaneously college credit and credit toward a high school diploma. The college credit may be applied toward a postsecondary diploma, or a certificate or degree at a Florida public institution. The Dual Enrollment program is an opportunity to take challenging courses and accelerate education opportunities. Students who successfully complete dual enrollment courses will save time in obtaining their college degree, and save money as well, because these students are exempt from the payment of registration, tuition and laboratory fees.

To enroll in courses through the dual enrollment program, students must demonstrate readiness for college-level coursework. Eligibility criteria take both GPA and passing the appropriate sections of the college placement test into consideration. The high school must grant permission for the student to enroll in these courses, thereby agreeing to accept these college courses to meet high school graduation requirements.

Early admission is a form of dual enrollment through which eligible high school students enroll at the college on a full-time basis. The courses these students take are creditable toward a high school diploma and the certificate or associate degree. Students selected for early admission or dual enrollment may begin their studies in any term, provided that they complete the regular admission, advisement and registration procedures and receive permission from their high school.

Alternative Ways of Earning Credit Through Standardized Examinations

- Advanced Placement (AP)
- Cambridge Advanced International Certificate of Education Examination (AICE)
- Caribbean Advanced Proficiency Examination (CAPE)
- Certified Professional Secretary Examination (CPS)

- College-Level Examination Program (CLEP)
- DANTES Subject Standardized Tests (DSSTs)
- Excelsior College Examinations (formerly Regents or ACTPEP)
- International Baccalaureate (IB)

Miami Dade College awards college credit for standardized examinations that document the required knowledge and competencies for one or more subject areas. Evaluations of examinations are made after the student has been admitted to the College. Official score reports must be sent directly from the testing agencies to the College's Transcript Processing Services Office. Awarded credit based on the College's approved course equivalents will appear on the student's permanent record and on the student's official College transcript as earned credit only. There will be no indication of grades or quality points and duplicate credit is not awarded. Miami Dade College uses the minimum scores, credits and guidelines for awarding credit for exams established by the State of Florida's Articulation Coordinating Committee (ACC). For additional information please visit the Testing Criteria Credit-by-Exam website, accessed from MDC's Homepage (www.mdc.edu) by clicking on "Resources," then "Testing Information".

Institutional (Departmental) Credit-by-Examination

Students who have been admitted to the College may receive credit for courses through departmental examinations. Applications for this type of credit are available from the Registrar's Office and must be approved first by the appropriate academic department. Subsequently, the registration must be completed at the Registrar's Office and fees need to be paid by each term's published deadline. Credits for departmental examination are not included in any computation of credit load for full-time or part-time student status. Institutional credit-by-examination will become a part of the student's permanent record at the conclusion of the term in which it is awarded. Grades of A, B, C or D will be assigned for college credits earned

by examination and will be computed in the student's GPA. A nonrefundable fee of \$30 per credit will be charged for each examination administered.

Credit for Specialized Training

College credit for specialized non-collegiate occupational training may be granted to students enrolled in occupational programs. This credit is granted upon validation of the non-collegiate instruction by the appropriate academic department. A processing fee of \$15 per course, up to a maximum of \$50 for any single application, will be charged for the evaluation of non-collegiate instruction. Agreements to recognize specialized non-collegiate occupational training must have been previously approved in accordance with College curriculum procedures.

Certified Professional Secretary (CPS)

Students passing the complete national examination of the Certified Professional Secretary Examination (CPS) and the CPS Exam Prep courses may be granted credit toward an Office Administration Associate in Science degree at Miami Dade after official score reports are received from the International Association of Administrative Professionals (IAAP). The credit will appear on the student's permanent record as earned credit only, without any indication of grades.

Industry Certifications

Miami Dade College may award college credit to eligible students who have earned a recognized appropriate industry certification which will be applied toward the specific Associate in Science degree.

Evaluations of industry certification(s) are made after the student has been admitted to the College and provides a valid industry certification based on the Florida State Board of Education, which has approved a statewide list on industry certification.

For a complete list of the approved statewide Career and Technical Educa-

tion articulation agreements please visit http://www.fldoe.org/workforce/dwdframe/artic_indcert2aas.asp.

Military Service Schools, Defense Activity for Non-Traditional Education Support (DANTES) and United States Armed Forces Institute (USAFI)

Miami Dade College will grant credit toward an Associate degree for properly validated military service training. This includes military service schools, the United States Armed Forces Institute (USAFI) and Defense Activity for Non-Traditional Education Support (DANTES) end-of-course examinations, as well as acceptable College Level Examination Program (CLEP) test scores. The recommendation of the American Council on Education, a guide to the evaluation of education experiences in the armed services, is used in evaluating military service school training. Active duty military personnel must submit DD Form 295 and the Miami Dade military service school training record form. USAFI and DANTES college-level credit courses taken by correspondence, or by extension through other accredited colleges, are accepted under regular transfer credit provisions. Official Reports of Educational Achievement must be mailed directly to the College Admissions Department from each approved organization.

College credit earned through military service schools, USAFI, or DANTES college level end of course tests, will appear on the student's permanent record as earned credit only, without any indication of quality points. Transfer credit evaluations of this work are made after the student has been admitted to the College. Veterans must submit a true copy of the service personnel's separation papers (DD Form 214) and the Miami Dade military service school training record form to the Admissions Office.

Veterans who have earned credit through USAFI or DANTES should request transcripts from Educational Testing Service. Prospective students may contact: Representative for DANTES, P.O. Box 6604, Princeton, New Jersey 08541.

Special Information

Computer Services

Miami Dade College provides students and faculty with a state-of-the-art computing and telecommunication infrastructure. The College's campuses and centers are interconnected by a diverse high-speed gigabit fiber network backbone supporting voice, video and data. The network currently has over 31,000 ports, and provides 2Gbps bandwidth connection to the Internet2 from diverse sites using multiple service providers. Wireless connectivity for mobile computing is available in classrooms, libraries, conference centers, and other instructional and meeting locations. All classrooms are augmented with a variety of technological tools including computers and digital projectors that can enhance the learning experience.

In addition to extensive computing facilities at each College location, the College also offers a wide array of web-based services for students. The MyMDC student portal provides self-services to admissions, orientation, registration, advising, financial aid, transcript requests, term grades and credit card payments. Furthermore, the services offer up-to-the-minute course listings and academic program information. The Blackboard Learning Management System facilitates the creation and delivery of online instructions. With Blackboard Mobile, the students and faculty are able to manage their learning and teaching experience via their mobile devices.

Institutional Advancement

(District Office)

The office of Institutional Advancement has responsibility in three major divisions in carrying out its mission as the development organization for Miami Dade College: District Development Office, the Office of Alumni Relations and the Miami Dade College Foundation Inc.

Resource Development Department

The Department of Resource Development identifies external sources of funding to support the programs and priorities of the College. The department works with College faculty and staff to develop, prepare and submit innovative grant proposals to public and private funding sources designed to promote excellence in teaching, learning and institutional effectiveness. Resources obtained through grant awards help fund new and existing programs, spe-

cial projects, student services, curriculum development, professional staff development, the construction of new facilities, exchange programs, research, new equipment and student scholarships. The Department of Resource Development also encourages public-private partnerships and collaboration with other educational institutions. In addition to the pre-award portion of the grants process at the College, the department is also in charge of the College Processing Number (CPN) System which allows MDC to track proposals submitted to external sources.



Miami Dade College Office of Alumni Relations

The Alumni Association's mission is to assist current and past students of MDC through mentorship programs, job networking, fundraising and other means to create a smooth transition from student to member of the workforce. The association maintains the official website www.SuccessfulAlumni.com. This site offers a variety of services to all alumni and attendees of the College. More than 2 million people have attended Miami Dade College and more than 190,000 have earned degrees.

Members of the Miami Dade College Alumni Association are entitled to numerous benefits, including the use of the College libraries and discounts at participating vendors. Furthermore, members are invited to the various College-sponsored functions, including cultural arts events, the Miami Book Fair and the Miami International Film Festival. Membership is free: Sign up at www.SuccessfulAlumni.com to receive these benefits, and to be considered for the alumni advertising campaign.

Miami Dade College Foundation Inc.

The Miami Dade College Foundation Inc. was chartered by the state of Florida in 1965 as a nonprofit 501(c)3 direct-

support organization of Miami Dade College. Governed and guided by an independent Board of Directors of more than a dozen community leaders, the MDC College president, a rotating MDC campus president and a representative of the MDC Board of Trustees, the Foundation is vital to the College's ability to provide high-quality, accessible and affordable educational services to our community.

The Foundation ensures the mission of Miami Dade College is accomplished by promoting interest in the College through three primary objectives:

- Continue to build a permanent endowment to support Miami Dade College;
- Maintain an open-door policy ensuring that no student is denied access to an education for financial reasons;
- Develop broad-based constituent support at the local, state, national and international level to enhance and continue strengthening Miami Dade College as the largest college in the nation.

At a time when legislative support for higher education continues to decline, the Foundation's efforts to identify alternative funding sources are vital to the future of MDC. The Foundation facilitates a means through which individuals, private and family foundations, civic organizations and corporations can work with the College to serve the community. Gifts from these sources have established scholarships, new programs, direct faculty support and critical capital improvement funds.

Contributions to the Foundation are tax-deductible under Section 170 of the Internal Revenue Code and are administered according to gift agreements and donor intentions. Numerous donations from many generous sources, including MDC faculty, staff and administrators have contributed to the growth of the Foundation's endowment, which is approximately \$80 million. The endowment is comprised of more than 700 scholarship and program support donor accounts for the College.

Endowed Teaching Chairs

The Miami Dade College Endowed Teaching Chair program is the first of its kind at a community college dedicated solely to recognize excellence in teaching. Inaugurated in 1992, the Endowed Teaching Chair awards each recipient \$22,500 over a three-year period, allowing faculty to explore new teaching methods, develop new projects, purchase specialized or innovative teaching materials, enhance their technological expertise and further their own knowledge in order to benefit their students.

The Endowed Teaching Chairs represent our institution's highest recognition of our faculty. Recipients of this award, past and present, have demonstrated to their peers the absolute definition of excellence in every aspect of teaching. Further, they have made student learning their top priority and, in doing so, have fulfilled the mission of Miami Dade College.

The Endowed Teaching Chairs have been made possible through the generous support of individuals, corporations and organizations committed to the "art of teaching" and are managed by the Miami Dade College Foundation. The Endowed Teaching Chair program began in 1992 and has awarded more than 238 awards. A gift of an Endowed Teaching Chair is among the most important contributions that can be made to the College and the thousands who are educated at MDC.



Call us Essential ... Call us the College

Academic Offerings

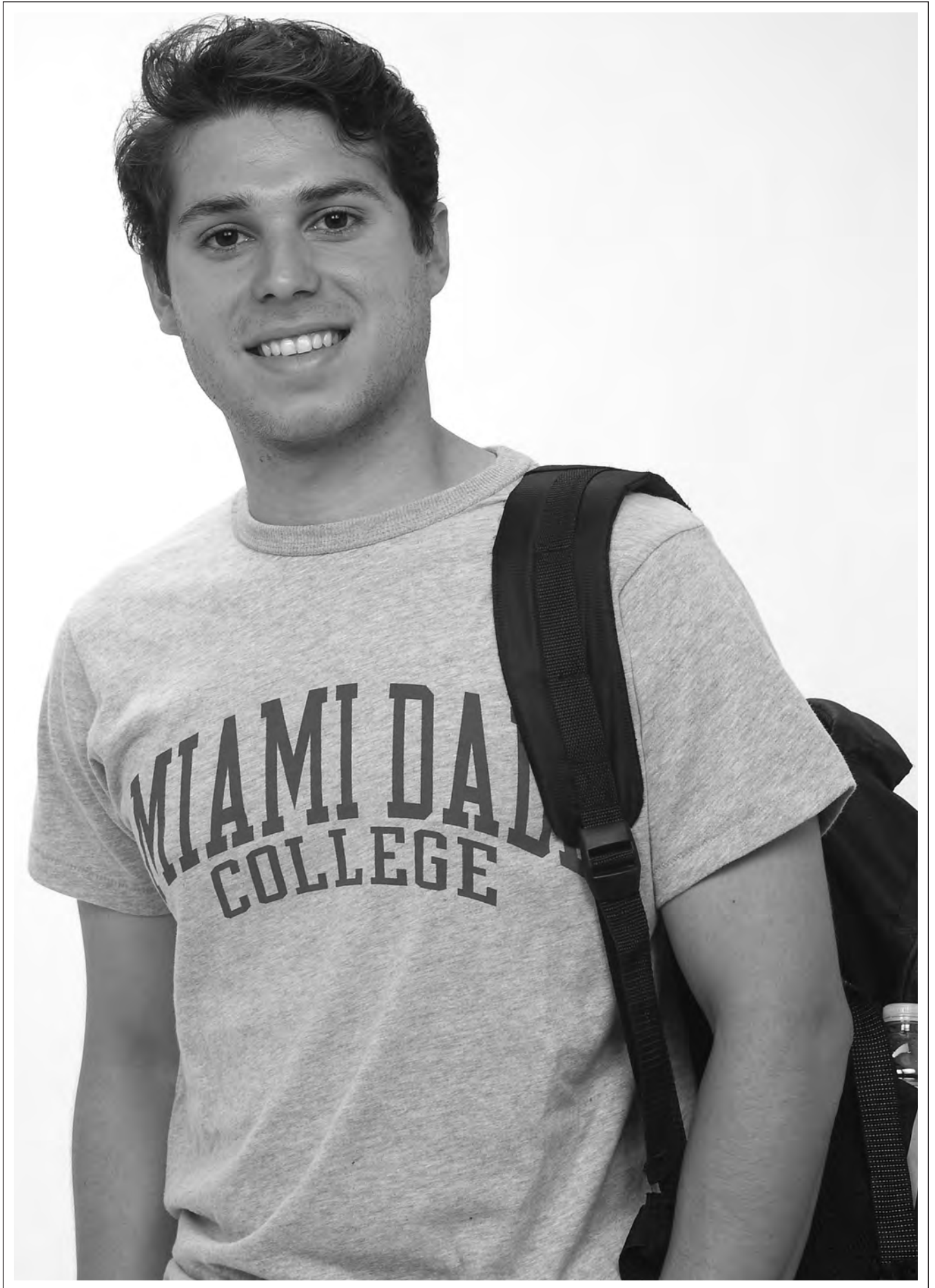
COURSE INFORMATION

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Course Information

Florida's Statewide Course Numbering System

Courses in this catalog are identified by prefixes and numbers that were assigned by Florida's Statewide Course Numbering System (SCNS). This numbering system is used by all public postsecondary institutions in Florida and 25 participating nonpublic institutions. The major purpose of this system is to facilitate the transfer of courses between participating institutions. Students and administrators can use the online SCNS to obtain course descriptions and specific information about course transfer between participating Florida institutions. This information is at the SCNS website at <http://scns.fldoe.org>.

Each participating institution controls the title, credit and content of its own courses and recommends the first digit of the course number to indicate the level at which students normally take the course. Course prefixes and the last three digits of the course numbers are assigned by members of faculty discipline committees appointed for that purpose by the Florida Department of Education in Tallahassee. Individuals nominated to serve on these committees are selected to maintain a representative balance as to type of institution and discipline field or specialization.

The course prefix and each digit in the course number have a meaning in the SCNS. The listing of prefixes and associated courses is referred to as the "SCNS taxonomy." Descriptions of the content of courses are referred to as "statewide course profiles."

EXAMPLE OF COURSE IDENTIFIER

Prefix	Level Code (first digit)	Century Digit (second digit)	Decade Digit (third digit)	Unit Digit (fourth digit)	Lab Code
ENC	1	1	0	1	
English Composition	Lower (Freshman) Level at this institution	Freshman Composition	Freshman Composition Skills	Freshman Composition Skills I	No laboratory component in this course

General Rule for Course Equivalencies

Equivalent courses at different institutions are identified by the same prefixes and same last three digits of the course number and are guaranteed to be transferable between participating institutions that offer the course, with a few exceptions, as listed below in *Exception to the General Rule for Equivalency*.

For example, a freshman composition skills course is offered by 56 different postsecondary institutions. Each institution uses "ENC_101" to identify its freshman composition skills course. The level code is the first digit and represents the year in which students normally take the course at a specific institution. In the SCNS taxonomy, "ENC" means "English Composition," the century digit "1" represents "Freshman Composition," the decade digit "0" represents "Freshman Composition Skills," and the unit digit "1" represents "Freshman Composition Skills I."

In the sciences and certain other areas, a "C" or "L" after the course num-

ber is known as a lab indicator. The "C" represents a combined lecture and laboratory course that meets in the same place at the same time. The "L" represents a laboratory course or the laboratory part of a course that has the same prefix

and course number but meets at a different time or place.

Transfer of any successfully completed course from one participating institution to another is guaranteed in cases where the course to be transferred is equivalent to one offered by the receiving institution. Equivalencies are established by the same prefix and last three digits and comparable faculty credentials at both institutions. For example, ENC 1101 is offered at a community college. The same course is offered at a state university as ENC 2101. A student who has successfully completed ENC 1101 at the community college is guaranteed to



receive transfer credit for ENC 2101 at the state university if the student transfers. The student cannot be required to take ENC 2101 again since ENC 1101 is equivalent to ENC 2101. Transfer credit must be awarded for successfully completed equivalent courses and used by the receiving institution to determine satisfaction of requirements by transfer students on the same basis as credit awarded to the native students. It is the prerogative of the receiving institution, however, to offer transfer credit for courses successfully completed that have not been designated as equivalent. **NOTE:** Credit generated at institutions on the quarter-term system may not transfer the equivalent number of credits to institutions on the semester-term system. For example, 4.0 quarter hours often transfers as 2.67 semester hours.

The Course Prefix

The course prefix is a three-letter designator for a major division of an academic discipline, subject matter area or subcategory of knowledge. The prefix is not intended to identify the department in which a course is offered. Rather, the content of a course determines the assigned prefix to identify the course.

Authority for Acceptance of Equivalent Courses

Section 1007.24(7), Florida Statutes, states: Any student who transfers among postsecondary institutions that are fully accredited by a regional or national accrediting agency recognized by the United States Department of Education and that participate in the statewide

course numbering system shall be awarded credit by the receiving institution for courses satisfactorily completed by the student at the previous institutions. Credit shall be awarded if the courses are judged by the appropriate statewide course numbering system faculty committees representing school districts, public postsecondary educational institutions and participating nonpublic postsecondary educational institutions to be academically equivalent to courses offered at the receiving institution, including equivalency of faculty credentials, regardless of the public or nonpublic control of the previous institution. The Department of Education shall ensure that credits to be accepted by a receiving institution are generated in courses for which the faculty possess credentials that are comparable to those required by the accrediting association of the receiving institution. The award of credit may be limited to courses that are entered in the statewide course numbering system. Credits awarded pursuant to this subsection shall satisfy institutional requirements on the same basis as credits awarded to native students.

Exceptions to the General Rule for Equivalency

Since the initial implementation of the SCNS, specific disciplines or types of courses have been excepted from the guarantee of transfer for equivalent courses. These include courses that must be evaluated individually or courses in which the student must be evaluated for mastery of skill and technique. The following courses are exceptions

to the general rule for course equivalencies and may not transfer. Transferability is at the discretion of the receiving institution.

- A. Courses not offered by the receiving institution
- B. For courses at nonregionally accredited institutions, courses offered prior to the established transfer date of the course in question
- C. Courses in the 900-999 series are not automatically transferable, and must be evaluated individually. These include such courses as Special Topics, Internships, Apprenticeships, Practica, Study Abroad, Thesis and Dissertations
- D. Developmental education courses (credit and vocational credit)
- E. Graduate courses
- F. Internships, apprenticeships, practica, clinical experiences and study abroad courses with numbers other than those ranging from 900-999
- G. Applied courses in the performing arts (Art, Dance, Interior Design, Music, and Theatre) and skills courses in Criminal Justice (academy certificate courses) are not guaranteed as transferable. These courses need evidence of achievement (e.g., portfolio, audition, interview, etc.).

Courses at Nonregionally Accredited Institutions

The SCNS makes available on its home page (<http://scns.fldoe.org>) a report titled "Courses at Nonregionally Accredited Institutions" that contains a comprehensive listing of all nonpublic institution courses in the SCNS inventory, as well as each course's transfer level and transfer effective date. This report is updated monthly.

Questions about the SCNS and appeals regarding course credit transfer decisions should be directed to the MDC collegewide Registrar or the Florida Department of Education, Office of Articulation, 1401 Turlington Building, Tallahassee, Florida 32399-0400. Special reports and technical information may be requested by calling the SCNS office at (850) 245-0427 or at <http://scns.fldoe.org>.

Miami Dade College course offerings and their descriptions are grouped under the applicable statewide discipline, in alphabetical order according to discipline



Miami Dade College Course Offerings and Cross References

title, not under the department or division of the college through which they are offered. For instance: FIN 2100, Personal Finance, is listed under Finance, the statewide discipline and not under a business, economics or management department. Dance courses, DAA, are listed under Dance, not under Physical Education. Within the specific disciplines, courses are listed alphabetically by prefix, then numerically within that prefix. Not all courses are offered in all terms or at all campuses. For current offerings, consult the listing of credit courses published each term prior to registration period on all campuses. The number of contact hours per week following each course description are for 16-week terms. More contact hours are required per week for the six and 12-week terms. The cross

references which follows will aid you in locating courses by prefix or discipline. Note: **Miami Dade College reserves the right to cancel classes and/or programs for which there is insufficient enrollment, to close a class when the enrollment limit in that class is reached and to make any schedule changes as necessary, including a change in time, days, credit, location or instructor. In the event of cancellation, the College will notify each registrant by email and/or by telephone and will issue a full refund. Miami Dade College is not responsible for any other related expenses.**

Prefix to Prefix Title to Statewide Discipline

ACG	Accounting - General	Accounting	126
ACO	Accounting Occupational/Technology	Accounting	226 *
ACR	HVACR: Heating/Ventilation/AC/Refrigeration	HVACR	228 *
AFH	African History	History	181
AFR	Air Force ROTC (Aerospace Studies)	Military Science	193
AMH	American History	History	181
AML	American Literature	English Language and Literature	165
ANT	Anthropology	Anthropology	132
ARC	Architecture	Architecture	132
ARH	Art History	Art	134
ART	Art	Art	134
ARV	Architectural/Drafting Technology	Architecture	231 *
ASC	Aviation Science	Aeronautical Science	127
ASL	American Sign Language	American Sign Language	131
AST	Astronomy	Physics	209
ATE	Animal Science:Technology	Agriculture	129
ATF	Aviation Technology Flight	Aeronautical Science	127
ATT	Aviation Technology Theory	Aeronautical Science	127
AVM	Aviation Management	Aeronautical Science	128
BAN	Commercial Banking (AIB)	Banking	135, 232 *
BCA	Building Construction Apprenticeships	Building Construction Apprenticeships	226 *
BCH	Biochemistry	Biochemistry	136
BCN	Building Construction	Building Construction	139
BCT	Building Construction	Building Construction	139
BOT	Botany	Biological Science	136
BRC	Banking	Banking	136, 232 *
BSC	Biological Sciences	Biological Science	137
BUL	Business Law	Business Law	139, 232 *
CAP	Computer Applications	Computer Sciences	141
CCJ	Criminology & Criminal Justice	Criminal Justice	146
CET	Computer Engineering Technology	Electrical/Electronic Technology	161
CGS	Computer General Studies	Computer Science	141, 232 *
CGV	Computer Concepts and Occupational Technology	Computer Science	232 *
CHI	Chinese Language	Asian Languages & Literature	141
CHM	Chemistry	Chemistry	140
CIS	Computer Information Systems	Computer Science/Engineering	142
CJC	Criminology & Criminal Justice	Criminal Justice	147, 233 *
CJE	Criminal Justice Development	Criminal Justice	148

*Vocational Certificate Courses (see pages 239-257)

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CJK	Criminal Justice & Related Technologies	Criminal Justice 234 *
CJL	Criminal Justice Development	Criminal Justice 149
CJT	Criminal Justice Technology	Criminal Justice 149, 236 *
CLP	Clinical Psychology	Psychology 211
COP	Computer Programming	Computer Science 143
CPO	Comparative Politics	Political Science 210
CRW	Creative Writing	English Language & Literature 165
CTE	Home Economics: Clothing & Textiles	Fashion 169
CTS	Computer Technology & Skills	Computer Science 144, 232 *
DAA	Dance Activities	Dance 150
DAN	Dance	Dance 151
DEH	Dental Hygiene	Dental Hygiene 152
DEP	Developmental Psychology	Psychology 211
DES	Dental Support	Dental Support 153
DIG	Digital Media	Digital 169
EAP	English for Academic Purposes	ESL for Academic Purposes 168
ECO	Economics	Economics 153
EDF	Education: Foundations & Policy Studies	Education: Foundations & Policy Studies 153
EDG	Education: General	Education Systems 154
EEC	Education: Early Childhood	Education Systems 155
EEL	Engineering: Electrical	Engineering II 160
EET	Electronic Engineering Technology	Electrical/Electronic Technology 162
EEV	Electrical/Electronic Vocational	Electrical/Electronic Technology 233 *
EEX	Education: Exceptional-Child-Core Competencies	Education, Exceptional Child 156
EGN	Engineering General	Engineering General Support 160
EGS	Engineering: General/Engineering: Support	Engineering: General Support 160
EME	Education: Technology and Media	Education Systems 157
EMS	Emergency Medical Services	Emergency Medical Services 159
ENC	English Composition	English Language & Literature 165
	English College Preparatory	English College Preparatory 166
ENG	English: General	English Language & Literature 165
ENL	English Literature	English Language & Literature 165
EPI	Educator Preparation Institutes	Educator Preparation Institutes 247
ESC	Earth Science	Geology 175
EST	Electronic Specialty Technology	Electrical/Electronic Technology 163
ETC	Engineering Tech: Civil	Engineering Technologies 161
ETD	Engineering Tech: Drafting	Engineering Technologies 161
ETI	Engineering Tech: Industrial	Engineering Technologies 163
ETM	Engineering Tech: Mechanical	Engineering Technologies 164
EUH	European History	History 181
EVR	Occupational Safety & Health Tech.	Environmental Studies 166
FFP	Fire Fighting and Protection	Fire Science 172, 237 *
FIL	Film	Mass Communication 170
FIN	Finance	Finance 172
FOT	Foreign & Biblical Language in Translation	Foreign Literature 173
FRE	French Language	French Language & Literature 174
FRW	French Literature (Writing)	French Language & Literature 174
FSE	Funeral Services	Funeral Services 174
FSS	Food Service Systems	Nutrition 173
GEB	General Business	General Business 175, 237 *
GEO	Geography-Systematic	Geography 175
GER	German Language	German & Germanic Language & Literature 176

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GLY	Geology	176
GRA	Graphic Arts	176, 238 *
GRV	Graphics	238 *
HAI	Haitian Creole Language	178
HCW	Haitian Creole Language	179
HFT	Hospitality Management	181, 233
HIM	Health Information Management	179, 238 *
HLP	Health, Leisure, Physical Education	205
HMV	Travel Agency Operations	246 *
HOS	Horticulture Sciences	131
HSC	Health Sciences	180, 240 *
HUM	Humanities	184
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HUS	Human Services	183
IDH	Interdisciplinary Honors	184
IDS	Interdisciplinary Sciences	184
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INR	International Relations	211
INT	Education: American Sign Language & I	159
IPM	Horticulture Sciences	131
ISC	Interdisciplinary Sciences	185
ISS	Interdisciplinary Social Sciences	211, 216
ITA	Italian Language	185
JOU	Journalism	185
JPN	Japanese Language	185
LAH	Latin American History	181
LDE	Landscape Design	131
LIN	Linguistics	186
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COURSE DESCRIPTIONS

COLLEGE CREDIT COURSES

Miami Dade College courses are developed and offered to meet the many and varied needs of both individual students and the community. College credit courses are offered in general education, occupational/technical, nursing, allied health, business, and public service disciplines. The following are descriptions of more than 2,000 college credit courses at Miami Dade College. These courses are applicable to the Baccalaureate, Associate of Arts, Associate in Science, Associate of Applied Science degree programs and/or certificate programs. They are listed in alphabetical order by title according to the State Course Numbering System directory of taxonomies and are subject to change. Not all courses are offered each term or at each campus. Check the registration handbook of the campus you are attending, or plan to attend, prior to registration each term.

Accounting

ACG1949

Co-op Work Experience 1:

ACG **3 credits**

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employee. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. (3 hr. lecture)

ACG2001

Principles of Accounting 1 **3 credits**

An introduction to the basic principles of financial accounting with emphasis on basic accounting procedures such as the recording of transactions and the preparation of financial statements. Other topics include inventories, receivables, and cash. ACG 2001 and ACG 2011 can be substituted for ACG 2021. Corequisite: ACG 2001L. (3 hr. lecture)

ACG2001L

Principles of Accounting 1

Lab **1 credit**

Provides the accounting student with support to achieve the objectives of ACG 2001. Corequisite: ACG 2001. Laboratory fee. (2 hr. lab)

ACG2011

Principles of Accounting 2 **3 credits**

Accounting for owners' equity with emphasis on corporate financial statements. Other topics include plant assets, intangible assets, current and long-term liabilities. ACG 2001 and 2011 can be substituted for ACG 2021. Prerequisite: ACG 2001; corequisite: ACG 2011L. (3 hr. lecture)

ACG2011L

Principles of Accounting 2

Lab **1 credit**

Provides the accounting student with support to achieve the objectives of ACG 2011. Corequisite: ACG 2011. Laboratory fee. (2 hr. lab)

ACG2021

Financial Accounting **3 credits**

An introduction to financial accounting concepts and analysis with emphasis on corporate financial statements and determination of income. Corequisite: ACG 2021L. (3 hr. lecture)

ACG2021L

Financial Accounting Lab **1 credit**

Students will learn to interpret and solve problems related to the financial field. Additional support will be provided to the students in order to achieve the objectives of ACG2021. Corequisite: ACG2021. May be repeated for credit. Laboratory fee. (2 hr. lab)

ACG2031

Accounting Theory **3 credits**

Designed primarily for the transferring accounting major, the course covers current topics in both financial and managerial accounting. It exposes the student to a computerized accounting system. It also familiarizes the student with current accounting literature and includes a review of the preparation and analysis of financial statements. Prerequisites: ACG 2071. (3 hr. lecture)

ACG2071

Managerial Accounting **3 credits**

Managerial Accounting focuses on the accounting information needs of the various levels of internal management within an organization. Internal responsibility is directed at three major areas of management responsibility: cost determination, planning and control, and long-term decision-making. Prerequisite: ACG 2011 and ACG 2001 or ACG 2021; corequisite: ACG 2071L. (48 contact hrs.)

ACG2071L

Managerial Accounting Lab **1 credit**

Students will learn to interpret and solve problems related to the managerial accounting field. Additional support will be provided to students in order to achieve the objectives of ACG2071. Prerequisites: ACG2021, ACG2021L; corequisite: ACG2071. Laboratory fee. (2 hr. lab)

ACG2100

Intermediate Accounting 1 **3 credits**

A review of the accounting cycle and advanced work in the area of temporary investments, receivables, inventories, plant assets, and investments in stock and bonds. Prerequisite: ACG 2071. Special fee. (3 hr. lecture)

ACG2170

Financial Statement Analysis **3 credits**

Basic instruction in analyzing statements in order to make sound judgments on the financial condition of specific businesses. Prerequisite: ACG 2071. Special fee. (3 hr. lecture)

ACG2360

Cost Accounting **3 credits**

A consideration of the accumulation, interpretation and control of costs by the job order and the process cost systems. Includes the study of break-even analysis, budgeting and other cost control techniques. Prerequisite: ACG 2071. Special fee. (3 hr. lecture)

ACG2450

Microcomputers in

Accounting **1-3 credits**

Accounting application of electronic data processing including the preparation interpretation and use of computer information in financial decision making. Pre-/Co-requisite: ACG 2001 or ACG 2021. Special fee. (1-3 hr. lecture)

ACG2500

Financial Management for

Nonprofit Organizations **3 credits**

This course provides an overview of the way in which a non-profit organization is responsible for the financial management of the organization. Success of many non-profits centers on the feasibility of the groups fiscal policies. This course provides a systematic analysis of the financial and legal ground work for which non-profit administrators, board members, and staff of non-profits are responsible. (3 hr. lecture)

ACG2630

Auditing **3 credits**

Fundamental principles of audit practice and procedure including the verification of balance sheets and income statement items, the preparation of audit working papers, and the compilation of audit reports. The course includes short problems and audit of accounting records. Prerequisite: ACG 2071. Special fee. (3 hr. lecture)

ACG2949

Co-op Work Experience 2:

ACG **3 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as report-

ed by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-Operative Education Office to obtain registration approval. (3 hr. lecture)

TAX2000

Income Tax 3 credits
Federal income tax fundamentals with emphasis on individual returns. Topics considered include gross income, capital gains and losses, deductions and exemptions, and tax credits. Special fee. (3 hr. lecture)

TAX2010

Business Taxes & Returns 3 credits
A practical course on the various tax reports and forms required in an accounting office. Topics include payroll deposits, payroll returns, corporate tax return, annual report, tangible and intangible tax returns, sales taxes, employment forms and licenses. (3 hr. lecture)

Aeronautical Science

ASC1010

Aerospace History 3 credits
This course is designed to provide the student with an understanding of the significant events, people, places and technologies of aviation that have occurred as it progressed through history. The course begins centuries before man flew when concepts of flight were first being imagined to the first successful hot air balloons and the first heavier than air attempts at flight and continues to the present day with supersonic aircraft and space vehicles from both a civilian and military perspective. (3 hr. lecture)

ASC1210

Aviation Meteorology 3 credits
This is a core aviation course. The student will be prepared to understand weather and environmental issues in commercial aviation. Topics covered will be atmospheric phenomena relating to aircraft operations, the analysis and use of weather data as presented by the U.S. National Weather Service. Prerequisite: ATT 1100 or equivalent; corequisite: ATT 2110 or equivalent. Special fee. (3 hr. lecture)

ASC1550

Aerodynamics 3 credits
This is a basic course in aerodynamics. Students will analyze the physics of flight and the application of basic aerodynamics to both airframe and power plant as preparation for the requirements of commercial aviation. (3 hr. lecture)

ASC1610

Aircraft Engines and Structure Theory 3 credits
This is a foundation course in aircraft engines and structure. Students will learn the ele-

ments of aircraft engines, engine theory, construction, systems, operating procedures, performance diagnosis, and aircraft structures. (3 hr. lecture)

ASC2320

Aviation Laws and Regulations 3 credits
Insight pertinent to federal governing bodies, and current local, federal and international laws forming the present structure of aviation law. (3 hr. lecture)

ASC2470

Physiology/Psychology of Flight 3 credits
This is an introductory course in the physiology and psychology of flight. Students will learn aero-medical facts of significance to pilots, including causes, symptoms, prevention and emergency treatment of ailments common to the aviation environment through a basic understanding of a person's normal functioning. Cabin pressurization, communications, decompression sickness, hyperventilation, hypoxia, self-imposed stresses, spatial disorientation and vision are examined. (3 hr. lecture)

ASC2670

Aircraft Systems 3 credits
As preparation for commercial aviation requirements, this course is concerned with a detailed study of aircraft systems, their various sources of basic power and the functional application of mechanisms operated by these systems. Prerequisite: ASC 1610. (3 hr. lecture)

ATF1601L

Flight Orientation/Simulator Lab 1 credit
This course will provide the student with an introduction to the environment of operating an aircraft from a pilot's point of view. It is designed to provide this knowledge to those students such as Air Traffic Controllers and Aviation Administration Students who have no piloting experience. Special fee. (2 hr. lab)

ATF2210

Commercial Pilot Flight 3 credits
This course provides pilot training required to allow the student to safely conduct flight as a Commercial Pilot. The training will be conducted in accordance with FAR Part 141 and in concert with stages 5 and 6 of the Jespersen Sanderson Instrument/Commercial Syllabus. Upon satisfactory completion of this course, the FAA written exam, and FAA practical exam the student will receive an FAA Commercial Rating. A Class 1 Medical Certificate with Instrument Rating are required. Minimum approved FAA Part 141 course hours include 120 hours of flight. Cost per hour Wet/Dual at Wayman Flight School - Cessna 152 = \$99/\$158, Cessna 172 C = \$120/\$179, Cessna 172 G = \$165/\$224, Cessna 172 R = \$139/\$198, Piper = \$159/\$218. Special fee. (3 hr. lecture)

ATF2305

Instruments Pilot Flight 3 credits
This course provides the flight training required to safely conduct flights as an instrument-rated pilot. The training is conducted in accordance with Part 141 of the Federal Aviation Regulations as outlined in stages 1 through 4 of the Jespersen Sanderson Instrument/Commercial Syllabus. Upon satisfactory completion of this course and the Federal Aviation Administration (FAA) knowledge and practical exams, the applicant will receive an FAA instrument rating. Minimum approved FAA Part 141 course hours include 35 hours of flight. Cost per Hour Wet/Dual at Wayman Flight School - Cessna 152 = \$99/\$158, Cessna 172 C = \$120/\$179, Cessna 172 G = \$165/\$224, Cessna 172 R = \$139/\$198. Prerequisites: ATF 1100; FAA Private Pilot Certificate; corequisites: ATT 2120; current FAA Medical Certificate. Special fee. (3 hr. lecture)

ATF2400

Multi-Engine Pilot Flight 1 credit
This course provides the flight training required to prepare the student to safely conduct flight as a Multi-Engine Pilot. Upon satisfactory completion of this course, and the FAA oral and practical exam the student will receive an FAA Multi-Engine Rating. Minimum approved FAA Part 141 course hours include 20 hours of flight. Cost per hour at Wayman Flight School - \$300/\$359. Prerequisite: ATF 1100 or ATF 2210; corequisite: ATT 2133. Laboratory fee. (3 hr. lecture)

ATF2501

Flight Instructor-Flight Training 3 credits
This course provides flight training for the student to develop the ability to analyze the performance of private and commercial flight maneuvers from the right seat of a training aircraft, in compliance with the Federal Aviation Administration Certified Flight Instructor Certificate. Minimum approved FAA Part 141 course hours include 25 hours of flight. Cost per hour Wet/Dual at Wayman Flight School - \$159/\$218. Prerequisite: ATF 2300; corequisites: ATT 2131, ATF 2501L. Special fee. (3 hr. lecture)

ATF2501L

Flight Instructor-Laboratory 1 credit
Provides the student with internship teaching experience based upon the principles of flight instruction learned in ATT 2131 and ATF 2501. Students will learn to develop lesson plans and how to communicate effectively using instructional materials. Prerequisite: ATF 2300; corequisite: ATT 2131, ATF 2501. (2 hr. Lab)

ATF2651C

Flight Engineer-Turbojet 4 credits
This course will provide ground and simulator training for the purpose of obtaining a turbojet flight engineer license (Boeing 727) in accordance with provisions of FAR 63.64, FAR 63 Appendix C and Exemption 4901. Each trainee must hold a valid Commercial Pilot's Certificate with an instrument rating.

Each trainee must also have successfully completed the FAA Flight Engineer Written Exam in accordance with FAR 63.35(d). (3 hr. lecture; 2 hr. lab)

ATT1101

Private Pilot Applications 3 credits
This course, together with ATT 1100, provides the basic knowledge needed by students in the Professional Piloting Technology program. The two courses must be taken concurrently by students majoring in the professional Piloting Technology program. The areas of study include: aircraft preflight, the planning and preparations prior to flight, airport operations, airspace, Federal Aviation Regulations, flight information publications, air navigation, cross country navigation, radio navigation, and flight safety. When this course is taken simultaneously with ATT 1100, it will prepare students for the FAA (Federal Aviation Administration) Private Pilot Knowledge Examination and allow them to take the FAA exam (IAP047) upon completion of the course. Corequisites: ATT 1100, ASC 1210. (3 hr. lecture)

ATT2110

Commercial Pilot Theory 3 3 credits
This course provides students with the aeronautical knowledge required to act as Commercial Pilot. Students will prepare for the FAA Commercial Written Exam. Private Pilot Certificate with Instrument Rating required. Prerequisite: ATF 2200. Corequisite: ATF 2300 or 2210. (3 hr. lecture)

ATT2120

Instruments Pilot Theory 4 4 credits
This course introduces basic theories of instrument pilot operations to prepare students for the FAA Instrument Written Exam. Students will acquire aeronautical knowledge required to act as an Instrument rated Pilot. It will prepare the students for the FAA Instrument Written Exam. Private Pilot Certificate required. Prerequisites: ASC 1210, ATF 1100, ATT 1100; corequisite: ATF 2200. (4 hr. lecture)

ATT2131

Flight Instructor Theory 3 3 credits
Provides the student ground instruction to obtain the necessary aeronautical knowledge, to meet the FAA written standards for the Certified Flight Instructors Certificate. Preparation for the written exam is included in the course content. Prerequisite: ATF 2300; corequisites: ATF 2501, 2501L. (3 hr. lecture)

ATT2133

Multi-Engine Pilot Theory 2 2 credits
This course introduces basic theories of multi-engine pilot operations to prepare students for the FAA Multi-Engine oral and practical exams. Students will acquire aeronautical knowledge required to act as a multi-engine rated pilot. (2 hr. lecture)

ATT2660

Regional Airline Operations 3 3 credits
This course provides theoretical instruction

and practical experience in flight planning inclusive of navigation, weather, fuel management, flight and communication procedures, aircraft performance, crew coordination and simulator procedures. Utilizing flight systems automated panels, the course additionally provides practical instruction in the operation of aircraft systems. Prerequisites: ASC 1610, ATT 2110, 2120. (3 hr. lecture)

ATT2820

Air Traffic Control 3 3 credits
The basic elements of air traffic control operations, providing the necessary foundation for successful completion of the Air Traffic Control Basic Certification Examination. Prerequisite: sophomore standing in major program. (3 hr. lecture)

ATT2821

Air Traffic Control (ATC) Radar 3 3 credits
This course will provide the student with a fundamental knowledge of air traffic control practices, policies and procedures as they relate to the specifics of the controller function in an air traffic radar operating environment, with air traffic controllers utilizing the radar for traffic separation. The liberal use of the figures and example phraseology assist the student in achieving an overall use of understanding of the air traffic control system. A radar air traffic control simulator is utilized to provide realistic training exercises for the students. Prerequisite: ASC1210. (2 hr. lecture; 2 hr. lab)

ATT2822

VFR Tower Operations 3 3 credits
This course expands the knowledge attained from ATT 2820, and is designed to further develop the aviation students skill in the ATC environment. Emphasis is placed on the duties and responsibilities of operational positions in local, ground, flight data, and coordination. Students will also learn the FAA regulations which govern flight under visual conditions. Optimum use of the Hughes Virtual Tower incorporated into this course. Prerequisite: ATT 2820. Special fee. (3 hr. lecture)

ATT2823

Air Traffic Control (ATC) Non-Radar 3 3 credits
In this course, future air traffic controllers will acquire an understanding of air traffic control practices, policies and procedures and their application in a non-radar air traffic environment. Throughout this course, (Non-Radar Procedures) appropriate real-life examples are used to illustrate the reasoning behind procedures used by air traffic controllers utilizing the non-radar methods. The liberal use of figures and example phraseology is used to assist the student in achieving an overall understanding of the air traffic control system. Prerequisites: ATT 2820, ASC 1210. Special fee. (3 hr. lecture)

AVM1010

Aviation Industry Operation 3 3 credits
The course provides insight into the development and present status of aircraft and air

transportation, governmental organizations, controls and regulations, and career opportunities in the field. (3 hr. lecture)

AVM1022

Flight Operations 3 3 credits
An investigation of the occupational duties, responsibilities, and physical facilities required by the positions of pilot, co-pilot, flight engineer, dispatcher and flight attendant. (3 hr. lecture)

AVM1062

Aviation Career Planning 1 1 credit
This course provides direction and guidance in career planning for all aviation students. Topics of discussion will include the job search education and training requirements, resume writing, business etiquette, interview skills and follow-up techniques. A.S. degree credit only. (1 hr. lecture)

AVM1121

Hazardous Materials/ Dangerous Goods 3 3 credits
This course is designed to provide the student with knowledge of dangerous goods/hazardous materials and their effect in air transportation and logistics. The students will be conversant in hazardous material regulations for cargo and passenger transportation. The course will encompass the identification, labeling, packaging and handling of 9 types of dangerous goods in air transportation and general logistics. Prerequisite: AVM 2120. Special fee. (3 hr. lecture)

AVM1301

Aviation Sales and Promotion 3 3 credits
A presentation and utilization of sales methods, sales tools, sales opportunities and personal sales skills requirements for entry level sales employment in the aviation industry. Included are sales campaign planning and implementation factors of flight, travel and cargo options. (3 hr. lecture)

AVM1440

Aviation/Airport Security 3 3 credits
This course will provide the student with knowledge of the issues and strategies that are used to protect the national airspace system, airports and airlines from security threats. The various types of threats and responses to those threats will be covered. In addition, the legal requirements planning issues, physical equipment and facility requirements and personnel issues will also be discussed. (3 hr. lecture)

AVM1520

Airline Reservations 3 3 credits
Prepares students for airline employment opportunities through a familiarization of the procedures involved in airline reservations, cargo reservation and route structures, using the American Airline's SABRE reservations and LATA systems. This course is not approved for the Travel Agency Management degree. A.S degree credit only. Special fee. (3 hr. lecture)

AVM1521**Airline Ticketing 3 credits**

A preparation for airline employment opportunities requiring the responsibilities of airline ticketing procedures manual and automated (American Airline's SABRE system) for domestic and international ticketing, tele ticketing, boarding procedures, and immigration guides. This course is not approved for the Travel Agency Management Degree. A.S. degree credit only. Special fee. (3 hr. lecture)

AVM1949**Co-op Work Experience 1: AVI 3 credits**

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. Prerequisite: 2.0 minimum GPA, approval of Co-op Program Director, minimum of 6 credits in field or work approved experience. (3 hr. lecture)

AVM2120**Air Cargo 3 credits**

The course develops a comprehensive grasp of the characteristics and evolution of air cargo, its impact on United States industry, inherent problems and future development. (3 hr. lecture)

AVM2410**Principles of Airport Management 3 credits**

This course provides the student with a broad background in the Principles of Airport Management. This includes the airport system and its history, planning, land use, community relation issues, financial issues, capacity and growth, operations, organization and administration. Special fee. (3 hr. lecture)

AVM2431**Customer Service Agent 3 credits**

Covers the generic skills needed for any airline position involving regular contact with the traveling public. Includes human relations, personal appearance enhancement, etiquette, conflict management, speech skills, and the acquisition of attributes that would promote a proper professional image. (3 hr. lecture)

AVM2441**Aviation Safety & Human Factors 3 credits**

This course will provide the student with an understanding of human factors and safety concepts as they apply to aviation. There will be an evaluation of aircraft accidents and their causal factors. Accident prevention measures are stressed as integral parts of an aviation safety program. (3 hr. lecture)

AVM2450**Airport Facilities/Financial Planning 3 credits**

This course provides the student with an in depth knowledge of the techniques and strategies of the airport master plan in planning airport facilities and financial resources. Forecasting, demand analysis, sources of funding, planning requirements, environmental issues and requirements and compliance issues will be discussed. Also implementation and control issues, financial management, budgets, costs and revenues as well as airport economics will be discussed. Prerequisite: AVM 2410. Special fee. (3 hr. lecture)

AVM2510**Airline Management 3 credits**

An insight relative to the business policies and the functions of management in airline operations. Course involves various internal managerial facets and the impact of external regulatory and economic implications. (3 hr. lecture)

AVM2515**Airline Marketing 3 credits**

A differentiation of the functions of marketing in airline operations; market research, demand analysis, advertising and promotion, sales, traffic, and the theory of price determination. (3 hr. lecture)

AVM2949**Co-op Work Experience 2: AVI 3 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. Prerequisite: 2.0 minimum GPA, approval of Co-op Program Director, completion of AVM 1949. (3 hr. lecture)

Agriculture & Related Technologies

ATE1110**Animal Anatomy 3 credits**

This course explores the physical and functional phenomena that interact to sustain life in animals. The student will learn the relationships of all of the systems in domestic animals, such as the osseous apparatus, the respiratory, digestive, genitourinary, endocrine, and nervous systems. The student will also be introduced to the descriptive and topographical terms needed to communicate with the professional staff. Prerequisites: CHM 1033, 1033L, ENC 1101; corequisites: ATE 1110L, 1211, 1650L. (3 hr. lecture)

ATE1110L**Animal Anatomy & Physiology Lab 1 credit**

This course will complete the coverage and understanding of the physiological

and anatomical relationships required for further development as a veterinary technician. This course will correlate with lecture material learned in the Animal anatomy and Animal Physiology lecture courses. Anatomical dissection, necropsy, examination of live animals will be used as well as the study of radiographs, skeleton models and histological sections. (2 hr. lab)

ATE1211**Animal Physiology 3 credits**

This course is designed to explore the terminology related to animal physiology, in addition to all aspects of the functions of systems in small and large animals. (3 hr. lecture)

ATE1630**Pharmacology for Veterinary Technicians 2 credits**

This introductory course reviews drug classifications and office procedures/management. Students will learn methods of calculating appropriate drug dosage, routes of administration, and evaluation of drug efficacy as well as office procedures used in veterinary hospital management. A.S. degree credit only. (2 hr. lecture)

ATE1650L**Introduction to Clinical Practice 1 1 credit**

This introductory course is designed to acquaint the student with skills associated with veterinary clinical practice. Students will learn basic office, laboratory and nursing skills, including hospital/office management, restraint, history taking, examination room techniques, administration of medication, basic parasitology, and basic clinical pathology procedures. A.S. degree credit only. (3 hr. clinic)

ATE1940**Veterinary Clinical Experience 1 3 credits**

This entry clinical course provides supervised clinical experience in a veterinary facility. Students will learn and reinforce competencies in clinical laboratory procedures, venipuncture techniques, physical examination of patients, administration of intramuscular and subcutaneous injections and exam room protocol. A.S. degree only. (144 hr. clinic)

ATE1941**Veterinary Clinical Experience 2 3 credits**

This course consists of supervised clinical experience in the veterinary workplace. Students will learn to enhance the competencies from ATE 1940 Veterinary Clinical Experience 1 while adding application of classroom knowledge in pharmacology, clinical laboratory procedures, and radiology. A.S. degree credit only. (144 hr. clinic)

ATE2050L**Animal Nursing & Medicine Laboratory 2 2 credits**

The student will practice training a dog, and applying corrections for common be-

havioral problems. Clinical training in a small animal necropsy is also presented. Prerequisites: ATE 1110, 2631, 2655L; corequisite: ATE 2612. (4 hr. lab)

ATE2611

Animal Medicine 1 3 credits
This course is designed to acquaint the student with anesthesiology, asepsis and general surgical nursing care, essentials in pharmacy and pharmacology, and concepts in microbiology, virology and immunology. Prerequisites: ATE 1110, 1211; corequisites: ATE 2661, 2942, 2631, 2655L. (3 hr. lecture)

ATE2612

Small Animal Nursing 2 3 credits
A study of the basic concepts of nutrition, obstetric, and pediatric care, as well as the important aspects regarding zoonotic diseases, public health and animal behavior. The student will also be introduced to alternative medicine, including holistic concepts, homeopathic, acupuncture, chiropractic and other emerging specialties. Prerequisites: ATE 1110, 2611, 2631, 2655L; corequisite: ATE 2050L. (3 hr. lecture)

ATE2614

Animal Medicine 2 3 credits
This course will explore general pathology, causes and nature of disease, toxicology, and an overview of pathologies of major systems, as well as immunity disease prevention, common vaccinations and diseases relating to small animals. Prerequisites: ATE 1110, 2611. (3 hr. lecture)

ATE2631

Small Animal Nursing 1 3 credits
The student will master the technical skills of medicating animals and the taking and processing of radiographs. This course also covers general care, including grooming and bathing, feeding and watering, nail trimming, ear cleaning, anal sac expression, and determination of vital signs. Prerequisites: ATE 1110, 1211; corequisites: ATE 2611, 2655L. (3 hr. lecture)

ATE2636

Large Animal Clinic & Nursing Skills 2 credits
This course is designed to acquaint the student with the fundamentals of large animal herd management, reproductive physiology and lactation physiology. Aspects of equine, bovine, ovine and porcine husbandry will be included. Prerequisites: ATE 1110, 1211 corequisite; ATE 2636L. (2 hr. lecture)

ATE2636L

Large Animal Clinic & Nursing Skills Laboratory 1 credit
This course is designed to acquaint the student with the fundamentals of large animal husbandry, herd health management, preventive medicine, animal restraint and nutrition as it relates to the bovine, equine, porcine and caprine species. Techniques discussed in the Large Animal Clinic and Nursing skills course

such as venipuncture, injections and administration of other oral medications will be reviewed and demonstrated. One laboratory session will be devoted to poultry science. (2 hr. lab)

ATE2638

Animal Lab Procedures 1 3 credits
This course is designed to introduce the veterinary technician to common parasites and their life cycles seen in routine veterinary practice. Also, hematology and the kinetics of the hematopoietic system are discussed with emphasis on normal blood smears and common changes seen during disease stages of the domestic animals. Prerequisites: ATE1110, 1211; corequisite: ATE 2638L. (6 hr. lab)

ATE2638L

Animal Lab Procedures 1 Laboratory 2 credits
This course is designed to acquaint the student with clinical laboratory procedures covered in the Animal Laboratory Procedures 1 course. Areas of emphasis include hematology, coagulation and parasitology as well as general laboratory etiquette. Corequisite: ATE 2638. (4 hr. lab)

ATE2639

Animal Lab Procedures 2 3 credits
This course serves as a continuation of Animal Laboratory Procedures 1 and covers immunology, liver function and diagnostic testing for liver abnormalities, kidney function and testing used in disease states, urinalysis, pancreatic evaluation; normal and abnormal exfoliative cytology; and the evaluation of endocrine disorders. It also will include principles of serological testing and microbiological methods and protocols. Prerequisites: ATE 2638, 2638L; corequisite: ATE 2639L. (3 hr. lecture)

ATE2639L

Animal Lab Procedures 2 Laboratory 2 credits
This course provides experience in the practical applications discussed in Animal Laboratory procedures 2. It also will include principles of serological testing and microbiological methods and protocols as well as dentistry for the veterinary technician. Prerequisites: ATE 2638, 2638L; corequisite: ATE 2639. (4 hr. lab)

ATE2652L

Introduction to Clinical Practice 2 1 credit
The clinical application of basic veterinary radiology and surgical nursing skills will be the primary focus of this practicum. The student will demonstrate skills under supervised instruction. Prerequisite: ATE 1110, 1650L. (1 hr. lab)

ATE2655L

Animal Nursing & Medicine Laboratory 1 2 credits
This course is designed to acquaint the student with exam room and restraining

techniques, anesthesia and surgical protocols and diagnostic imaging procedures used in veterinary hospitals. (4 hr. lab)

ATE2661

Large Animal Diseases 1 credit
This course is designed to acquaint the student with the fundamentals of preventative medicine and with the common disease seen in the large animal species. Aspects of equine, bovine, ovine and porcine diseases and common treatments will be emphasized. Prerequisites: ATE 1110, 2636, 2636L; corequisite: ATE 2611. (1 hr. lecture)

ATE2671C

Lab Animal Medicine 2 credits
This foundation course provides instruction on laboratory animal care. Students will learn the technical aspects of laboratory animal care, including restraint and handling, common diseases and nutrition. The animals studied include rabbits, rats, mice, guinea pigs, hamsters and primates. A.S. degree credit only. (1 hr. lecture; 2 hr. lab)

ATE2710

Animal Emergency Medicine 2 credits
This course is designed to acquaint the student with fundamentals of emergency veterinary medicine, including veterinary first aid, toxicology and specialized medical techniques and procedures. Prerequisites: ATE 1110, 1211; corequisites: ATE 2611, 2631, 2655L. (2 hr. lecture)

ATE2722C

Avian & Exotic Pet Medicine 2 credits
This course is designed to acquaint students with the medical care associated with exotic animal and avians. Students will learn types of species that may be encountered in a practice and their associated care techniques. A.S. degree credit only. (1hr. lecture; 2 hr. Lab)

ATE2942

Veterinary Clinical Experience 3 4 credits
This course provides clinical experience to the student, under the supervision of a veterinarian. Students will enhance the competencies learned in ATE 1940 - Clinical Experience 1 and ATE 1941 - Veterinary Clinical Experience 2 and master skills associated with advanced veterinary technology practice. Prerequisite ATE 1941. A.S. degree credit only. (192 hr. clinic)

ATE2943

Veterinary Clinical Experience 4 1-3 credits
This course consists of supervised clinical experience in a work place approved by the college. All aspects of critical and non-critical care will be observed and performed under the supervision of a veterinarian. The areas of competency of Veterinary Clinical Experience 1, 2 and 3 will be reinforced. The student receives no monetary compensation for the nine clinical hours. Prerequisite: ATE 2942; corequisites: ATE 2050L, 2612, 2614. (9 hr. clinic)

HOS1010**Horticulture 1 3 credits**

This is an introductory course on the principles of horticulture. Students will learn plant structure and function, plant propagation, plant nutrients and fertilizers, potting media, soils, pruning, and plant pests. A survey of various fields in ornamental horticulture will also be covered. (3 hr. lecture).

HOS1011**Horticulture 2 3 credits**

The student will learn the maintenance and management aspects of horticulture business (nursery facility or landscape maintenance and design) including irrigation systems, plant growing facilities, plant propagation equipment, and landscape maintenance equipment. Hands-on practice in programming of plant production crops and nursery design in our nursery. Prerequisite: HOS1010. A.S. degree only. Special fee. (3 hr. lecture)

IPM2112**Principles of Entomology 3 credits**

This is an introductory course on the principles of entomology. Students will learn to identify characteristics of arthropods, the insect orders, and the growth cycle of insects. Students will also address insect pest's specific to South Florida and methods to responsibly manage plant pests. (3 hr. lecture)

IPM2301**Pesticide Applications 3 credits**

Students will learn government regulations with regards to pesticide mixing and application, and safety equipment. Preparation for the restricted use applicators license exam will be covered. A.S. degree credit only. Special fee. (3 hr. lecture)

IPM2635**Introduction to Plant Pathology 3 credits**

The students will learn to identify diseases that affect plants and management practices for different types of plant diseases. Environmental factors contributing to a plant's susceptibility to a particular disease will also be discussed. Methods of prevention, eradication, and control will be given for each specific disease. A.S. degree credit only. Special fee. (3 hr. lecture)

LDE2000**Planting Design 1 4 credits**

Basic principles of design, on-the-job sketching and plan presentation as used by nurseries. Prerequisite: ORH 1510. Laboratory fee. (2 hr. lecture; 4 hr. lab)

LDE2310**Irrigation Design & Maintenance 3 credits**

The students will learn the design, maintenance, and installation of nursery and landscape irrigation systems. All types of nursery systems will be covered including field, shade house, and greenhouse. Both sprinkle and low volume drip systems will be surveyed for appropriateness in nursery and landscape uses. Includes occasional weekend hands-on

activities. A.S. degree only. Special fee. (3 hr. lecture)

ORH1251**Nursery Practices 1 3 credits**

The student will learn the techniques and practices in commercial production of ornamental plants. Emphasis on types of nurseries. Prerequisite: HOS1010. A.S. degree only. Laboratory fee. (2 hr. lecture; 2 hr. lab)

ORH1510**Landscape Plant Identification 1 3 credits**

Students will learn the identification and usage of plants used in the horticultural trade in South Florida. Subject matter includes trees, shrubs, and flowering plants for both interior and outdoor use. (3 hr. lecture)

ORH1511**Landscape Plant Identification 2 3 credits**

The student will learn to identify and classify plants used in the horticulture industry in South Florida. Prerequisite: ORH1510. A.S. degree credit only. (3 hr. lecture)

ORH1840C**Landscape Construction 2 credits**

The student will learn to analyze a landscape site, read blueprints, and prepare a site for landscape installation. Basic construction techniques such as creating and maintaining wood structures, mixing concrete, and installing hardscape will be covered. Taught from a hands-on perspective. Occasional Saturday activities. A.S. degree credit only. Laboratory fee. (4 hr. lab)

ORH2230**Exterior Plant Usage and Maintenance 3 credits**

This course emphasizes the maintenance and installation of exterior plants in the South Florida Environment. Students will learn installation procedures for bedding plants, shrubs, trees/palms, and vines. Students will be required to become familiar with all plants and equipment names and uses. A.S. degree credit only. Special Fee. (3 hr. lecture)

ORH2277**Foliage Plant Production 3 credits**

Students will learn plant propagation techniques such as the taking of cuttings, divisions, and seeds, along with aseptic and meristem culture. Students will be required to look for insect diseases, and other cultural problems associated with foliage production and learn how to combat these problems. Environmental factors affecting foliage plants such as water, humidity, light, and temperature will be studied in relation to growing foliage plants specifically in South Florida. A.S. degree only. Special fee. (3 hr. lecture)

ORH2835C**Computer-Aided Landscape Design 1 2 credits**

Students will learn CAD fundamentals and then create computer generated drawings. Using these fundamentals and landscape design

concepts, students will generate both landscape and hard scape aspects of residential landscape designs. A combination lecture/lab course. Prerequisites: CGS 1060 (or equivalent) and working knowledge of landscape plants or permission of instructor. (1 hr. lecture; 2 hr. lab)

ORH2837C**Computer-Aided Landscape Design 2 2 credits**

Students will carry out landscape design projects with CAD as required in a landscape design business. Appropriate landscape design principles will be applied to landscape projects and presented in CAD-generated drawings. A combination lecture and lab course. Prerequisites: ORH 2835C, CGS 1060 (or equivalent) and working knowledge of landscape plants or permission of instructor. (1 hr. lecture; 2hr. lab)

ORH2932**Special Topics in Landscaping 1 credit**

Special topics in landscaping offers horticulture students the opportunity of enriching their education with aspects of the field not covered in the A.S. program. Topics will be offered in the areas of irrigation, appropriate landscaping, recent innovations, pests and pesticides, etc. A.S. degree credit only. (1 hr. lecture)

ORH2949**Landscape Technology Internship 3 credits**

The internship will provide students with hands-on work experience in horticulture. Landscape, or related technology industries. Students will learn employability skills, and the specific skills and safety requirements necessary for effective work in this environment. (144 hr. Internship)

American Sign Language and ASL Interpretation

ASL1000**Survey of Deaf Studies 3 credits**

Provides an overview of aspects of deafness including demographics, audiology, education, rehabilitation, assistive devices and organizations on deafness and interpreting. (3 hr. lecture)

ASL1140C**American Sign Language 1 4 credits**

Provides introductory information on the linguistics of American Sign Language and approximately 500 sign concepts. Course includes lecture, discussion and lab practice. (4 hr. lecture)

ASL1150C**American Sign Language 2 4 credits**

Provides continued instruction in the linguistic principles of American Sign Language and an additional 500 sign concepts. Course

includes lecture, discussion and lab practice which is conducted in ASL. Prerequisite: ASL 1140C. (4 hr. lecture)

ASL1906

Directed Independent

Studies 1-2 credits
Provides continued instruction in the linguistic principles of American Sign Language and an additional 500 sign concepts. Course includes lecture, discussion and lab practice which is conducted in ASL. Prerequisite: ASL 1140C. (4 hr. Lecture)

ASL2160C

American Sign Language 3 4 credits
Provides linguistic principles of American Sign Language at the intermediate level and an additional 500 sign concepts. Lecture, discussion and lab practice are included. Students have increased opportunities for interaction with members of the deaf community. Increasingly, class sessions are conducted in ASL. Prerequisite: ASL 1150C; Pre/corequisite: ASL 2210. (4 hr. lecture)

ASL2200C

American Sign Language 4 4 credits
Provides linguistic principles of American Sign Language at the advanced level and an additional 500 sign concepts including idioms used in ASL. Lecture, discussion and lab practice are included. Class sessions are conducted predominately in ASL. Prerequisite: ASL 2160C. (4 hr. lecture)

ASL2210

ASL Conversational Skills 3 credits
This course will provide practice communication in American Sign Language (ASL). Students will use previously acquired knowledge of ASL vocabulary and linguistic principles to communicate in the language. Prerequisite: ASL 1150C or 2160C. (3 hr. lecture)

ASL2220

Receptive Skills Development 3 credits
The course will focus on increasing the students' receptive understanding of signed communications. Examples of American Sign Language (ASL) will be presented via videotapes and live interactions with deaf persons. Students will identify all the components and linguistic features of ASL and will provide appropriate English translations either in speech (paraphrasing) or in written form. Prerequisite: ASL 1150C. (3 hr. lecture)

ASL2400

Linguistics of American Sign Language 3 credits
Course is designed for persons who already have an understanding of ASL principles. Provides an overview of the various systems of manual communication used in the U.S. including PSE, Cued Speech and signed English. Prerequisite: ASL 2160C. (3 hr. lecture)

ASL2430

Manual alphabet Skills Development 3 credits

Content focuses on acquiring both expressive and receptive skill in the manual alphabet of American Sign Language, commonly known as fingerspelling. A performance test is given at the beginning of the course to determine existing competency. Prerequisites: ASL 1140C, 1150C. (3 hr. lecture)

ASL2510

Deaf Culture and Community 3 credits
The course provides an in-depth study of the lives and experiences of deaf and hard of hearing persons and it examines why many deaf people consider themselves to belong to a unique cultural group. Characteristics of the culture are examined along with the impact of hearing loss on one's family, friends and employment. Multicultural issues will be covered since the impact of hearing loss is addressed differently in various ethnic groups. Also examined are societal attitudes regarding disability in general and hearing loss and communication difficulties in particular. Prerequisites: ASL 1150C, 1000. (3 hr. lecture)

SPA2001

Introduction to Communication Disorders 3 credits
An introduction to functional and organic speech problems which interfere with oral communications and to the profession of speech science and correction; speech and hearing therapy, in public, private, or governmental agencies. (3 hr. lecture)

Anthropology

ANT2000

Introduction to Anthropology 3 credits
This course covers the theoretical and conceptual fundamentals for understanding the human species through an integrated study of the cultural, biological, evolutionary and linguistic aspects of our kind. Students will learn about human origins as well as human cultural diversity from antiquity to the present. (3 hr. lecture)

ANT2410

Introduction to Cultural Anthropology 3 credits
The nature of culture, personality, and social organizations. Emphasis is on the customs of pre-literate people. (3 hr. lecture)

ANT2511

Introduction to Physical Anthropology 3 credits
Man as a biological unit in the animal kingdom. The human fossil record, living primates, the criteria of race and races of man, principles of biological evolution and human genetics. (3 hr. lecture)

Architecture

ARC1113

Sketchbook Studies 3 credits
This course focuses on the development of perception and awareness of major architectural monuments, historical sites, and public spaces through two-dimensional architectural renderings performed in situ. Freehand perspective drawings will be created in black and white, with color as applicable. Mediums of presentation will vary from pencil to pen. (3 hr. lecture)

ARC1115

Architectural Communications 1 2 credits
Exercises in freehand drawing, sketching and linear perspective are designed to increase the student's awareness of the architectural environment. This is accomplished through a series of form studies of nature, architectural forms, and abstract elements of composition. Corequisite: IND 1020. Laboratory fee. (1 hr. lecture; 2 hr. lab)

ARC1126

Architectural Drawing 1 4 credits
This course exercises the visualization and drafting of architectural objects and construction conditions. Students will learn to draw orthographic projections, isometric and sectional drawings as an expression of architectural communication. Topics include drawing of plans, elevations, details, schedules, and sections of wood frame and masonry structures. (2 hr. lecture; 4 hr. lab)

ARC1128

Architectural Drawing 2 4 credits
A simulation of an actual architectural drafting room. The instructor issues preliminary design drawings from which the student prepares working drawings. The problems presented have varied materials and structural systems, differing occupancies, etc., offering a series of new experiences in architectural drawing. Prerequisite: ARC 1126. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ARC1301

Architectural Design 1 4 credits
Introductory course to architectural design, its scope, methods and vocabulary interfacing graphics and design as a means towards an awareness and understanding of basic organizational principles. Design concepts analyzed through graphical representation and modeling. Pre/corequisite: ARC 1115. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ARC1302

Architectural Design 2 4 credits
A continuation of ARC 1301, emphasizing the application of ordering concepts, and aspects and determinants of form and space. An individual design process is developed by the student. Pre-/Co-Requisites: ARC 1126, 2701; Prerequisite: ARC 1301. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ARC1949**Co-op Work Experience 1:****ARC 1-3 credits**

This course is designed to provide training in the students' field of study through work experience. Students will learn to make connections between their internship experiences, academic coursework, and career goals. Students are graded on the basis of documentation of learning and goal achievement as reported by both student and employer. Prerequisite: Departmental Approval (1-3 hr. lecture)

ARC2053**Architectural Computer Applications****4 credits**

Applications of software and computer languages in the fields of architecture, building construction and interior design. Corequisite: ARC2052. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ARC2056**Computer Aided Architectural Presentation****4 credits**

This course is designed to introduce the student to the concept of three-dimensional modeling and rendering for the purpose of producing an animated architectural presentation. Laboratory fee. (2 hr. Lecture; 4 hr. lab)

ARC2171**Computer Aided Drafting 1****4 credits**

Computer-aided drafting as it applies in the fields of architecture and interior design using office simulation. Emphasis is on the production of computer-aided drafting of working drawings involving different types of structure. Prerequisite: ARC 1126 or 2461. Laboratory fee. (2 hr. lecture; 4 hr. Lab)

ARC2172**Computer Aided Drafting 2****4 credits**

This course is designed for students with previous computer-aided design knowledge. Students will use both 2-dimensional and 3-dimensional CAD software to further develop their abilities to apply CAD techniques to the solution of architectural, engineering, and interior design problems. Prerequisite: ARC 2171. Laboratory fee. (2 hr. lecture; 4 hr. Lab)

ARC2178C**Introduction to Building Surfacing****4 credits**

A BIM course introducing building surfacing and form finding technology. Students will learn the practice of creating complex building models and non-traditional architectural geometries, exploring design intent modeling, and generating solid models from surface models through AEC related objects. Design drivers, computational geometry, and advanced assembly techniques are explored. Prerequisite: ARC 2180C (2 hr. lecture; 4 hr. lab)

ARC2180C**Introduction to 3D Building Modeling****4 credits**

An introduction to 3D building modeling and generative drafting as it applies to the fields of architecture and interior design. Students will learn current practices in 3D building design by emphasizing the manipulation of commands used for modeling, drawing, editing, dimensioning, basic drawing management, and drawing output. Prerequisites: ARC 2172, CGS 1060, MAC 1105. (2 hr. lecture; 4 hr. lab)

ARC2201**Theory of Architecture****3 credits**

An introduction to the meaning of Architecture to society, the foundation theories of architecture and an exposure to the ways and means of the creative process. Prerequisite: ARC 1115. (3 hr. lecture)

ARC2303**Architectural Design 3****5 credits**

Integration of the natural and built environment with physiological, functional, organizational, spatial and environmental forces. Prerequisites: ARC1302 and 2461. Laboratory fee. (2 hr. lecture; 6 hr. lab)

ARC2304**Architectural Design 4****5 credits**

A continuation of ARC 2303. Introduction to programming and design methods in architecture. Applications of building technology in the design process. Overview of computer applications in design. Prerequisite: ARC 2303; pre/corequisites: ARC 2053, 2681. Laboratory fee. (2 hr. lecture; 6 hr. lab)

ARC2312C**Introduction to Building Assembly Modeling****4 credits**

Introduction to the principles of Building Assembly Modeling. Students will learn to explore a building as an assembly of architectural objects and subassemblies, using virtual design and construction software. In addition, students will learn part modeling, assembly modeling, generative drafting, and general representational and modeling techniques. Prerequisites: ARC 2172, CGS 1060, and MAC 1105. (2 hr. lecture; 4 hr. lab)

ARC2461**Architectural Materials and Construction 1****4 credits**

An introduction to basic materials and methods of building construction. Emphasis is on wood, concrete, unit masonry, and light steel construction. Laboratory projects may include working drawings interpretation, sketching construction details, or field trips to construction sites and fabricant plants. Designed primarily as the initial materials and methods course for architectural transfer students. Prerequisite: ARC 1126 or BCN 1251. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ARC2580**Architectural Structures 1****4 credits**

A basic structural course, designed primarily for Architectural and Construction majors, covering the fundamentals of statics. Timber design emphasized. Prerequisite: MAC1114; pre-/corequisites: PHY 2053, 2053L and ARC

1126, 2461. Laboratory fee. (3hr. lecture; 2 hr. lab)

ARC2681**Environmental Technology****3 credits**

An introduction to technology aspects of building design which relates to human comfort, safety, and building performance. Includes a survey of the fundamentals of water supply, waste lines, plumbing equipment, heat and air conditioning; solar applications; and electrical components and equipment in the design and construction of buildings. Prerequisite: ARC 1126. (3 hr. lecture)

ARC2701**History of Architecture 1****3 credits**

A general survey of architecture from primitive times through the 18th century including an integration of art forms, structural forms and ornamental forms used in various cultures of the world during those times. (3 hr. lecture)

ARC2702**History of Architecture 2****3 credits**

A general survey of architecture from the 19th century through the present, including an integration of art forms, structural forms, and ornamental forms used in various cultures of the world during these times. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

ARC2765**An Introduction to: Cities of the World****3 credits**

This course is a comparative study of contemporary cities both industrialized, developing and redeveloped and/or reconstructed. This course is conducted abroad. Students will learn about improving the quality of our man-made environment by seeing first-hand, positive progress towards civilizing cities of the world. Separation of pedestrian and traffic ways, and the amenities which result, will be a major element of study. Assiduous use of the natural environment will be observed and studied. (3 hr. lecture)

ARC2767**Architectural History: Urban Spaces****3 credits**

Studies in situ of major urban spaces, with accompanying critical analyses of those spaces. An historical overview of the architecture of the places and spaces studied, with specific attention given to the ambiance, color, light, texture, and patterns, will be presented. The history of the community activities occurring in the spaces will be further analyzed, with appropriate urban and regional planning evaluations. Principles of positive planning will be studied, with the intention of developing knowledge of urban planning process and practice. (3 hr. lecture)

ARC2949**Co-op Work Experience 2: ARC**

3 credits
This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as report-

ed by student and employer. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. Prerequisite: 2.0 minimum GPA, approval of Co-op Program Director and completion of ARC 1949. (3 hr. lecture)

Art

ARC1000 Art Appreciation 3 credits

The role of art in everyday living in the home, the school and the community. A lecture course illustrated with films and slides. (3 hr. lecture)

ARC2050 Art History 1 3 credits

A world survey of the visual arts from prehistory to 800 A.D. (3 hr. lecture)

ARC2051 Art History 2 3 credits

A world survey of the visual arts from 800 to 1850 A.D. Prerequisite: ARH 2050. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

ARC2402 Art History 3 3 credits

A world survey of modern visual arts from 1850 A.D. - present. Prerequisite: ARH 2051. (3 hr. lecture)

ARC2740 Cinema Appreciation 3 credits

An analysis of the cinema as an important social force and an artistic medium. Significant American, British, and foreign language films will be shown and discussed. Prerequisite: HUM 1020. Fulfills Gordon Rule writing requirement. (2 hr. lecture; 2 hr. lab)

ART1201C Basic Design 3-4 credits

This introductory course is designed to familiarize students with the basic elements and principles of design and to give hands-on opportunity to transform visual and experiential information into basic forms. Creative individual thinking and image making and successful problem solving both aesthetically and technically are ultimate goals. (1-2 hr. lecture; 4 hr. lab)

ART1202C Two-Dimensional Design 3-4 credits

This course is designed to give students an understanding of advanced concepts of two dimensional design and to give hands on opportunity to transform visual and experiential information into two-dimensional form. Creative individual thinking and image making and successful problem solving both aesthetically and technically are ultimate goals. (1-2 hr. lecture; 4 hr. lab)

ART1203C Three Dimensional Design 3-4 credits

This course is designed to give students an understanding of the concepts of three-dimensional design and to provide hands-on opportunity to transform visual and experiential information into three-dimensional form. Creative individual thinking and image making and successful problem solving both aesthetically and technically are ultimate goals. Self-evaluation and safety skills will also figure prominently. Prerequisite: ART 1202C. (1-2 hr. lecture; 4 hr. lab)

ART1205C Color and Composition 1 3-4 credits

ART 1205C is a studio art course that is focused on learning the theory and practice of color mixing and compositional arrangement. The course will examine the various interactions of color and their creative application so that the student may use color more effectively in fine arts and applied design. (1-2 hr. lecture; 4 hr. lab)

ART1300C Drawing 3-4 credits

Basic problems in freehand drawing, including perspective, still-life and landscape. Emphasis is on developing a sense of structure through line, form and texture. (1-2 hr. lecture; 4 hr. lab)

ART1330C Figure Drawing 3-4 credits

Drawing and painting from the live model with emphasis on structure, movement and expression. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART1803C Workshop for ART Research and Practice: Studio 6 credits

Small enrollment sections. Interdisciplinary, team taught, introductory studio experience in a wide variety of media. In-depth exploration of creative processes, principles of artistic integrity, and the nature or artistic meaning. Concepts in two-dimensional and three-dimensional design will be explored through studio experience. (12 hr. lab)

ART1949 Co-op Work Experience 1: ART 3 credits

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

ART2142C Advanced Metals 4 credits

Individualized instruction in metal forming specifically oriented toward the students aesthetic concerns. May be repeated for credit.

Prerequisites: ART 2150C, 2151C. (2 hr. lecture; 4 hr. lab)

ART2150C Jewelry and Metalsmithing 1 4 credits

An introduction to creative design as applied to jewelry, flatware, and hollowware forms. Prerequisite: ART 1202C or 1300C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ART2151C Jewelry and Metalsmithing 2 4 credits

Advanced techniques in jewelry making and metalsmithing. Prerequisite: ART 2150C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ART2301C Drawing 2 3-4 credits

In this course students will execute drawings in various media, working with the figure or from various assigned drawing problems which are more complex and incorporate other design possibilities. Assignments in drawing will go beyond the realistic or literal and will incorporate media not usually used such as painting, collage, mixed media, and found objects. (1-2 hr. lecture; 4 hr. lab)

ART2302C Advanced Drawing 3-4 credits

An explanation of varied approaches to drawing through studio problems. May be repeated for credit. Prerequisites: ART 1300C, 1330C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2400C Printmaking 1 3-4 credits

Basic techniques of printmaking including relief prints (wood cut and wood engraving), intaglio (dry point and etching) and lithography. Prerequisite: ART 1202C or 1300C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2401C Printmaking 2 3-4 credits

Advanced techniques in printmaking. Prerequisite: ART 2400C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2406C Advanced Printmaking 3-4 credits

Individualized instruction on printmaking concepts specifically oriented toward the student's aesthetic concerns. May be repeated for credit. Prerequisites: ART 2400C, 2401C. Laboratory fee. (1-2 hr. Lecture; 4 hr. lab)

ART2500C Painting 1 3-4 credits

Studio problems in painting involving contemporary styles, techniques and materials. Prerequisite: ART 1202C or 1300C. (1-2 hr. lecture; 4 hr. lab)

ART2501C Painting 2 3-4 credits

Advanced techniques in painting. Prerequisite: ART 2500C. (1-2 hr. lecture; 4 hr. lab)

ART2502C Advanced Painting 3-4 credits

Individualized instruction in painting concepts specifically oriented to the student aes-

thetic concerns. May be repeated for credit. Prerequisites: ART 2500C, 2501C. (1-2 hr. lecture; 4 hr. lab)

ART2600C
Computer Art 3-4 credits

This course is an introduction to basic theory and skill techniques of visual communications using computers. It gives students a basic understanding of technical devices for the electronic production of visual images. Prerequisites: ART 1201C, ART 1300C. Special fee. (1-2 hr. lecture; 4 hr. lab)

ART2601C
Intermediate Computer Art 3-4 credits

An intermediate computer art course focusing on the integration of computer technology with traditional design and fine art media such as illustration, painting, printmaking and photography. Prerequisite: ART 2600C. (1-2 hr. lecture; 4 hr. lecture)

ART2602C
Advanced computer Art 4 credits

An advanced computer art class which focuses on new and emerging computer technology utilizing multiple platforms to produce advanced computer art portfolio assignments in illustration, fine art, 2D animation and digital photography. (2 hr. lecture; 4 hr. lab)

ART2701C
Sculpture 1 3-4 credits

An introduction to sculpting techniques and materials. Prerequisite: ART 1202C or 1300C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2702C
Sculpture 2 3-4 credits

Advanced sculpting techniques. Prerequisite: ART 2701C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2703C
Advanced Sculpture 3-4 credits

Individualized instruction in sculptural concepts specifically oriented to the student's aesthetic concerns. May be repeated for credit. Prerequisite: ART 2701C, 2702C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2750C
CERAMICS 1 3-4 credits

Basic techniques in pottery designed - forming, decorating, glazing and firing. Prerequisites: ART 1202C or 1300C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2751C
CERAMICS 2 3-4 credits

Advanced techniques in pottery design and preparation. Prerequisite: ART 2750C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2771C
Advanced Ceramics 3-4 credits

Advanced work in ceramics. Emphasis placed on individual concepts and their application in ceramics. May be repeated for credit. Prerequisites: ART 2750C, 2751C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2802C
Visual Arts Workshop 1-4 credits

Special Studio Topics including methods, materials and theory related to specific studio processes. Permission of department chairperson. May be repeated for credit. (2-8 hr. lab)

ART2949
Co-op Work Experience 2: 3 credits

ART
This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education office to obtain registration approval. (3 hr. lecture)

ART2950
Portfolio Preparation - Art 3 credits

Provides students with knowledge and skills to compile a portfolio which prepares them for a college or professional career. Course content focuses on individual development through the use of varied media and styles. Emphasis is placed on selection, evaluation, and presentation. May be repeated for credit. (6 hr. lab)

Banking

BAN1004
Principles of Banking 3 credits

In this course the students will learn the foundation, structure and function of financial systems. The course plan includes the review of the role of banks as businesses and their impact on the economy. The students will receive an overview of the main entities that comprise the financial system: financial intermediaries, investments and financial markets. The students will be able to describe the risk infrastructure of financial institutions, the regulatory environment, and the responsibilities inherent in complying with regulatory requirements associated with safety and soundness of banks. (3 hr. lecture)

BAN1013
Negotiable Instruments and the Payments Mechanism 3 credits

This course is designed to provide students with an overview of payment systems, specifically negotiable instruments. The course plan includes a discussion of the requirements defined by Article 3 of the Uniform Commercial Code and other laws applicable to negotiable instruments. In this course the students will learn the requirements associated with the transfer of negotiable instruments including but not limited to the parties involved and their rights. (3 hr. lab)

BAN1155
International Banking 3 credits

In this course the students will learn about the evolution of international banking and finance, the processes, the prevailing competition and the issue of cross-border risk exposure. The course plan provides a review of salient global financial events such as the merger of European currencies into single currency: the Eurodollar and the expansion of high speed electronic global payments. This course is designed for all level bankers, investment bankers or junior officers wishing to pursue a career in international banking. (3 hr. lab)

BAN1231
Introduction to Commercial Lending 3 credits

This course provides an increased awareness of the credit underwriting process. It provides a comprehensive foundation to the lending process including technical and interpretative analysis of financial information from liquidity, solvency, ratio and cash flow analysis to the basics for the completion of a credit approval memorandum. Students will learn the concepts of qualitative analysis including the assessment of industry risk, market risk and management risk. The course provides an understanding of the role of loan policy and the need to summarize the borrowers various risks into an appropriate credit risk rating. Pre-requisites: BAN2210 (3 hr. lab)

BAN1240
Installment Credit 3 credits

In this course the student will learn a comprehensive approach to consumer lending, identifying financial risks and the regulatory environment that impact and promote safety and soundness in lending. The course centers around providing a practical approach to the fundamentals of consumer installment lending, including a review of different loan products, their life cycles, the credit application process and the essentials of the closing process (3 hr. lecture)

BAN1241
Bank Cards 3 credits

This course presents an overview and update of the bank card industry. The development of the card, operational aspects, legal and regulatory issues, and implications for the future of the card are discussed in depth. A.S. degree credit only. (3 hr. lecture)

BAN1425
Selling Bank Services 3 credits

Recognizing and meeting bank customer needs through checking accounts, savings services, loans to individuals, safe deposits, travelers checks and cross-selling. Identification of the services their banks offer, the scope and advantages of these banking services, customer needs based on a bank transaction or conversation with the customer and the appropriate service to the perceived customer need. Designed for tellers and new accounts personnel .A.S. degree credit only. (3 hr. lecture)

BAN1744**BankSim 3 credits**

Through the use of a sophisticated computer model, participants actually "run" in a competitive society and a changing economy—a \$500 million commercial bank. Designed for operations, long term financial strength and asset utilization. A.S. degree credit only. (3 hr. lecture)

BAN1800**Law and Banking 3 credits**

This course is designed to provide students with a comprehensive knowledge base in a range of areas within the commercial banking laws. The students will learn the fundamentals of legal and regulatory principles in the field of banking and their impact and application to bank products, services and client relationships. Through a carefully designed course plan, students new to banking will gain insight and understanding of US laws and regulations impacting the banking industry. (3 hr. lecture)

BAN2135**Bank Accounting 3 credits**

This course is designed to help the bank employee understand the elements of accounting as they relate to and are applied in the banking environment. Prerequisite: ACG 2001 or ACG 2021. A.S. degree credit only. (3 hr. lecture)

BAN2210**Analyzing Financial Statements 3 credits**

In this course the students will learn the framework and resources available to analyze financial statements and to assess a company's operation and future performance. The course covers the critical objectives with the assessment of business performance such as: the relationship between the company's business and financial strategy, their financial statements, ratio, profitability, balance sheet and cash flow analysis. The course plan includes the use of financial and accounting information to make lending/credit and investment decisions. The course is targeted to a wide range of students including those pursuing careers in banking, general management, investment banking, financial analysis and consulting. Pre-requisites: ACG2021 (3 hr. lecture)

BAN2211**Applied Financial Statement Analysis 3 credits**

This course provides a comprehensive analysis of business strategy, operating performance, financial condition and cash flow strength. The student will learn basic and advanced financial concepts impacting the viability of a business, including accounting rules, methods of credit analysis, assessment of financial ratios, historical financial analysis, cash flow and financial forecasting. Pre-requisites: BAN2210 (3 hr. lab)

BAN2253**Residential Mortgage Lending 3 credits**

This course covers all phases of the residential mortgage lending process, including a foundation to the underwriting, credit analysis and

servicing of residential mortgage loans. The student will learn the aspects of construction and permanent financing for residential property, real estate and mortgage law, financing options in real estate, appraisals, servicing, regulatory requirements and secondary mortgage markets. The students will become familiar with the critical issues necessary for any individual to operate successfully in the residential mortgage loan market. Target audience for this course includes loan officers, underwriters, loan processors and individuals interested in pursuing career in the mortgage lending business. (3 hr. lecture)

BAN2501**Money and Banking 3 credits**

The course is designed to provide students with an overview of the US financial systems including theory and practice of monetary policy and financial instruments. Students will learn about interest rate determination, the structure and role of banks, financial institutions in the intermediation process, the factors impacting inflation, and variables in the economy. The course plan is designed not only for students but individuals working in the financial services industry including junior officers to mid-management and entry level staff who are considering pursuing a career in the banking field. (3 hr. lab)

BAN2511**Marketing for Bankers 3 credits**

Marketing of financial services is a specialized segment of marketing. It is highly competitive, making the process of selling for bankers a highly specialized and challenging endeavor. Changing market conditions, deregulation, the emergence of new competitors from within and external to the banking industry and the rapid integration of new technologies are some of the challenges bankers encounter. It covers the aspects of a consultative selling approach with emphasis on planning, implementing and fostering a long term advisory relationship with clients. The students will learn to become proficient on how to prepare for a successful sales presentation and closing. (3 hr. lab)

BRC1059**Diversity Awareness and Customer Service 3 credits**

This course will consist of invited speakers on selected topics to address cultural norms and values and the resulting impact on customer service in order to help individuals of different cultures become homeowners. A.S. degree credit only. (3 hr. lecture)

BRC2266**Affordable Housing and Community 3 credits**

This course will cover specialized programs that provide financing opportunities to low and moderate-income households. Students will gain exposure to specific tools and techniques to facilitate homeownership, sources of funds, types of mortgages and various community lending product and non-traditional underwriting guidelines and home buyer

education and counseling. A.S. degree credit only. (3 hr. lecture)

BRC2267**Fair Housing and Fair Lending 3 credits**

This course will cover the legislative policies origins of regulatory and compliance laws, designed to prohibit discriminatory practices in lending, A.S. degree credit only (3 hr. lecture)

BRC2268**Mortgage Loan Servicing and Quality 3 credits**

This course will cover servicing of mortgage loans from the close of the loan until the final payment. The student will be provided with an in-depth study of the actual procedures required in the daily operations of mortgage loan servicing. This course will include a study of the quality control technique and an understanding of the importance of the ethics in mortgage lending. A.S. degree credit only. (3 hr. lecture)

BRC2353**Marketing for Financial Institutions 2 credits**

The facts and principles of marketing are set forth in this course. Topic includes: the marketing concept and structure, marketing information and buyer behavior, consumer and intermediate customers' buying behavior, product packaging and branding decisions, consumer and industrial goods, product planning and time-place utility, channels of distribution, promotion, pricing strategy, and developing a marketing program, controlling marketing programs, and the cost-value to society. A.S. degree credit only. (2 hr. lecture)

BRC2941**Field Experience in Mortgage Finance 3 credits**

Skills learned in the classroom environment are not only reinforced but become instilled in a student when opportunities in the practical work environment are presented. A.S. degree credit only. (3 hr. lecture)

Biochemistry

BCH3023**Introductory Biochemistry 3 credits**

This course surveys the fundamental components of biochemistry. In this course, students will learn concepts such as the structure and function of amino acids, proteins, carbohydrates, lipids, and nucleic acids, together with discussions of oxidative metabolism and regulation. Special fee. Prerequisites: BSC 2010/L, 2011/L, CHM 2200 or CHM 2211/L. Corequisites: BCH 3023L. (3 hr. lecture)

BCH3023L**Introductory Biochemistry Laboratory 2 credits**

This laboratory course complements the lecture corequisite BCH 3023, which involves the study of the fundamental components of biochemistry. In this laboratory course students will learn and will be pro-

vided with hands-on experiences with the concepts addressed in the lecture course. Special fee. Prerequisites: BSC 2010/L, 2011/L, CHM 2200 or CHM 2211/L. Corequisites: BCH 3023. (3 hr. lecture)

Biological Science

BOT1010 **Botany** 3 credits

A survey of the plant kingdom based on a detailed study of the morphology, anatomy and physiology of selected representative specimens. Corequisite: BOT 1010L. (3 hr. lecture)

BOT1010L **Botany Laboratory** 1 credit

Laboratory for BOT 1010. Corequisite: BOT 1010. Laboratory fee. (2 hr. lab)

BOT2150C **Native Plant Identification and Usage in South Florida** 3 credits

Plants native to south Florida are identified and presented by their typical ecological community. Emphasis is primarily upon pineland, tropical hammock, mangrove and coastal, Everglades marsh, and cypress swamp communities. Plants appropriate for use in urban landscapes as well as in ecological restorations are covered. A combination lecture and lab course. (2 hr. lecture; 2 hr. lab)

BOT3015 **Survey of Plant Diversity** 3 credits

This course explores the plant kingdom and gives emphasis on structure, function and genetics of plants. Students will learn the evolutionary relations hips, natural history, ecological adaptations, physiology, morphology and reproductive biology of gymnosperms and angiosperms. Prerequisites: BSC 2010, 2010L, 2011, 2011L. Corequisite: BOT 3015L. Special fee. (3 hr. lecture)

BOT3015L **Survey of Plant Diversity Laboratory** 1 credit

This course is designed to provide the necessary laboratory experiments and dissection exercises to supplement/accompany the BOT 3015 Survey of Plant Diversity lecture course. Students will learn about the plant kingdom and with emphasis on structure, function and genetics of plants. Dissections and laboratory exercises are designed to explore the fundamental cell and tissue structures of both vascular and non-vascular plants. Prerequisites: BSC2010, 2010L, 2011, 2011L. Corequisite: BOT 3015. Special fee. (2 hr. lab)

BSC1005 **General Education Biology** 3 credits

This general education biology course covers basic biological concepts, concentrating on selected principles that help explain molecular biology, evolution, genetics, growth, disease, and the problems of humans in the environment. It is designed to stimulate in-

terest in the variety of life that exists on our planet, help students recognize the factors that provide order in this variety, and involve students in the processes of inquiry, observation, and analysis of biological organization in order to give them a foundation for intelligently interpreting and evaluating biological topics. (3 hr. Lecture)

BSC1005L **General Education Biology Laboratory** 1 credit

An optional one-credit lab to provide students with experience in the scientific process. Laboratory fee. (2 hr. lab)

BSC1030 **Social Issues in Biology** 3 credits

Social Issues in Biology develops in students an understanding and appreciation for living systems (including themselves) and the skills and knowledge needed to address biological issues that are important and relative to their lives and the society in which they live. Such issues include, but are not limited to, the origin of biodiversity, advances in reproductive technology, genetic engineering, scientific ethics, advances in the treatment of disease and genetic disorders, environmental problems and sociobiology. (3 hr. lecture)

BSC1050 **Biology & Environment** 3 credits

This course provides students with an understanding and appreciation of how the natural world functions, how human attitudes and actions alter nature systems, creating environmental problems, and how sustainable approaches may resolve these problems. (3 hr. lecture)

BSC1084 **Functional Human Anatomy** 3 credits

Basic human anatomy for the students in allied health and mortuary science programs. Includes the dynamics of gross and functional anatomy, terminology, body orientation, and systematic relationships. (3 hr. lecture)

BSC1949 **Co-op Work Experience 1: BIO** 3 credits

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. (3 hr. lecture)

BSC2010 **Principles of Biology** 3 credits

This is the first sequence of two courses that deal with the principles of modern biology. It covers scientific process, the chemistry of life, the basics of metabolism, cell theory, cellular respiration, photosynthesis, classical, and molecular genetics. Pre/corequisites: BSC 2010L, CHM 1045. Special fee. (3 hr. lecture)

BSC2010L **Principles of Biology 1 Laboratory** 2 credits

This laboratory course is designed to complement BSC 2010, Principles of Biology 1. It covers the nature of scientific investigation, the chemistry of life, microscopy, cell structure and function, metabolism, and the continuity of life. Corequisite: BSC 2010. Special fee. (4 hr. lab)

BSC2011 **Principles of Biology 2** 3 credits

This is the second in a sequence of two courses that deals with the principles of modern biology. It covers organic evolution, phylogeny, biological diversity, overviews of plant and animal form and function, behavior, as well as population, community, and ecosystem ecology. Prerequisites: BSC 2010, 2010L; corequisite: BSC 2011L. Special fee. (3 hr. lecture)

BSC2011L **Principles of Biology Lab 2** 2 credits

This course is intended for major's students and complements the lecture course BSC 2011. As such, it functions to provide majors students with hands-on experience with laboratory exercises designed to complement the presentation of the principles of biology as they relate to evolution, biological diversity, form and function in plants and animals, ethnology, ecology and conservation biology. Prerequisite: BSC 2010L; corequisite: BSC 2011. (4 hr. lab)

BSC2020 **Human Biology: Fundamentals of Anatomy/Physiology** 3 credits

This course provides a basic understanding of the human body, its systems and their functions. It includes the dynamics of physiology, terminology, and physiological relationships of the body systems. (3 hr. lecture)

BSC2085 **Human Anatomy and Physiology 1** 3 credits

In this course students will learn the structure and function of the systems of the human body, emphasizing those aspects most pertinent to students in the Health Sciences programs. Students are strongly recommended to complete CHM1033/1033L prior to enrolling in this course. Corequisite: BSC2085L. (3 hr. lecture)

BSC2085L **Human Anatomy and Physiology 1 Laboratory** 1 credit

In this laboratory course, student will learn to apply the concepts covered in BSC2085 as it pertains to structure and function of the human body from an experiential approach. Corequisite: BSC2085 (2 hr. lab)

BSC2086 **Human Anatomy & Physiology 2** 3 credits

Building on concepts learned in BSC2085, students will learn the structure, function, and physiology of the human body, with an emphasis on the Endocrine, Cardiovascular, Lymphatic, Respiratory, Digestive, Urinary, and Reproductive Systems. Prerequisite: BSC2085 Corequisite: BSC2086L (3 hr. lecture)

BSC2086L**Human Anatomy & Physiology 2 Laboratory 1 credit**

In this laboratory course, students will learn to apply the concepts covered in BSC2086, which include the structure and function of the Endocrine, Cardiovascular, Lymphatic, Respiratory, Digestive, Urinary, and Reproductive Systems and development, from an experiential approach. Prerequisite: BSC2085L, BSC2085 Corequisite: BSC2086 (2 hr. lab)

BSC2250**Natural History of South Florida 3 credits**

Integrates and correlates certain features of the natural history of South Florida such as its geology, meteorology, flora, fauna, ecology and conservation. (3 hr. lecture)

BSC2423C**Methods & Applications of Cell Culture & Protein Biotechnology 4 credits**

This course addresses the basic methods and principles of cell culture and protein biochemistry necessary for an understanding of the field and effective applications of cell culture and protein biotechnology are explored with hands-on training in plant and mammalian cell culture and protein purification. Prerequisites: BSC 2427, 2427L. Laboratory fee. (3 hr. lecture; 2 hr. lab)

BSC2426**Biotechnology Methods and Applications 1 3 credits**

This course addresses the basic principles, concepts and techniques of biotechnology necessary for an understanding of the field, and effective work in a pharmaceutical-biotechnology-and/or research laboratory setting(s). Practical applications of biotechnology are explored. Prerequisite: Previous knowledge of chemistry and biology strongly recommended; corequisite: BSC 2426L. (3 hr. lecture)

BSC2426L**Biotechnology Methods & Applications 1 Laboratory 2 credits**

This laboratory course is designed to complement BSC 2426 Biotechnology Methods and Applications 1. This is a hands-on course that emphasizes the basic laboratory principles, techniques, and instrumentation, necessary for effective work in pharmaceutical, biotechnology, and/or research laboratory settings(s). Prerequisite: Previous knowledge of chemistry and biology strongly recommended. Corequisite: BSC 2426. Laboratory fee. (4 hr. lab)

BSC2427**Biotechnology Methods and Applications 2 3 credits**

This course addresses advanced principles, concepts and techniques of biotechnology necessary for an understanding of the field, and effective work in a pharmaceutical-biotechnology-and/or research-laboratory setting(s). The following areas of contemporary biotechnology are covered: forensics, bioremediation, and medical-, animal-, plant-, and marine biotechnology. Prerequisites: BSC 2426, 2426L. corequisite: BSC 2427L. (3 hr. lecture)

BSC2427L**Biotechnology Methods & Applications 2 Laboratory 2 credits**

This laboratory course is designed to complement BSC 2427 Biotechnology Methods and Applications 2. This is a hands-on course that emphasizes advanced laboratory principles, techniques, and instrumentation necessary for effective work in a pharmaceutical, biotechnology, and/or research-laboratory setting(s). Prerequisite: BSC 2426, 2426L; corequisite: BSC 2427. Laboratory fee. (4 hr. lab)

BSC2943L**Bioscience Internship 3-6 credits**

This internship course is a capstone for students majoring in bioscience and related programs. Students will learn to apply acquired knowledge and skills to gain experience in the bioscience workplace A.S. degree credit only. (144-288 hr. Internship)

BSC2949**Co-op Work Experience 2: BSC 3 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

BSC3930**Biological Sciences Seminar 1 credit**

This course is designed for biological science majors. Students will gain an understanding of the broad range of career options within the biological sciences. Additionally, students will learn how to read, interpret, discuss, and cite selected examples of the scientific literature in different areas of biology. Prerequisites: BSC 2010, 2010L, 2011, 2011L. Special fee. (3 hr. lecture)

BSC4422**Biotechnology Methods and Applications - III 3 credits**

This course will explore biotechnology as a

science and its implications in modern society. Students will learn how to make well-designed and controlled experiments. Students will also demonstrate knowledge of data acquisition and interpretation. Requisites: BSC 2427, 2427L, PCB 3060, 3060L, BCH 3023, 3023L. Corequisites: BSC4422L. Special fee. (3 hr. lecture)

BSC4422L**Biotechnology Methods and Applications - III Lab 2 credits**

This course provides students with hands-on laboratory experiences to supplement the BSC4422 lecture course. Students will learn how to perform advanced molecular bio techniques that build on previous knowledge. They will perform diagnostic assays, western blots, purifications, etc and determine how to correlate findings with the basic research or clinical data. Prerequisites: BSC 2427, 2427L, PCB3060, 3060L, BCH3023, 3023L. Corequisite: BSC 4422. Special fee. (4 hr. lab)

BSC4434**Bioinformatics for Biologists 4 credits**

The student will be introduced to the basic concepts and tools that scientists use to analyze biological information. Students will learn, through the examination of literature, development of projects and use of available web-based tools, how to store, retrieve and analyze genetic information. Prerequisites: BSC 2010, 2010L, 2011, 2011L, and PCB 3060, 3060L. Special fee. (4 hr. lecture)

BSC4940**Senior Specialty Internship 3 credits**

This course will provide students with hands-on experience in the biological science workplace by conducting an internship. The experience readies the individual for their first position in-field. Prerequisite: Pre-completion of BS-BS core curriculum and approval by BS-BS faculty. Special fee. (3 hr. Internship)

BSC4950**Senior Capstone Research Project 3 credits**

This course will provide students with a capstone research experience in the biological science discipline. The experience readies the individual for their first position in-field. Prerequisite: Pre-completion of BS-BS core curriculum and approval by BS-BS faculty by BS-BS faculty. Special fee. (3 hr. capstone)

MCB2010**Microbiology 3 credits**

This course introduces basic principles of morphology, physiology, biochemistry and genetics of microorganisms. The students will learn representative types of microorganisms including bacteria, algae, protozoa and viruses and the roles of various microorganisms in health and disease, modes of transmission and the effects of their activities in our biosphere. Students are strongly recommended to take the laboratory component MCB 2010L. Prerequisites: BSC 2010/2010L or BSC 2085/2085L, CHM 1033/1033L or CHM 1045/1045L. (3 hr. lecture)

MCB2010L**Microbiology Laboratory 2 credits**

This laboratory course to accompany MCB-2010 complements lecture topics. Students will learn and have direct experience with fundamental techniques for observation, isolation, cultivation, counting, identification, and control of microbes. Prerequisites: BSC2010/2010L or BSC2085/2085L CHM1033/1033Lor CHM 1045/1045L; corequisite MCB 2010. (4 hr. lab)

MCB3023**Principles of Microbiology 3 credits**

This course offers an introduction to the principles of microbiology. Students will learn the taxonomy, biochemistry, genetics, and ecology of microorganisms and will have an understanding of the impact of microorganisms on the advancement of the biological sciences. Prerequisites: BSC 2010, 2010L, 2011, 2011L, CHM 2211, 2211L. Corequisites: MCB 3023L. Special fee. (3 hr. lecture)

MCB3023L**Principles of Microbiology Lab 2 credits**

This Laboratory course accompanies MCB3023. Students will learn and have direct experience with fundamental techniques for observation, isolation, cultivation, enumeration, biochemistry, identification, genetics, and control of microbes. Prerequisites: BSC 2010, 2010L, 2011, 2011L, CHM 2211, 2211L. Corequisites: MCB3023. Special fee. (4 hr. lab)

MCB4503**Virology 3 credits**

This course will cover general virology, including virus structure, replication cycles, infection and mode of transmission of human diseases. Student will learn the major families of the bacterial (bacteriophages), plant and animal viruses and how they influence infection. Prerequisites: MCB 3023, 3023L. Special fee. (3 hr. lecture)

OCB1010**Introduction to Marine Biology 3 credits**

An introduction to the biology of the seas. Emphasis is placed on the variety of marine organisms and their structural, physiological, and behavioral adaptations within specific marine environments. Special attention is directed to marine communities, e.g., coral reefs and shallow grass flats, and the factors limiting the distribution of organisms within those communities. Discussions will also be directed towards geological, chemical and physical characteristics of the world's oceans. (3 hr. lecture)

OCB1010L**Introduction to Marine Biology Laboratory 1 credit**

An optional laboratory class for OCB 1010. This laboratory course stresses understanding, familiarization, and identification of local marine organisms and study of local marine communities through field

trips to selected local marine habitats and hands-on laboratory activities. An introduction to field collection methods and various sampling techniques is presented. (2 hr. lab.)

PCB2033**Introduction to Ecology 3 credits**

This course will provide students with an understanding of an appreciation for how organisms relate to one another and their environment at the levels of biological organization from the individual to the biosphere. Prerequisites: PSC 1515 or BSC 2011. (3 hr. lecture)

PCB2061**Genetics 3 credits**

This course provides an understanding of the mechanisms of transmission of heritable information including classical principles of Mendelian genetic analysis, principles of modern genetic analysis, gene mapping change and regulation of gene expression. Quantitative genetic analysis, genomics, genetic basis of cell and cancer development will also be explored. Prerequisite: BSC 2010, 2010L. (3 hr. lecture)

PCB3043**Fundamentals of Ecology 3 credits**

This is a foundations course in ecology. In this course, students will learn the basic principles of ecology at organismal, population, community, and ecosystem levels, including consideration of Florida's ecosystems and human impact on those systems. Prerequisites: BSC 2011, 2011L. (3 hr. lecture)

PCB3060**Principles of Genetics 3 credits**

This course is an introduction to the mechanisms of transmission of hereditary information. Students will learn the classical Mendelian principles of heredity, deviation of Mendelian principles, genetic analysis, linkage and mapping, genetics of populations, gene regulation, mutation, the genetic bases of cancer and other genetic disorders will also be studied. Prerequisites: BSC 2010, 2010L. (3 hr. lecture)

PCB3060L**Principles of Genetics Laboratory 2 credits**

This laboratory course is designed to complement PCB 3060 Principles of Genetics. Students will learn hands-on skills with emphasis on laboratory principles, techniques, and instrumentation within the field of genetics. Prerequisites: BSC 2010, 2010L, 2011, 2011L. Corequisites: PCB 3060. Special fee. (6 hr. lab)

PCB4023**Molecular and Cell Biology 3 credits**

Students will learn the structure and function of cells and biological membranes, signal transduction pathways, cell cycle and cell division, the flow of genetic information and the regulation of gene expression. Exploration of laboratory techniques and discussion

of the cellular basis of human diseases will also occur. Prerequisites: BSC 2010, 2010L, 2011, 2011L. Special fee. (3 hr. lecture)

PCB4097**Human Physiology 3 credits**

The student studies the physiology of organism's major organ systems with emphasis on humans. Student will learn the principles of physics, cell biology, and anatomy in order to explain how the different organs systems work individually and in the context of the whole organism. Prerequisites: PHY 2054, 2054L, BCH 3023, 3023L, and PCB 4023. Special fee. (3 hr. lecture)

PCB4233C**Fundamentals of Immunology 4 credits**

Students will learn the immunological processes and concepts as they pertain to human health, disease prevention, development, and treatment. Its primary emphasis is on the cellular and non-cellular components of the immune system, and the ways in which these components interact to provide immunity. This is a combination lecture and lab course. Prerequisites: MCB3023, 3023L. Special fee. (3 hr. lecture; 2 hr. lab)

PCB4674**Evolution 3 credits**

Students will learn the theory of evolution as it pertains to different fields of modern biology including the theory of natural selection, the evidence for evolution, microevolution, speciation, macroevolution, the origin of life on Earth, major evolutionary trends, and the evolution of humans. Prerequisites: BSC 2010, 2010L, 2011, 2011L, PCB 3060, 3060L. Special fee. (3 hr. lecture)

PHI3633**Biomedical Ethics 3 credits**

This is a foundation course in biomedical ethics and ethical theory. Students will learn to use methods of effective reasoning to apply to topics in biomedical ethics. These topics may include, but are not limited to, genetic engineering, stem cell research, human cloning, euthanasia, and clinical research ethics. (3 hr. lecture)

ZOO1010**Zoology 3 credits**

A survey of the animal kingdom based on a detailed study of the morphology, anatomy, and physiology of selected representative specimens. Corequisite: ZOO 1010L. Special fee. (3 hr. lecture)

ZOO1010L**Zoology Laboratory 1 credit**

Laboratory for ZOO 1010. Corequisite: ZOO 1010. Laboratory fee. (2 hr. lab)

ZOO3021**Survey of Animal Diversity 3 credits**

This course presents zoology as a scientific discipline. Students will learn the basic principles of zoological nomenclature, taxonomy, systematics, and the basic understanding of the relationships of animals to one another,

to humans, their environment and to society. Prerequisites: BSC 2010, 2010L, 2011, 2011L. Special fee. (3 hr. lecture)

ZOO3021L

Survey of Animal Diversity

Laboratory

1 credit

This laboratory course provides hands-on experience with the concepts covered in the lecture ZOO 3021. Students will learn the basic principles of zoological nomenclature, taxonomy, and systematic; and the basic understanding of the relationships of animals to other organisms and to one another. Prerequisites: BSC 2010, 2010L, 2011, 2011L. Corequisite: ZOO 3021. Special fee. (2 hr. lab)

Building Construction

BCN1272

Building Construction Plans

Interpretation 1

3 credits

Develops the students' ability to interpret working drawings. Students will learn the conventions of graphic and symbolic language used by construction professionals to communicate information on drawings. Emphasis is on architectural and structural details with limited coverage on mechanical and electrical aspects. (3 hr. lecture)

BCN1275

Building Construction Plans

Interpretation 2

3 credits

Plan interpretation of complex working drawings for multi-story residential and commercial buildings. Students will learn to read and understand construction working drawings, identifying structural systems and their details. Familiarity with all aspects of complex working drawings will be addressed. Prerequisite: BCN1272 (3 hr. lecture)

BCT1743

Building Construction Law

3 credits

The legal aspects of construction contracts and the responsibilities arising particularly from the field operations. Also includes relationship of the general contractor to owner, architect, and subcontractor; material men and mechanics lien law; bonds; labor law; and other statutes and ordinances regulating contractors. (3 hr. lecture)

BCT1750

Building Construction

Financing

3 credits

A study of building construction financing and related contract requirements. Topics include construction loans, permanent building mortgages, construction bids and contracts, penalty and incentive provisions, progress payments and retention, escalation, escalation provisions, costs extras, performance and bid bonds, company profits, cash flow, and business loans. (3 hr. lecture)

BCT1770

Building Construction

Estimating Fundamentals

3 credits

An analysis and calculation of building construction costs. Students will learn the classification of materials, labor, and subcontracted work into the smallest manageable units. Students will develop a simple estimate for a residential structure. Prerequisite: BCN1272. Laboratory fee. (3 hr. lecture)

BCT1771

Building Construction

Advanced Estimating

3 credits

Estimating more advanced elements of building construction. Students will learn to calculate direct, indirect, and overhead costs, as well as prepare bid proposals and related documents for commercial buildings. Prerequisite: BCN1275, BCT1770. Laboratory fee. (3 hr. lecture)

BCT2760

Building Code Regulations

3 credits

The restrictions and limitations of the various agencies concerned with the building industry. Provisions of the South Florida Building Code are stressed. (3 hr. lecture)

Business Law

BUL2131

Legal Environment

3 credits

Law in relation to the proper conduct of business including a consideration of the nature and sources of law, its legal environment and history. The Topics of business torts, crimes, contracts and forms of organizations are also covered. (3 hr. lecture)

BUL2241

Business Law 1

3 credits

Law in relation to the proper conduct of business, including a consideration of the nature and source of law, courts and courtroom procedure, contracts, sales of goods, negotiable instruments and secured transactions. Special fee. (3 hr. lecture)

BUL2242

Business Law 2

3 credits

Emphasis on the laws affecting agencies, the formation and operation of partnership and corporation, personal and real property, insurance, surety ship, estates and bankruptcy, and a general review of government regulations affecting usual business operations. Prerequisite: BUL 2241. Special fee. (3 hr. lecture)

BUL4461

Law of International Trade

3 credits

Students will learn to interpret laws of international trade, licensing, and customer's regulation. This course also addresses U.S. customs regulations, classification of merchandise, application of tariff rules, duty free treatment, importing and exporting, liquidation inspection, search and seizure, and fines

and penalties. In addition, the course will review the general rules and how to interpret the harmonized tariff schedule. Prerequisites: MAN 2021 and GEB 3358. (3 hr. lecture)

Chemistry

CHM1020

General Education Chemistry

3 credits

This course provides the non-science major with an introductory study of the substances central to our daily lives. The students will learn the basic chemistry of nutrition, medicines, cosmetics, household cleaners and the environment. (3 hr. lecture)

CHM1020L

General Education

Chemistry Laboratory

1 credit

This course provides the non-science major with an introductory study of the substances central to our daily lives. Students will learn the basic chemistry of nutrition, medicines, cosmetics, household cleaners and the environment in a laboratory setting. Co-requisite: CHM1020. (2 hr. lab)

CHM1025

Introductory Chemistry

3 credits

This course will provide beginning students with certain basic knowledge and skills, which will enable them to be successful in the first semester of General Chemistry I, CHM 1045. The students will learn elementary principles of modern chemistry, including basic measurements, chemical bonding, chemical reactions, stoichiometry, concentration of solutions, and chemical nomenclature. Prerequisite MAT 1033. (3 hr. lecture)

CHM1025L

Introductory Chemistry Lab

1 credit

This course is an optional beginning chemistry laboratory course, which has been designed for those students who have little or no background in chemistry and are enrolled in CHM 1025. Students will reinforce what they learn in CHM 1025, including basic measurements, chemical bonding, chemical reactions, stoichiometry, concentration of solutions, and chemical nomenclature. (2 hr. Lab)

CHM1033

Chemistry for Health Sciences

3 credits

This course emphasizes chemistry topics related to allied health. Students will learn the essentials of inorganic chemistry, organic chemistry, biochemistry and their applications to physiological functions. Pre-Corequisite: CHM1033L, MAT1033. (2 hr. lab)

CHM1033L

Chemistry for Health Sciences

Lab

1 credit

This course emphasizes chemistry topics related to the allied health sciences. Students will learn the essentials of inorganic chemistry, organic chemistry, biochemis-

try, and their application to physiological functions in a laboratory setting. Prerequisite: MAT1033 Corequisite: CHM1033 (2 hr. lab)

CHM1045**General Chemistry and Qualitative Analysis****3 credits**

CHM 1045 is the first semester of a two-semester general chemistry course for science, premedical science and engineering students. Students will learn stoichiometry, atomic structure, completing and balancing chemical reactions, nomenclature, bonding, acid-base theories, solutions, gas laws and beginning thermodynamics. Special fee. Prerequisite: CHM1025 or a passing score on the CART exam, MAC 1105. Co-requisite: CHM 1045L. (3 hr. lecture)

CHM1045L**General Chemistry and Qualitative Analysis Lab****2 credits**

CHM 1045L is the first semester general chemistry laboratory course. Students will learn to introduce the basic laboratory techniques involved in general chemistry and to re-enforce and illustrate several of the important topics in general chemistry (e.g., stoichiometry, gas laws, atomic structure, and quantitative analysis). The enrollment generally consists of pre-medical, pharmacy, medical technology, physical therapy, engineering, and science majors. Prerequisite: MAC1105, CHM1025 or a passing score on the CART exam. Co-requisite: CHM 1045. (2 hr. lab)

CHM1046**General Chemistry and Qualitative Analysis****3 credits**

CHM 1046 is the second course in the CHM 1045-1046 sequence. Students will learn major topics in modern chemistry including but not limited to thermodynamics, kinetics, solutions equilibria including acids, bases, and other ionic equilibria and electrochemistry. Special fee. Prerequisite: CHM1045 Corequisite: CHM1046L (3 hr. lecture)

CHM1046L**General Chemistry & Qualitative Analysis Lab****2 credits**

CHM 1046L is the second semester general chemistry laboratory course. Students will learn the basic laboratory techniques involved in general chemistry and to re-enforce and illustrate several of the important topics in general chemistry (e.g., qualitative and quantitative analysis, equilibrium, thermodynamics, and kinetics). The enrollment generally consists of pre-medical, pharmacy, medical technology, physical therapy, engineering, and science students. Prerequisite: CHM1045L. Corequisite: CHM1046

CHM1941**Principles & Techniques of Peer Tutoring in Chemistry****1 credit**

Provides an opportunity for outstanding stu-

dents with at least one semester of general chemistry to assist other students to review and clarify principles and techniques in chemistry. Provides future professionals a chance to sharpen their communication skills. (1 hr. lecture)

CHM1949**Co-op Work Experience 1:****CHM****3 credits**

This is a course designed to provide training in a student's field of study through work experience. Students are graded in the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact Cooperative Education Office to obtain registration approval. (3 hr. lecture)

CHM2124C**Survey of Quantitative Analysis****4 credits**

This course is a one-semester combination lecture-laboratory course covering the theories, calculations, and methodologies used in analytical chemistry. Topics include mathematical treatment of data; acid-base equilibria; and Gravimetric, volumetric, and potentiometric methods of analysis. Prerequisites: CHM 1046, 1046L with a grade of "C" or better. Special fee. (2 hr. lecture; 4 hr. lab)

CHM2200**Survey of Organic Chemistry****3 credits**

This one-semester course briefly examines the structure, synthesis, nomenclature and reactivity of selected mono-and-poly-functional organic compounds. Theories that relate the structure of organic molecules to their chemical reactivity will be presented as a unifying principle. Prerequisite: CHM1046 with a grade of "C" or higher; corequisite: CHM 2200L. (3 hr. lecture)

CHM2200L**Survey of Organic Chemistry****Laboratory****1 credit**

Experiments and exercises will be conducted to introduce students to the basic laboratory techniques that are used in organic chemistry and that re-enforce and illustrate several important topics in organic chemistry. Prerequisite: CHM 1046L with a grade of "C" or higher; corequisite: CHM 2200. Special fee. (2 hr. lab)

CHM2210**Organic Chemistry 1****3 credits**

In Organic Chemistry 1, students will learn about aliphatic hydrocarbons and their derivatives. Lectures are supplemented by laboratory preparation of representative compounds. Prerequisite: CHM1046 Corequisite: CHM2210L

CHM2210L**Organic Chemistry 1****Laboratory****2 credits**

Students will learn to reinforce and illus-

trate topics learned in CHM 2210. Topics such as nomenclature, preparations, reactions and electronic and structural features of alkanes, alkenes, alkynes, alkyl halides, aromatic hydrocarbons and other organic compounds will be performed in a laboratory setting. Prerequisite: CHM1046L Corequisite: CHM2210 (4 hr. lab)

CHM2211**Organic Chemistry 2****3 credits**

In organic chemistry 2, students will learn about nomenclature, preparation reactions, and electronic and structural features of alcohols, ethers, phenols, aldehydes, ketones, carboxylic acids, acid anhydrides, amides, esters, and other organic compounds. Prerequisite: CHM2210 Corequisite: CHM2211L (3 hr. lecture)

CHM2211L**Organic Chemistry 2****Laboratory****2 credits**

Students will learn to reinforce and illustrate topics learned in CHM 2210. Topics such as nomenclature, preparations, reactions and electronic and structural features of alkanes, alkenes, alkynes, alkyl halides, aromatic hydrocarbons and other organic compounds will be performed in a laboratory setting. Prerequisite: CHM1046L Corequisite: CHM2210 (4 hr. lab)

CHM2949**Co-op Work Experience 2:****CHM****3 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

CHM3120**Introduction to Analytical****Chemistry****3 credits**

This course requires students to examine the theories, calculations, and methodologies used in analytical chemistry. Topics include: acid-base equilibria and titrations; precipitation and complex formation; electrochemistry; oxidation-reduction; spectrophotometric analytical methods; chromatographic techniques; statistical treatment of data; and sampling methods. Prerequisites: CHM 1046, 1046L with a grade of "C" or better; corequisite: CHM 3120L. (3 hr. lecture)

CHM3120L**Introduction to Analytical****Chemistry Laboratory****2 credits**

Experiments will be performed to introduce students to various laboratory methods used to analyze and quantify pep-

representative samples. Prerequisites: CHM 1046, 1046L with a grade of "C" or better; corequisite: CHM 3120. (4 hr. lab)

CHM3610

Intermediate Inorganic Chemistry

3 credits

This course expands and deepens the student's knowledge of inorganic chemistry. Students will learn about bonding theories, nuclear chemistry, chemical periodicity, and metal and nonmetal chemistry. Prerequisite: CHM 2200. (3 hr. lecture)

CHS1522C

Forensic Science 1

4 credits

An introductory course in the principles and techniques of forensic science. Students will learn how forensic science pertains to crime scene investigation and crime laboratory analysis. (3 hr. lecture)

CHS2311C

Analytical Chemical Instrumentation

4 credits

An introduction to a variety of chemical instrumentation commonly employed in the chemical and pharmaceutical industries. The course will combine lecture and discussion with laboratory experiences to present the principles of instrumental analysis as well to provide extensive hands-on experience with instrumentation commonly used in the chemical and pharmaceutical industries. Pre/corequisites: CHM 2200, 2200L, 2120C or CHM 2210, 2210L, 2211, 2211L. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CHS2523

Forensic Science 2

3 credits

This is a continuation of Forensic Science 1. Students will learn topics which include but are not limited to: drug identification and toxicology; document analysis; death determination; soil examination methodology; forensic anthropology; tool marks and casts/impressions. Prerequisite: CHS 1522C. (3 hr. lecture)

Chinese Language

CHI1120

Elementary Mandarin Chinese 1

4 credits

An integrated (multi-media) approach to acquire proficiency in the basic skills of Mandarin Chinese- listening/understanding, speaking, reading, writing, and cross-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice in class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

CHI1121

Elementary Mandarin Chinese 2

4 credits

A continuation of Mandarin Chinese 1120. A proficiency-oriented course emphasizing the

mastery of the basic skills of the language. (4 hr. lecture)

CHI2220

Intermediate Mandarin Chinese 1

4 credits

A continuation of CHI 1121. Students will learn Chinese language and culture through a systematic review of reading and writing skills with emphasis on oral as well as written presentations. Students will also learn the use of Chinese radicals and characters rather than pinyin. Prerequisite: CHI1121 or equivalent. (4 hr. lecture)

CHI2221

Intermediate Mandarin Chinese 2

4 credits

A continuation of CHI2220. Students will learn advanced grammar, together with the introduction of more complex reading materials and an increase in the number of radicals and characters. Students will also be exposed to cross-cultural awareness. Prerequisite: CHI2220 or equivalent. (4 hr. lecture)

Computer Science & Related Technologies

CAP1760

Introduction to Analytics

4 credits

This course is designed for students who require or are interested in basic aspects of data mining and analytics using domain-specific data. Students learn the computerized techniques by which to organize, manipulate, report, present, depict and analyze domain-specific data in order to find or otherwise derive information. Prerequisites: CGS 1060 and use of a desktop database application, or equivalent experience. Prerequisite: CG1060. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CAP2047

User Interface Design

4 credits

This course is for students majoring in game development. It covers designing and developing interfaces for games. Students will learn how to use different input/output hardware devices, how to create and use existing interfaces for different types of hardware, and the development process for different types of gaming systems. Prerequisite: COP2335 (3 hr. lecture; 2 hr. lab)

CAP2048

Game Development Project

5 credits

This capstone course is for students majoring in Game Development and Game Animation. Student's will work in cross disciplinary teams to develop a working animated game or film. Students will learn how to apply the skills and knowledge they have acquired in a real world working development environment. Prerequisite: DIG2626; Pre/Corequisite: CAP2047 (3 hr. lecture; 2 hr. lab)

CAP2761

Advanced Analytics

4 credits

This is an advanced course for students to review and expand the use and fundamentals of databases and database programming for implementing analytics. Students design data models and subsequently implement and use analytics and data mining techniques to derive information from domain-specific databases. The My SQL database engine and its SQL implementation will be used. Prerequisites: CAP 1760 and CIS 1321, or equivalent experience. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CAP3770

Predictive Analytics Algorithms

4 credits

This course is for students majoring in Data Analytics. Students will learn the fundamental algorithms used in data mining and analysis. Students will learn various methods and techniques used in data mining, clustering and classification. Prerequisite: STA2023. (3 hr. lecture; 2 hr. lab)

CAP4744

Data Visualization

4 credits

This course is for students majoring in Data Analytics. Students will learn to utilize the tools and techniques required to present complex data in visually meaningful representations. Students will learn how to organize raw data, to analyze and interpret data, and to draw and present conclusions. Prerequisite: CTS3452. (3 hr. lecture 2 hr. lab)

CAP4767

Data Mining

4 credits

This course is for students majoring in Data Analytics. Students will learn how to extract information from data sets, transform it into an understandable structure for further use, and apply this knowledge to solve real world business scenarios. (3 hr. lecture; 2 hr. lab)

CAP4784

Big Data

4 credits

This course is for students majoring in Data Analytics. Students will acquire the skills and the tools to manage Big Data. Students will learn to design and to implement cloud-based data warehouses and to manage massive amounts of data in the creation of meaningful reports. Students will also learn basic visualization techniques. Prerequisite: CTS1437 and CTS2433. (3 hr. lecture; 2 hr. lab)

CAP4910

Data Analytics Capstone

4 credits

This course is for students majoring in Data Analytics. Students will learn to apply business-driven data analytics solutions to real-world problems utilizing acquired skills in statistical analysis, data mining, and data visualization. Must be taken during the last semester before graduation. Departmental approval required. (3 hr. lecture 2 hr. lab)

CGS1005C

Computing Fundamentals for Entrepreneurship

4 credits

This interactive discovery course for non-computer majors teaches how to apply

computational thinking to solve real world problems. Students will learn basic computer programming, web design, mobile application development, project management and desktop publishing through the use of case studies and scenarios that simulate real world business applications. (3 hr. lecture; 2 hr. lab)

CGS1021
Scientific Computing 4 credits

This course explores the specialized features of common computer desktop applications as applied to biotechnology data. Through hands-on practical assignments, students will study and practice the computerized techniques by which to organize, manipulate, report, present, depict and analyze biomolecular data and information. Laboratory fee. Corequisite: STA 2023. (3 hr. lecture; 2 hr. lab)

CGS1060C
Introduction to Computer Technology & Applications 4 credits

This course provides the skills required for personal, academic and professional success. Students will learn essential computer concepts, skills and how to utilize popular applications. The course satisfies the College's computer competency requirement. (3 hr. lecture; 2 hr. lab)

CGS1081
Introduction of Computing for the Visually Impaired 4 credits

This course is designed to provide students with an overview of access technology, experience using it with applications and a chance to explore the wide range of opportunities that computers can offer to people who are blind. It will cover, the components of the computer, access technology, screen reading software, disk operating systems. DOS versus Windows, WordPerfect for DOS, and accessible software, including shareware and freeware. Prerequisite: Departmental Approval. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

CGS1145
Introduction to Bioinformatics 4 credits
This course introduces the basic concepts and techniques of Bioinformatics. Through research papers, hands-on projects and use of common computational programs, students will apply aspects of Information Technology and Computer Science in order to analyze biological/bimolecular/bioinformatics data. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CGS1501
Word-processing Applications 4 credits
A comprehensive course in the use of a word processor for microcomputers. The concepts, features, and commands of a word processor are applied to a variety of applications. Programming concepts will be introduced. Classes are conducted in a hands-on-lecture/laboratory environment where a microcomputer is available for each student. The content of this course will continually change to keep pace with current technology. CGS

1060 or computer experience is required. Laboratory fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

CGS1511
Spreadsheet Applications 4 credits

A comprehensive course in the use of a spreadsheet for microcomputers. The concepts, features, and commands of a spreadsheet are applied to a variety of applications. Programming concepts will be introduced. Classes are conducted in a hands-on lecture/laboratory environment where a microcomputer is available for each student. The content of this course will continually change to keep pace with current technology. Computer experience is required. Laboratory fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

CGS1540C
Database Concepts Design 4 credits

This course is designed for computer science majors and non-majors who require a fundamental knowledge of databases and database management systems. Students will learn how to design, implement and use databases to maintain and manipulate data. Students should have knowledge of basic computer concepts or seek faculty advisement. (3 hr. lecture 2 hr. lab)

CGS1541
Database Applications 4 credits

A comprehensive course in the use of a database for microcomputers. The concepts, features, and commands of a database are applied to a variety of applications. Programming concepts will be introduced. Classes are conducted in a hands-on-lecture/laboratory environment where a microcomputer is available for each student. The content of this course will continually change to keep pace with current technology. CGS 1060 or computer experience is required. Laboratory fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

CGS1560
A+ Computer Operating Systems 4 credits

This is a comprehensive course in the use of operating systems for microcomputers suitable for students seeking preparation for A+ operating system certification. Students will learn how to install, configure, use, manage, and troubleshoot the Disk Operating System (DOS), Microsoft Windows, and other microcomputer operating systems. Prerequisite: CGS 1060 or computer experience is required. Laboratory fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

CGS1580
Desktop Publishing 4 credits

A comprehensive course in the use of desktop publishing for microcomputers. The concepts, features, and commands of desktop publishing are applied to a variety of applications. Programming concepts will be introduced. Classes are conducted in a hands-on-lecture/laboratory where a microcomputer is available for each student. The content of this course

will continually change to keep pace with current technology. CGS 1060 or computer experience is required. Laboratory fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

CGS2091
Professional Ethics and Social Issues in CS 4 credits

This course is designed to provide computer science majors and others with an introduction to professional ethics & social issues in Computer Science. Students will learn theories associated with the legal, ethical, and social issues relevant to information technology, and the roles and responsibilities of computer professionals in today's technological society. Laboratory fee. (3 hr. lecture; 1 hr. lab)

CGS2108
Advanced Desktop Applications 4 credits

This is an advanced level course for major and non-major students who have completed CGS 1060, Introduction to Microcomputer Usage. Students will learn advanced computer skills using software applications, such as word processing, spreadsheets, database, presentation graphics, and communications and scheduling software. Students will also learn advanced file management techniques, deal with security issues, and troubleshoot hardware and software. Prerequisite: CGS1060. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CGS2172
Implementing a Commerce-Enabled Website 4 credits

Students will learn to implement, support, maintain, optimize, and troubleshoot Web sites using Microsoft Site Server, focusing particularly on electronic commerce (e-commerce) sites. Prerequisite: COP2823 or CTS2463. Recommended Preparation: CGS2547 Laboratory fee. (3 hr. lecture; 2 hr. lab)

CGS3763
Operating System Principles 4 credits

This upper division course, for students majoring in Information Systems Technology, introduces fundamental operating system topics and includes both computer system and operating system structure. Students will learn how processes, threads, concurrent programming, interrupt handling, CPU scheduling and process synchronization, and I/O system memory management affect the system structure. Additionally, students will learn how virtual memory, deadlocks, file system, and command interpreter relate to client/server systems. Prerequisite: COP 1334. Special fee. (3 hr. lecture; 2 hr. lab)

CIS1000
Introduction to Data Processing 4 credits

An introductory course for data processing majors covering the fundamentals of data processing and computer programming. Elementary programming applications are included. Laboratory fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

CIS1321**Introduction to Systems Analysis and Design****4 credits**

This course introduces computer science and non-majors to fundamental skills of analysis and design of management information systems. Students learn the concept of charting, investigating, documenting and reporting using current information systems, system analysis tools and system design tools. The related concept of management, organization, computers, information processing and the system approach are combined and applied to case studies. Prerequisites: CGS 1060. Knowledge of business accounting is recommended. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CIS1949**Co-op Work Experience 1:****CIS****1-4 credits**

This course is designed as a work experience for students majoring in computer information systems programs. Students will learn to apply the skills and knowledge that they have acquired through their program of study in a real work environment. Prerequisite: Successful completion of required program course work. Department approval required. (1-4 hr. lecture)

CIS2322**Systems Analysis and Design Implementation****4 credits**

This course is designed for students majoring in computer programming. Students build on the concepts learned in CIS 1321 by applying detailed design and analysis techniques to implementing an information system. Students will learn to synthesize concepts of management, organization, computers, information processing, and the system approach to analyze case studies. Prerequisites: CGS 1060 and CIS1321. Knowledge of business accounting is recommended. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CIS2900**Directed Study II****1 credit**

This course is for students majoring in Information Technology. Students will complete projects and make presentations based on self-directed research and related experiences. Prerequisite: Successful completion of required program course work. Department approval required. (2 hr. lab)

CIS2949**Co-op Work Experience 2:****CIS****1-4 credits**

This course is designed as a second-level capstone for students majoring in computer information systems programs. Students apply advanced skills and knowledge that they have acquired through their first capstone course in a real work environment. Prerequisite: CIS1949. Successful completion of required program course work. Department approval required. (1-4 hr. lecture)

CIS3360**Principles of Information Security****4 credits**

This upper division course, for students majoring in Information Systems Technology, provides an overview of information systems security principles, practices, methods, and tools for organizational and institutional computing. Students will learn about the relationship between policy and security, the mechanisms used to implement policies, and the methodologies and technologies for assurance and vulnerability analysis and intrusion detection. Students will be required to perform security analyses, and set up protection schemes. Prerequisites: CTS 1134 or CTS 1650. Special Fee. (3 hr. lecture; 2 hr. lab)

CIS3368**Data Security & Governance****4 credits**

This course is for students majoring in Data Analytics. Students will learn the principles and practices of security and governance. Students will learn to apply organizational and regulatory requirements in the management of the security and the governance of proprietary data. (3 hr. lecture 2 hr. lab)

CIS3510**Information Technology****Project Management****4 credits**

This upper division course, for students majoring in Information Systems Technology, covers the general aspects of project management and emphasizes the important special considerations which apply to information technology projects. Students will learn the principles, processes and practices of information technology project management, including techniques for planning, organizing, scheduling, and controlling software projects with a substantial focus on cost estimation and risk management. Special fee. (3 hr. lecture; 2 hr. lab)

CIS4347**Information Storage Management****4 credits**

This upper division course, for students majoring in Information Systems Technology, introduces challenges and solutions for data storage and data management. Students will learn how to manage advanced storage systems, protocols, and architectures, including storage area networks (SAN), network attached storage (NAS), fiber channel networks, internet protocol SANS (IPSAN), ISCSI, and content-addressable storage (CAS). Prerequisite: CGS 1540. Special fee. (3 hr. lecture; 2 hr. lab)

CIS4617**Knowledge Management****4 credits**

This upper division course, for students majoring in Information Systems Technology, explores how an enterprise gathers, organizes, shares, and analyzes its knowledge in terms of resources, documents, and people skills. Students will learn how to gather, organize, refine and disseminate information needed in a small business or corporation using technical applications to house and mine the data. Prerequisite: COP 4723. Special fee. (3 hr. lecture; 2 hr. lab)

CIS4891**Capstone Project****4 credits**

This upper division course, for students majoring in Information Systems Technology, requires students to demonstrate their competence to analyze, design, develop, and test an information system in a team environment. Students will learn how to create and present an information technology (IT) solution proposal that includes: design documentation, implementation plan, and project test plan to create an operational information system. Must be taken during the last semester before graduation. Prerequisite: Departmental approval required. Special fee. (3 hr. lecture; 2 hr. lab)

CNT1512**Introduction to Wireless Networking****4 credits**

This course provides the student with a complete foundation of knowledge for entering into or advancing in the wireless networking industry. Topics include: an introduction to wireless LANs; RF theory; spread spectrum technologies; wireless LAN infrastructure devices; antennas and accessories; wireless LAN standards; and wireless LAN organizations to link budget math, troubleshooting, and performing a site survey. This course delivers hands-on training that benefits the novice as well as the experienced network professional. Prerequisites: CGS1060 and CTS 1134. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CNT4603**System Administration and Maintenance****4 credits**

This upper division course, for students majoring in Information Systems Technology, explores UNIX and Microsoft Windows systems and their administration and maintenance within the network setting. Students will learn how to install, maintain, and extend multi-user computer systems and how to develop administrative policies and procedures. Students will also learn how to apply troubleshooting and problem solving skills to resolve user and system issues. Prerequisite: CTS 1134 or 1650. Special fee. (3 hr. lecture; 2 hr. lab)

CNT4702**Network Design and Planning****4 credits**

This upper division course, for students majoring in Information Systems Technology, presents network design using layering. Students will learn how to apply cabling, topology, and architecture to design systems. Students will also learn how design impacts network performance and control issues such as congestion control, error control, and contention resolution. Prerequisite: CIS 3360. Special fee. (3 hr. lecture; 2 hr. lab)

COP1120**Introduction to COBOL****Programming****4 credits**

This is an introductory course in COBOL programming recommended for students majoring in Information Technology and Computer Information Systems. Students will learn

how to design, code, compile, and execute structured programs for business applications. Recommended preparation: CGS1060 or experience working with computers and knowledge of elementary algebra. Pre/Corequisite: CGS 1060. Special Fee. (3 hr. lecture; 2 hr. lab).

COP1332**Introduction to Visual Basic**

Programming 4 credits
This course introduces computer science and non-major students to fundamental programming skills using the Visual Basic Integrated Development environment. Students will learn program design, the fundamentals of event driven object-oriented programming, arrays, validation of user input, and how to create menu driven programs and multiple form applications. Pre/Co-requisite: CGS1060. Knowledge of high school algebra is recommended. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP1334**Introduction to C++**

Programming 4 credits
This is an introductory course in C++ programming recommended for Computer Science and Computer Information Systems majors. Students will learn the syntax and rules of the C++ language, including how to code, compile, and execute programs. Students study program design, structured modular programming arrays, report generation, and file processing. Pre/corequisite: CGS1060. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP1670**Introduction to Computing through Mobile Application Development**

Development 4 credits
This course is designed for students pursuing a degree in STEM. Students will learn basic computing principles and computational thinking through the development of mobile applications. They will work in teams to develop applications for mobile computing devices using a graphical software development environment, such as App Inventor and Snap. A.S. degree credit only. Special fee. (3 hr. lecture; 2 hr. lab)

COP2129**Advanced COBOL**

Programming 4 credits
This is a second level course in COBOL programming recommended for Information Technology and Computer Information Systems majors. Students will learn advanced techniques of structured programming. Emphasis will be on design and execution of structured programming using various access methods. Special Fee. Prerequisite: COP1120. (3 hr. lecture; 2 hr. lab)

COP2270**"C" for Engineers**

4 credits
This course is intended for students majoring in Computer Engineering Technology, Electronics Engineering Technology, or any engineering discipline. Students will learn

the C programming language, MATLAB, and the Engineering Problem Solving Method to analyze, design, code, compile and execute programs that solve engineering related problems. Pre/Corequisite: MAC1105. Recommended Preparation: CGS1060 or knowledge of computer skills. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP2333**Advanced Programming**

Concepts using Visual Basic 4 credits
This course provides Microsoft Visual Basic developers with the knowledge and skills needed to develop Microsoft .NET-based applications using Visual Basic.NET. Students use advanced programming and object oriented tools to create enterprise applications for the .NET Platform and to create more traditional Visual Basic applications that take advantage of the enhancements to the language. Prerequisite: COP1332. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP2335**Object Oriented Programming using C++**

4 credits
This second course in C++ programming is recommended for Computer Science and Computer Information Systems majors. Students will learn techniques and skills of object oriented programming including object-oriented modeling, analysis, and design. Prerequisite: COP1334. Knowledge of high school algebra is recommended. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP2654**iPhone Application Development 1**

4 credits
This is an introduction to iOS programming course using the Objective C computer language, recommended for Computer Science and Computer Information Systems majors. Students will learn to code, compile and execute mobile iOS applications while learning advanced programming concepts and object oriented programming design concepts and principles. Prerequisite: COP 1332 or COP 1334. Special Fee. (3 hr. lecture; 2 hr. lab)

COP2658**iPhone Application Development 2**

4 credits
This intermediate iOS course teaches the principles of iPhone application development for majors in Computer Science, Computer Information Systems, and related disciplines. Students will learn how to create mobile applications that can be deployed to iPhone smartphones, tablets or simulators utilizing Cocoa and X Code for development. Emphasis will be placed on learning the underlying iPhone framework and components in order to create quality mobile applications. Prerequisite: COP 2654. Special Fee. (3 hr. lecture; 2 hr. lab)

COP2660**Android Application Development 1**

4 credits
This course teaches the principles of Android application development for majors in Com-

puter Science, Computer Information Systems, and related disciplines. Students will learn how to create mobile applications for deployment to Android smartphones, tablets or simulators utilizing open source software (Java, Eclipse IDE, Android Plug-In and Android SDK) for development. Emphasis will be placed on the underlying Android framework to create quality applications. Prerequisite: COP 1332 or COP 1334. Special Fee. (3 hr. lecture; 2 hr. lab)

COP2662**Android Application**

Development 2 4 credits
This course for majors in Computer Science, Computer Information Systems, and related disciplines teaches how to develop advanced Android applications. Students will learn how to create applications utilizing the advanced capabilities of Android smartphones, including interfacing the application to the devices content provider's databases, GPS and location based services, notifications, background threads, audio, video, SMS, motion sensors and network connectivity. Prerequisites: COP2660, 2800. Special fee. (3 hr. lecture; 2 hr. lab)

COP2700**Database Application**

Programming 4 credits
Current database management software is featured. Emphasis is on analysis, design, and programming of systems rather than data structures. This course is designed for individuals interested in developing programmed applications. Prerequisites: Completion of all basic skills or acceptable scores on the Placement Test, CGS 1060, (Introduction to microcomputer Usage), and proficiency in any programming language. Laboratory fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

COP2701**Advanced Database**

Programming 4 credits
Current database management is featured. Emphasis is on analysis, design, programming real world applications and integration of database and the internet applications. This course is designed for individuals interested in developing programmed database applications. Prerequisite: CTS 2433. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

COP2800**Java Programming**

4 credits
This is an intermediate level programming course using the Java computer language, recommended for Computer Science and Computer Information systems majors. Students will learn to code, compile, and execute programs while learning advanced programming concepts and object oriented programming and design concepts and principles. Prerequisite: COP 1334. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP2805**Advanced Java Programming**

4 credits
This is an advanced level programming

course using Java. Students will learn how to code, compile and execute programs. Topics include object serialization, Java Collection, sorting/searching algorithms, multithreading and networking capabilities, and Java databases. Prerequisite: COP2800. (3 hr. lecture; 2 hr. lab)

COP2812
Extensible Markup Language Programming (XML) 4 credits

The prospective e-commerce professional will learn the skills necessary to create applications using XML technologies. Building, maintaining, and implementing these applications allow the student an opportunity to create business-to-business web applications that solve everyday business problems. Prerequisites: CGS 1060, COP 2822, and COP 2800. Laboratory fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

COP2822
Web Page Design and Programming 4 credits

This is an intermediate level programming course that prepares students for web development. Students will learn client-side programming skills and technologies, such as JavaScript, XML, and Ajax. Prerequisite: COP1332 or COP1334, and CTS1800. Special fee. A.S. credit only. (3 hr. lecture; 2 hr. lab)

COP2823
ASP/Script Language Programming 4 credits

This course will teach Microsoft Visual Basic programmers and beginning Web developers the fundamentals of Web application development by using Microsoft ASP.NET and Microsoft Visual Basic.NET. Students will learn how to use the Microsoft Visual Studio .NET environment and the Microsoft.Net platform to create an ASP.NET Web application that delivers dynamic content to a Web site. Prerequisites: CGS 1060 and COP 1332 or COP 1334. Laboratory Fee. (3 hr. lecture; 2 hr. lab)

COP2825
Implementing an Internet Server 4 credits

Students will learn to implement, support, and maintain Internet servers. Both Microsoft and Apache servers are covered. Recommended preparation: Prior knowledge of operating systems and managing network resources is recommended. Laboratory fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

COP2842
Developing Websites using PHP/MYSQL 4 credits

This is an intermediate course for students preparing to become web developers. Students will learn to develop dynamic, interactive web sites using PHP5, an open source programming language and MYSQL database. Prerequisites: COP 1332 or COP 1334. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP2843
Implementing Open-Source Databases 4 credits

This course is an introduction to open-source database programming for students majoring in database and internet technologies. Students will learn to use and implement MYSQL for the purpose of storing and retrieving information from the MYSQL database. In conjunction with knowledge of open-source technologies such as Linux, Apache and PHP (LAMP), students will develop highly available, dynamic, web-based applications. Prerequisite: CGS 1060. Laboratory fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

COP4656
Mobile Applications Development 4 credits

This upper division course, for students majoring in Information Systems Technology, covers project-oriented development of applications for mobile computing devices. Students will learn how to develop mobile applications utilizing memory management, user interface design, user interface building, input methods, data handling, network techniques, URL loading, and GPS and motion sensing. Students will develop a project that produces a professional-quality deployable mobile application. Prerequisites: COP 2800 and 4723. Special fee. (3 hr. lecture; 2 hr. lab)

COP4723
Database Administration 4 credits

This upper division course, for students majoring in Information Systems Technology, builds a deeper understanding of how databases work, including topics in database theory and architecture, data modeling, query languages, and security. Students will learn the fundamentals of SQL, including how to create and maintain database objects, and how to store, retrieve, and manipulate data, and the basics of managing the database environment. Prerequisite: CGS 1540. Special fee. (3 hr. lecture; 2 hr. lab)

COP4834
Data Driven Web Applications (Web Administration) 4 credits

This upper division course, for students majoring in Information Systems Technology, utilizes modern three-tier application development to build web-based applications that use relational database systems. Students will learn how to integrate client-side and server-side scripts and database server to build a transaction processing and report generating data-driven web application system. Prerequisites: COP 1334 and 4723. Special fee. (3 hr. lecture; 2 hr. lab)

CTS1111
Linux + 4 credits

This course is designed to help students prepare for the CompTIA Linux+ Certification Exam and to teach the skills needed to administer GNU/Linux-based work-stations and servers. Students learn how to plan, install, maintain, document, and troubleshoot GNU/Linux operating system services. Prerequisite: CGS 1060 or computer experience is required. Special fee. (3 hr. lecture; 2 hr. lab)

CTS1120
Fundamentals of Networking Security 4 credits

This course provides the student with a complete foundation of knowledge for entering into or advancing in the information technology security field. Topics include: an introduction to general security concepts; communication security; infrastructure security; basic cryptography; operational and organizational security. Including topics from troubleshooting to performing a site survey, this course delivers hands on training that benefits the novice as well as the experienced network professional. Prerequisites: CTS 2306. Laboratory fee. (3 hr. Lecture; 2 hr. lab)

CTS1131
A+ Computer Essentials & Support 4 credits

This is an intermediate level course designed for students preparing for A+ certification as a support technician. Students will learn how to install, configure, upgrade and replace computer system components; how to troubleshoot operating systems, laptops, portable devices, printers, scanners, network devices and security measures; and how to provide professional IT support and customer service. Prerequisite: CGS 1560. Laboratory fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

CTS1134
Networking Technologies 4 credits

This course will provide an introduction to the technical areas of network connectivity, data communications, and communication protocols. Emphasis on understanding the foundation of networking technologies and data communication concepts. Topics covered will include an exploration of computer networking development, the OSI reference model, data signaling, data translation, standards for communications and data transmissions, network topologies and access methods. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS1328
Supporting Microsoft Clients 4 credits

This course is intended for students preparing for IT careers as desktop and network support specialists and server administrators, as well as candidates for industry certification. Students will learn how to implement and maintain a Microsoft client operating system. Prerequisite: CGS1060 recommended or equivalent experience, knowledge or skills. Laboratory Fee. (3 hr. lecture; 2 hr. lab)

CTS1437
Microsoft SQL Administration 4 credits

This is an introductory database administration course for students majoring in Internet Services, Database Technology Microsoft Database Administrator (DBA), Computer Programming and Analysis, and for students preparing for Microsoft DBA certification exams. Students will learn to install, administer, and optimize an enterprise-level database system, and how to use SQL to define databases, tables, stored procedures, and constraints.

Recommended Preparation: CGS1540 or CGS1541. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS1650

CCNA 1: Cisco Fundamentals 4 credits

This is the first course of the four-course Cisco curriculum that will prepare students for professional certification as a Cisco Certified Network Associate (CCNA). Students will learn networking concepts and practices, network terminology and protocols, the OSI reference model, cabling, cabling tools, routers, router and switch configurations, LAN/WAN topologies, IP addressing, and network standards. Special Fee. (3 hr. lecture; 2 hr. lab)

CTS1651

CCNA 2: Routing and Switching 4 credits

This is the second course of the four-course Cisco curriculum that will prepare the student for professional certification as a Cisco Certified Network Associate (CCNA). Students will learn the architecture, components and operation of routers and switches, LAN (Local Area Networks) switch protocols and operations, VLANs (Virtual Local Area Networks), network routing protocols and concepts, static and dynamic routing, router and switch configuration and troubleshooting, and IP Address services. Prerequisite: CTS 1650. Special Fee. (3 hr. lecture, 2 hr. lab)

CTS1800

Introduction to Web Page Development 4 credits

This introductory course covers the basics of web design and development. Students will learn about the World Wide Web., Hypertext Markup language (HTML), Extensible Hypertext Markup Language (XHTML), Cascading Style Sheets (CSS) and JavaScript using popular web authoring tools such as Dreamweaver. Students will also learn the basic functions of HTML, XHTML, CSS and JavaScript and how to develop and maintain a website. Prerequisite: CGS 1060. Laboratory fee. (3 hr. lecture)

CTS1801

Multimedia and Animation 4 credits

This course introduces computer science and non-majors to the tools and techniques to create multimedia and animated presentations. Students will learn how to make appropriate hardware and software decisions, how to select and use various authoring systems and tools, and how to publish their work to the Web. Prerequisite: CGS1060. Laboratory fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

CTS2102

Operating System Principles 4 credits

Students will become familiar with operating system functions and commands. Windows and UNIX operating systems are covered. Topics include file management, backup and recovery procedures, multiuser functionality, communications and establishing interfaces. Prerequisites: CGS 1060, COP 1332, and

COP1334. Laboratory fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

CTS2153

Supporting Windows Users & Applications 4 credits

This is an advanced course designed to help students prepare for the Microsoft Certified IT Professional Support Technician Certification. Students will learn how to install, configure and manage Windows applications in a networked Windows environment and how to support enterprise users. Students will also deploy Windows and applications using various methods, resolve installation and compatibility issues, establish group policies and user profiles, perform support functions, troubleshoot user and application issues, secure the desktop and network from unauthorized use, install software upgrades and updates, perform systems monitoring and documentation, and develop customer service skills. Prerequisite: CTS 1328. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2154

IT Help Desk Support 4 credits

This course is designed to prepare students as entry-level help desk computer support technicians. Students will learn skills needed to support computer users within the business organization and to provide exceptional customer service, including how to identify the appropriate tools, technologies, and processes to assess and meet computer user needs, essential communications skills, the IT function within the business organization, and career opportunities in computer user support. Prerequisites: CGS 1060, CGS 2108. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2215

PowerPoint/Outlook 4 credits

The student will be provided the opportunity to develop the skills necessary to prepare for the core level Microsoft Office User Specialist (MOUS) Certification exam in MS PowerPoint and MS Outlook. Prerequisite: CGS 1060. Laboratory fee. A.S degree credit only. (3 hr. lecture; 2 hr. lab)

CTS2300

Planning Network Infrastructure 4 credits

This course provides the information and skills necessary to successfully plan and maintain a Microsoft server operating system network infrastructure. The course focuses on: planning TCP/IP physical and logical network; planning and troubleshooting a routine strategy; planning a Dynamic Host Configuration Protocol (DHCP) strategy; optimizing and troubleshooting DNS; planning and optimizing WINS; planning, optimizing, and troubleshooting IPSEC network access; and troubleshooting network access. Prerequisite: CTS 2303. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2302

Designing Network Infrastructure and Directory Services 4 credits

This course provides the information and skills necessary to successfully design a Microsoft server Active Directory and network infrastructure. The course focuses on the Microsoft server directory service environment, including meeting the needs of an organization for their: forest and domain infrastructure: site infrastructure; Group Policy structure; administrative structure; physical network; DHCP; network connectivity; name resolution strategy; and network access infrastructure strategies. Prerequisite: CTS 2303. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2303

Configuring Windows Servers 4 credits

This course is intended for students preparing for IT careers as network support specialists and server administrators, as well as candidates for industry certification. Students will learn how to implement and configure Windows Server core services. Recommended Preparation: CGS 1060, CTS 1134, or equivalent knowledge. Special Fee. (3 hr. lecture, 2 hr. lab)

CTS2306

Administering Windows Servers 4 credits

This course is intended for students preparing for IT careers as network support specialists and server administrators, as well as candidates for industry certification. Students will learn to administer the tasks required to maintain a Windows Server infrastructure. Recommended Preparation: CTS1134, CTS2303 or equivalent knowledge. Special Fee. (3 hr. lecture, 2 hr. lab)

CTS2310

Design, Implement, Manage Network Security 4 credits

This course provides the information and skills necessary to design, implement, manage, maintain, and troubleshoot security in a Microsoft Windows Server network infrastructure. It is intended for students preparing to be IT systems engineers and security specialists who are responsible for implementing and managing security policies and procedures for an organization. Prepares students for the MCSE Security specialization. Pre/corequisite: CTS 2306; may be waived for individuals with current MCSA certification or equivalent experience. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2320

Managing a Windows Networking Environment 4 credits

This course will provide the knowledge required by System and Network Administrators who implement, manage and troubleshoot existing network and server environments based on the Microsoft Windows network operating system. This course focuses on performing desktop and server installation and configuration tasks, how to perform troubleshooting tasks, hardware and software installations, configurations and upgrades, and perform network and system operation tasks. Typical network services and resources that

would be managed include messaging, database, file and print servers, proxy server of firewall, Internet and intranet, remote access, and client computer management. Prerequisite: CTS 2306. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2334
Configuring Advanced Windows Servers 4 credits

This course is intended for students preparing for IT careers as network support specialists and server administrators, as well as candidates for industry certification. Students will learn how to perform the advanced configuration tasks required to deploy, manage, and maintain a Windows Server infrastructure. Recommended Preparation: CTS 2303, CTS 2306, or equivalent knowledge. Special Fee. (3 hr. lecture; 2 hr. lab)

CTS2361
SharePoint Administration 4 credits

This is a comprehensive course for students majoring in Internet Services, Database Technology Microsoft Database Administrator (DBA), Computer Programming and Analysis, and for students preparing for Microsoft SharePoint certification exams. Students will learn how to install, configure, and administer Microsoft SharePoint and also how to manage and monitor sites and users by using Microsoft SharePoint. Prerequisite: CTS1437. Special fee. (3 hr. lecture; 2 hr. lab)

CTS2375C
Cloud Infrastructure and Services 4 credits

This course helps students develop technical expertise in cloud computing and prepares them for the AWS (Amazon Web Services) Solutions Architect - Associate certification exam. Students will learn the essentials of cloud computing, business security and compliance considerations, migrating to the cloud, architecting a cloud server, and how to troubleshoot cloud services. (3 hr. lecture; 2 hr. lab)

CTS2404
Distributed Applications with Visual Basic 4 credits

This course will teach Microsoft Visual Basic programmers how to build N-tier client/server solutions for Microsoft Windows using Windows DNA and Com+ technologies. It includes developing distributed applications that conform to the Microsoft Solution Framework, and is designed to teach Visual Basic programmers, who currently develop desktop applications, how to build n-tier, client/server solutions. Also it will prepare students to take Microsoft's Certification Exam for Distributed Applications with Microsoft Visual Basic; it is a required course for MCSD and elective for MCDBA. Prerequisites: COP 2333. Laboratory fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

CTS2433
Microsoft SQL Implementation 4 credits

A comprehensive course in learning how to

design and implement enterprise database solutions using SQL. Working through a system of modular lessons and hands-on labs to comprehend SQL Architecture. Prerequisite: CTS 1437. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2440
Introduction to Oracle: SQL and PL/SQL 4 credits

This is an introductory level course for students majoring in the Oracle Database Administrator and/or Solutions Developer programs. Students will learn the fundamentals of SQL and PL/SQL programming languages including the concepts of relational databases, how to create and maintain database objects, and how to store, retrieve, and manipulate data. Students will also learn to create PL/SQL blocks of application code that can be shared by multiple forms, reports, and data management applications. Prerequisite: CGS 1060. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2441
Introduction to Oracle Database Administration 4 credits

This course is designed to give students who are preparing to become Oracle database administrators (DBA) a firm foundation in basic administrative tasks. Students will learn through instructor-led learning, structured hands-on practices, and challenge-level exercise labs, the necessary knowledge and skills to set up, maintain and troubleshoot an Oracle database. Prerequisite: CTS 2440. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2442
Intermediate Oracle Database Administration 4 credits

This is the second course in Oracle database administration. Student's will learn basic network administration, including techniques to backup and to recover an Oracle database. The skills developed in this class will help prepare students for the Oracle database administrator (DBA) certification exam. Prerequisite: CTS 2441 Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2444
Oracle Database Performance Tuning 4 credits

This course teaches students tuning steps which can be used to improve database performance. Students will learn through a combination of demonstrations, lectures, and lab exercises, gaining practical experience tuning an Oracle database. Students will also learn how to recognize, troubleshoot and resolve common performance related problems in administering an Oracle database. Pre-requisite: CTS2442. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2445
Programming PL/SQL in Oracle 4 credits

This course is designed for students preparing to become database developers and prepares students for the Oracle PL/SQL and Oracle Forms Developer Certification exam. Students will learn to create PL/SQL blocks

of application code, functions and packages. Students will also learn how to create and manage PL/SQL program units and database triggers. Laboratory fee. Prerequisite: Cts2440. (3 hr. lecture; 2 hr. lab)

CTS2446
Introduction to Oracle Database Applications 4 credits

In this course, students will learn how to build and test interactive applications and will work in a graphical user interface (GUI) environment. They will learn how to customize forms with user input items such as check boxes, list items and radio groups. Students will also learn how to modify data access by creating event-related triggers. (3 hr. lecture; 2 hr. lab)

CTS2450
Business Intelligence: Analysis Services and Data Mining 4 credits

This is one of two sources in business intelligence designed to provide students with the skills necessary for advanced web-based applications. This course provides an introduction to various data mining and business intelligence techniques. Students will learn Analysis Services and Data Mining, including database and problem-solving skills. The course focuses on how these techniques are applied in the corporate environment to better manage business processes and how data analysis is utilized to achieve business success. Prerequisite: CTS1437 or CTS2433 or CTS2451. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2451
Business Intelligence: Integration Services & Reporting 4 credits

This course is designed to provide students with the skills necessary for advanced web-based applications. Students will learn how to analyze business requirements to determine data access and data transfer requirements and how to apply database and problem solving skills to build data flow, design integration services, and reporting services. Prerequisite: CTS1437 or CTS2433. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2463
C# Web Application Development 4 credits

This course is designed to provide AS degree students majoring in computer information technology, database technology, or Internet services technology with skills necessary for web-based programming. Students will learn C# programming for ASP.NET, including database skills and problem-solving, using modular design techniques. The skills developed in this class will help prepare students for MCTS certification. Prerequisites: COP 1332 or COP 1334. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2652
CCNA 3: Advanced Routing and Switching 4 credits

This is the third course of the four-course Cisco curriculum that will prepare the student

for professional certification as a Cisco Certified Network Associate (CCNA). Students will learn how to create virtual local area networks (VLANs), configure inter VLAN routing, and implement wireless network access and VLAN security. Prerequisite: CTS1651. Special Fee. (3 hr. lecture; 2 hr. lab)

CTS2653

CCNA 4: Connecting Networks 4 credits
This is the fourth and final course of the four-course Cisco curriculum that will prepare the student for certification as a Cisco Certified Network Associate (CCNA). Students will learn how to implement a hierarchical network design, configure wide area networks (WANs), including point-to-point and frame relay connections, implement IP addressing services such as Network Address Translation, VPN and broadband solutions, monitoring and troubleshooting enterprise networks. Prerequisite: CTS 2652. Special Fee. (3 hr. lecture; 2 hr. lab)

CTS2823

Developing Internet Applications Using Apache 4 credits
This course is designed for students who are preparing to become web developers. Students will learn to build dynamic, web-based applications using open-source technologies such as Linux, Apache, MySQL, and PHP (LAMP). Prerequisites: CTS 1111, COP 2842, COP 2843. Laboratory Fee. A.S. degree credit only. (3 hr. lecture; 2 hr. lab)

CTS3452

Business Intelligence 4 credits
This course is for students majoring in Data Analytics. Students will learn how to organize, manage and analyze massive amounts of data on servers. Students will learn how to create reports and present information to optimize business decisions and performance. (3 hr. lecture; 2 hr. lab)

DIG1111

Digital Character Design 3 credits
This course is for students majoring in Animation & Game Art. Students will learn advanced 3D animation job skills used in creating 3D feature animation and game development, including advanced texturing, lighting and rendering a final image. (1 hr. lecture; 4 hr. lab)

DIG1132

Digital art and Design 3 credits
This course is for students majoring in Animation and Game Art and introduces environmental design. Students will learn the concepts, hardware, and software related to digital image acquisition, image editing, manipulation, color management basics, masking, layering, retouching, scanning and output, and color theory as it relates to digital media. (2 hr. lecture; 2 hr. lab)

DIG1302

3D Modeling 4 credits
This course, for students majoring in Animation & Game Art introduces students to the basic tools, techniques and applications for

feature 3D animation and game development. Students will learn how to manipulate objects, build models, employ lighting, design movement, work with materials and textures and render a final image. (3 hr. lecture; 2 hr. lab)

DIG1430

Storyboarding 3 credits
This course is for students majoring in Animation and Game Art. It introduces the necessary tasks in the storytelling phase of an animation project. Students will learn how to develop and design visual storyboards and how to sell their storyboard ideas. Pre/co-requisite: DIG 1437 with a minimum grade of "C" or higher. (1 hr. lecture; 4 hr. lab)

DIG1437

Narrative Storytelling 3 credits
This course is for students majoring in Animation and Game Art. It introduces the conceptual structure and design of visual storytelling. Students will learn principles of animation, mechanics, cinematics, character development, personality of place, exaggeration and effects, adapting movement for the animation medium, and how to create the illusion of life. (1 hr. lecture; 4 hr. lab)

DIG1705

3D Programming 1 4 credits
This course provides students with a foundation in 3D programming which will allow them to develop programs involving 3D vector graphics in Visual C++, while using popular graphics libraries such as s DirectX, and OpenGL. Students will learn to rotate, scale, translate and texture map 3D objects using matrix operations. Programs developed will use a graphical interface, keyboard and mouse. Students will also explore basics of 3D Engine development for modern games. Prerequisite: MAC1105, DIG1710, COP2335 (3 hr. Lecture; 2 hr. lab)

DIG1710

Introduction to Game Development 4 credits
This course is an introduction to the computer game design and development industry. Students will learn about game development careers, game development and design processes, marketing themes, copyright laws, game company structures, programming languages used by different types of games, the impact of video games on modern society, general programming concepts, and how to use common game development environments. (4 hr. lecture; 2 hr. lab)

DIG2113

Post Production & Editing 4 credits
This course, for students majoring in Animation & Game Art, equips students with skills required in post-production editing. Students will learn how to combine computer-generated imagery with matte painting and backgrounds and the core principles of proper compositing, color correction, and editing. Prerequisite: DIG1437 (3 hr. lecture; 2 hr. lab)

DIG2304

Character Animation 3 3 credits
This course, for students majoring in Animation & Game Art, equips students with the skills needed to create animated characters. Students will learning-depth character design, development, rigging, and animation techniques, how to create segmented and solid model mesh of bipeds and quadrupeds, and techniques used to create facial expressions and lip syncing. Prerequisite: DIG2790 (2 hr. lecture; 2 hr. lab)

DIG2318

Animation Studio 1 3 credits
This course is for students majoring in Animation and Game Art. Students will learn to design and implement a project involving computer animation, game production, VFX or scientific/architecture visualization. Students will work in collaboration with faculty and industry mentors. Prerequisite: DIG1430, DIG1302 Pre/Corequisite: DIG2113 (1 hr. lecture; 4 hr. lab)

DIG2319

Animation Studio 2 3 credits
This is a capstone course for students majoring in Animation and Game Art. Building on skills learned in Animation Studio 1, students will learn enhanced skills in the areas of 3D modeling, texturing, lighting, and animation. Working in groups, students develop a project plan and produce a short, 3D animated movie. (2 hr. lecture; 2 hr. lab)

DIG2391C

Animation Studio 3 4 credits
This is a capstone course for students majoring in Animation and Game Art. Students develop a project plan and produce a short, 3D animated movie. Students also create a website for the project, social media and market campaigns, and submit the short animated movie to festivals. Prerequisite: DIG2318. (3 hr. lecture 2 hr. lab)

DIG2396C

Motion Capture 4 credits
This course is for students majoring in Animation and Game Art. Students will learn to digitize motion and clean-up and editing techniques. They will also learn how to set up motion capture and shooting, data tracking, skeleton retargeting, as well as animation correction and enhancements. Prerequisite: DIG1302. (3 hr. lecture; 2 hr. lab)

DIG2625

Network Programming for Game Development 4 credits
This course is for students majoring in game development. It introduces network programming and communication in a distributed computing environment for game development. Students will learn network technologies, architecture, protocols, programming across different environments. Prerequisite: COP2335 (3 hr. lecture; 2 hr. lab)

DIG2626

Artificial Intelligence 4 credits
This course covers key aspects of Artificial In-

telligence (AI) for students majoring in game development. Students will learn the origins and history of Artificial Intelligence, current and future uses of AI, AI methods algorithms such as: path planning, stimulus-response agents, agent architectures, decision-making systems, game trees, neural networks, and genetic algorithms. Students will create and modify existing games to include an AI system. Pre/Corequisite: COP1334 (3 hr. lecture; 2 hr. lab)

DIG2771**3D Programming 2 -****Virtual Reality****4 credits**

This course is for students majoring in game development and covers key aspects of advanced 3D programming. Students will learn how to program special effects and create realism for games by using: illumination, shading, reflections, collision detection/ reaction, light mapping, sound, music, alpha blending, fog, and applying basic Newtonian physics to objects. Prerequisite: DIG1705 Pre/Corequisite: COP2335 (3 hr. lecture; 2 hr. lab)

DIG2790**Texturing & Environment****Design****4 credits**

This course is for students majoring in Animation & Game Art. Students will learn advanced 3D animation job skills used in creating 3D feature animation and game development, including advanced texturing, lighting and rendering a final image. Prerequisite: DIG1302 (3 hr. lecture; 2 hr. lab)

Criminal Justice & Related Technologies

CCJ1010**Introduction to Criminology****3 credits**

Theories and causes of criminal and delinquent behavior, including its variations, ramifications, explanations and measures of prevention, control and treatment. (3 hr. lecture)

CCJ1020**Introduction to****Criminal Justice****3 credits**

History, development, philosophy, constitutional aspects, introduction to and survey of the agencies and processes involved in the administration of criminal justice in a democratic society. (3 hr. lecture)

CCJ1191**Human Behavior in****Criminal Justice****3 credits**

Human behavior and how it relates to the duties and responsibilities of the criminal justice practitioner. (3 hr. lecture)

CCJ1949**Co-op Work Experience 1:****CCJ****3 credits**

This is a course designed to provide training in a student's field of study through work

experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

CCJ2053**Criminal Justice Ethics and Professionalism****3 credits**

This course will provide students with an overview of moral, ethical, and professional issues and dilemmas facing individuals and organizations within the criminal justice system. Students will learn to define and implement ethical and professional standards by examining what they will be confronted with and how to respond appropriately. Prerequisite: PHI 2604. (3 hr. lecture)

CCJ2358**Criminal Justice Reporting****3 credits**

This course prepares students through instruction and practice to properly prepare written reports common to the criminal justice community. Students will learn a variety of criminal justice scenarios presented and students will be instructed as to proper report format and presentation. Prerequisite: ENC 1101 (3 hr. lecture)

CCJ2650**Narcotics and Dangerous Substances****3 credits**

The general problems created by illegal use of narcotics and dangerous substances, with emphasis upon classification, description and history of drugs, etiology of addiction, extent of drug use and its relationship to criminal behavior and methods of control. (3 hr. lecture)

CCJ2940**Administration of Justice****Field Service Program****3 credits**

Provides supervised observation and participation in agencies involved in the administration of justice. This course bridges the gap between theory and practice. Prerequisite: to be arranged by/with the instructor. (3 hr. lecture; plus field experience)

CCJ2949**Co-op Work Experience 2: CCJ****3 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

CCJ3032**Crime and the Media****3 credits**

An examination of the inter-relationship among the mass media, crime, and criminal

justice. Includes media and the social construction of crime and criminal justice; media effects on attitudes toward crime and justice; and media as a cause of crime. Prerequisite: SYG 2000. (3 hr. lecture)

CCJ3663**Female Crime and Delinquency****3 credits**

A study of females in society and the criminal justice system. Includes the female delinquent, females as criminals, females as victims, and the impact of females as professionals in the Criminal Justice System. Prerequisites: CCJ 1191, 2500. (3 hr. lecture)

CCJ3666**Victimology****3 credits**

A comprehensive study of victimization; analysis of contemporary victim-assistance and victim compensation programs and related research; review of the historical importance of victim restitution as a basis for punitive criminal law. Prerequisite: CCJ 1191. (3 hr. Lecture)

CCJ3700**Methods of Research in****Criminal Justice****3 credits**

Evaluates the application of research methodologies as applied to the study of Public Safety Management. Prerequisite: STA 2023. (3 hr. Lecture)

CCJ4054**Ethics in the Criminal Justice System****3 credits**

An in depth study of moral, ethical, legal, and professional issues and dilemmas facing individuals and organizations within the Criminal Justice systems. Prerequisite: PHI 2604. (3 hr. lecture)

CCJ4450**Criminal Justice****Administration****3 credits**

An analysis of leadership styles, management principles, supervisory techniques, policies and procedures within Law Enforcement agencies. Prerequisite: CCJ 1020. (3 hr. lecture)

CCJ4641**Organized Crime****3 credits**

An analysis of organized crime in today's society, as well as, past, present, and future perspectives of the topic. (3 hr. Lecture)

CCJ4651**Drugs and Crime****3 credits**

An analysis of the interrelationship among drug usage, crime and the criminal justice system. Prerequisite: CCJ 2650. (3 hr. lecture)

CCJ4660**Crime, Violence, and Schools****3 credits**

An examination of comprehensive and proven theoretical models of explaining, predicting, and preventing school-based violence. Prerequisite: CCJ 1191, CJJ 2002. (3 hr. lecture)

CCJ4678

Race, Gender, Ethnicity

& Crime 3 credits
Focuses on the challenges and controversies of managing and treating special offender populations such as juvenile, elderly, disabled, mentally ill, pregnant inmates, etc. Prerequisite: CCJ 1191. (3 hr. lecture)

CCJ4941

**Internship Program -
Field Placement**

15 credits

Students will gain field placement experience in a local, state, federal, or private sector public safety agency. (240 hr. Internship)

CCJ4942

**Internship Program - Basic
Police Academy**

15 credits

Students will participate in the FDLE state-mandated certification training program in law enforcement. (240 hr. Internship)

CCJ4943

Internship Program -**Basic Corrections Academy**

15 credits

Students will participate in the FDLE State-Mandated Certification Training Program in Corrections. (240 hr. Internship)

CJC1000

Introduction to Corrections

3 credits

A comprehensive view of the historical and philosophical treatment programs and developments in the field of juvenile and adult corrections. Emphases on understanding the offender in the correctional system; an examination of the correctional client, the non-institutional correctional systems, agencies and recidivism. (3 hr. lecture)

CJC1005

Operations & Procedures in**Correctional Institutions**

3 credits

A basic survey of the operational routines that prevail in correctional facilities and the procedures used by officers in upholding these routines. The focus is on the preliminary knowledge needed by correctional officers before they can acquire the skills and techniques to perform job-related tasks. A.S. degree credit only. (3 hr. lecture)

CJC1162

Parole and Probation

3 credits

The history, current practices and the consideration of philosophical concepts in the areas of probation and parole. (3 hr. lecture)

CJC2301

**Interpersonal Skills for
Correctional Officers**

3 credits

The interpersonal skills needed by officers to understand the incarcerated society is explored, with emphasis on supervision methods. Inmate adjustment and the various segments of inmate society are studied. This course is limited to School of Justice students only. (3 hr. lecture)

CJC2350

Correctional Operations

3 credits

The operation of correctional facilities is stud-

ied including the intake of new inmates, all aspects of their daily care, and institutional procedures. This course is limited to School of Justice students only. (3 hr. lecture)

CJC4163

Advanced Probation & Parole

3 credits

A study of the process in which a convicted person can be released into society by means of probation or parole. Prerequisite: CJC 1162. (3 hr. lecture)

CJC4310

Correctional Theory

3 credits

An analysis of corrections relative to punishment and rehabilitation strategies utilized at penal institutions throughout the United States. Prerequisite: CJC 1000. (3 hr. Lecture)

CJC4311

Contemporary Issues and**Trends in Corrections**

3 credits

Focuses on and analyzes of major changes in incarceration philosophies and policies, prison populations, and operational costs. Prerequisite: CJC 1000. (3 Hr. Lecture)

CJC4351

Correctional Operations

3 credits

Focuses on challenges the correctional staff faces in their critical role in the day-to-day operations of a correctional facility. Prerequisite: CJC 1000. (3 hr. lecture)

CJE1003

Career Exploration in**Criminal Justice**

1-3 credits

To provide an overview of the various careers in criminal justice, and to help students define their career interests and physical abilities. A.S. degree credit only. (1-3 hr. lecture)

CJE1640

Crime Scene Technology 1

3 credits

This is an introductory course in Crime Scene Technology. Students will learn the techniques, materials and instrumentation used in securing, searching, recording, collecting, and examining physical evidence. There will be special emphasis on the tools, instruments, and techniques used in the studies of crime scene reconstruction, fingerprints, firearms, tool marks, and blood stain pattern analysis. (3 hr. lecture)

CJE1642

Crime Scene Technology 2

3 credits

This course covers advanced principles, theories and applications in crime scene technology. Students will learn specialized collection procedures of weapons, arson, gunshot residue, blood spatter, and recovery of buried bodies and surface skeletons are also included. Data analysis, reporting and plan of action development are emphasized. Prerequisite: CJE 1110. (3 hr. lecture)

CJE1673

Crime Scene Photography 1

3 credits

This is an introductory study of the history of photography including basic photography

skills. Students will learn camera operations, exposure control, relational photographs and flash control for crime scene and evidentiary documentation. (3 hr. lecture)

CJE1680

Introduction to**Computer Crimes**

3 credits

This course provides the student with an overview of crimes involving the use of computer technology and the internet. Students will learn how computer related crimes are committed and how they are investigated. Topics covered will include computer crime scene management and the legal issues involved in the prosecution of computer crimes. (3 hr. lecture)

CJE1772

Crime Scene Photography 2

3 credits

This course expands upon concepts; knowledge and skills taught in Crime Scene Photography 1. Students will learn to include specialty light sources, darkroom techniques and procedures, filters and specialized equipment including black and white and color enlargers. Prerequisite: CJE 1220. (3 hr. lecture)

CJE2302

Management of Police**Functions**

1-3 credits

The administration of line activities of law enforcement agencies, with emphasis on the patrol functions and the prevention of crime, including traffic, investigations, juvenile, vice, and other specialized units. (1-3 hr. lecture)

CJE2400

Criminal Justice and the**Community**

1-3 credits

A general orientation to the concepts of criminal justice and community relations. Group relations for criminal justice personnel. A survey of the field of criminal justice and community relations, emphasizing the role and influence in the management and resolution of conflict. (1-3 hr. lecture)

CJE2600

Criminal Investigation

3 credits

Fundamentals of criminal investigation, theory and practice, including crime scene search; preservation, collection and transportation of physical evidence interviewing, interrogating; statement taking; and case preparation, with investigation of specific offenses; relationship with the police science laboratory. (3 hr. lecture)

CJE2601

**Law Enforcement Investigations
for Police Officers**

3 credits

Fundamentals of criminal investigation, theory and practice, including crime scene search, preservation, collection and transportation of physical evidence are topics included in this course. Techniques are developed from the initial observation methods through the processing of the crime scene and case prepara-

tion. Florida's computer network is studied as an information source. This course is limited to School of Justice Basic Law Enforcement students only. (3 hr. lecture)

CJE2644
Crime Scene Safety 3 credits
This course provides the fundamentals of protecting and preserving the crime scene and identifies the essential techniques of properly handling physical evidence. Students will learn the understanding of various hazards and safety issues and provides basic techniques for preserving evidence as it relates to various hazardous chemical and biological materials. (3 hr. lecture)

CJE2671
Basic Fingerprinting 3 credits
This course provides a foundation in basic fingerprinting. Students will learn topics which include classification, identification, filing and rolling of fingerprints, problems and practices associated with post mortem fingerprinting and proper presentation of fingerprint evidence. (3 hr. lecture)

CJE2672
Fingerprint Development 3 credits
This course provides a continuation of CJE 2240 Basic Fingerprinting. Students will learn different methods involved in detection, enhancement, and recovery of latent fingerprints. Techniques will involve chemical and mechanical methods on substrates and evaluation for proper application in both theory and practices. Prerequisite: CJT 2240. (3 hr. lecture)

CJE3110
Law Enforcement Systems 3 credits
An analysis of the different law enforcement systems in Criminal Justice. Focuses on the different law agencies and their mission at the local, state, and federal levels. Prerequisite: CCJ 1020. (3 hr. lecture)

CJE3115
Police and Society 3 credits
Identifies police roles and philosophies, the nature of police work, community policing, and the debates pertaining to police discretion, community relations, and police misconduct. (3 hr. lecture)

CJE3444
Crime Prevention 3 credits
Provides students with strategies of how to develop, implement and maintain a crime prevention program. Includes the history of crime prevention, homeland security programs, public speaking, media relations, crime against the elderly, sexual assault programs, youth crime prevention, and telemarketing fraud and scams. Prerequisite: SPC 1017. (3 hr. lecture)

CJE3574
Interpersonal Communications for Law Enforcement 3 credits
An examination of the communication process and how it affects the relationship be-

tween the police and the people they serve. Prerequisite: CCJ 1191, SPC 1017. (3 hr. lecture)

CJE4310
Police Administration 3 credits
An analysis of corrections relative to punishment and rehabilitation strategies utilized at penal institutions throughout the United States. Prerequisite: CJC 1000. (3 hr. lecture)

CJE4615
Advanced Criminal Investigations 3 credits
The understanding, interpretation, and application of criminal investigative procedures in the U.S., based upon constitutional issues and legal precedent. Prerequisite: CJE 2600. (3 hr. lecture)

CJE4647
Advanced Crime Scene Technology 3 credits
An application of crime scene investigation techniques to include recording, preserving, and documenting a crime scene. Prerequisite: CJE 2600. (3 hr. lecture)

CJE4648
Crime Scene Safety 3 credits
A study of how to properly handle crime scenes and hazardous crime scenes relative to various hazardous materials, to include chemical and biological. (3 hr. lecture)

CJE4650
Advanced Crime Scene Investigations 3 credits
A study of advanced search techniques, crime scenes reconstruction, computer sketching, laser mapping, DNA evidence, trajectory, and blood spatter evidence. Corequisite: CJE 4675. (3 hr. lecture)

CJE4668
Computer Crime 3 credits
Synthesizes knowledge of crime elements, legal issues, investigative techniques, and computer skills used in the prevention and investigation of computer-generated crime. Prerequisite: CGS 1060. (3 hr. lecture)

CJE4675
Modern Fingerprint Technology 3 credits
A study of the detection, preservation, and removal of fingerprint evidence pertaining to latent, patent, and plastic prints. Prerequisite: CJE 2600, Corequisite: CJE 4641. (3 hr. lecture)

CJJ2002
Juvenile Delinquency 3 credits
An analysis of the theories and causes of juvenile delinquent behavior. The role of the three components of the juvenile justice system (Police, Court, Corrections) and their impact on prevention and rehabilitation. (3 hr. lecture)

CJL1000
Street Law 3 credits

This course will cover the evaluation, debate, and critical analysis of law and legal issues that affect individuals, their families, and communities. Students will learn about practical aspects of civil, criminal, constitutional, family, immigration, and consumer law in a diverse society with an orientation toward civic involvement in the local community. (3 hr. lecture)

CJL1100
Criminal Law 3 credits
Historical background and foundations of American criminal law, including United States Constitutional requirements, Federal and State court organization and jurisdiction, criminal law basics, Florida statutes, rules of evidence and procedure. (3 hr. lecture)

CJL2062
Constitutional Law and Legal Procedure or Evidence 3 credits
An examination of the United States and Florida Constitutions, with emphasis on leading cases dealing with arrest, search and seizure, confessions and the rules of evidence. (3 hr. lecture)

CJL2100
Criminal Procedure & Evidence 1 3 credits
This course explores the history, principles and applications of criminal law procedures for criminal justice officers. This course is limited to the school of justice students only. (3 hr. lecture)

CJL2130
Criminal Procedure and Evidence 3 credits
Criminal Procedure and Evidence as they relate to the law enforcement profession will be examined. Constitutional provisions applicable to arrest, search and seizure, and interrogation will be covered. In addition, evidentiary principles will be taught emphasizing those provisions applicable to law enforcement. (3 hr. lecture)

CJL2610
Courtroom Presentation 3 credits
This course introduces students to proper courtroom presentation and procedures. Students will learn the appropriate techniques for proper attire, grooming, speaking, listening and stress control during courtroom proceedings, visual aid preparation, and presentations of all evidence (commonly referred to as "scientific evidence") collected at the crime scene are also included. (3 hr. lecture)

CJL3044
Civil Law 3 credits
A study of civil liability for damages caused by breach of an imposed duty, which includes intentional torts, negligence, strict liability, product liability, civil nuisance, defamation, civil wrongful invasion of privacy, and damages. Prerequisite: CJL 1100. (3 hr. lecture)

CJL3564
Judicial Policy Making 3 credits
An analysis of the components, policies,

and procedures of the court structure of the United States and various components. An analysis of local, state, and federal courts in the Criminal Justice System. Prerequisite: CCJ1010. (3 hr. Lecture)

CJL4064
Corrections Administration & Law 3 credits

An overall view of the nature, philosophy, operations and goals of secure and non-secure correctional institutions and programs. Prerequisite: CJC 1000. (3 hr. lecture)

CJL4133
Criminal Evidence 3 credits

A study of evidentiary principles and rules of evidence, and their application in a courtroom setting. Prerequisite: CJL 1100. (3 hr. lecture)

CJL4170
Corrections Legal System 3 credits

An analysis of contemporary legal decisions regarding the rights and responsibilities of prisoners, correctional administrators, and correctional officers. Prerequisite: CJL1100. (3 hr. lecture)

CJL4514
Criminal Sentencing 3 credits

An examination of the various pre-trial and post-trial community based treatment and supervision programs. Prerequisite: CJC 1162. (3 hr. lecture)

DSC1002
Domestic and International Terrorism 3 credits

This course is a study of domestic and international terrorism as it relates to domestic security. Through focused topics, students will learn about terrorist organizations and motivations, investigating terrorism threats, conducting vulnerability assessments of potential terrorist targets, and the role of government agencies in response to a terrorist incident and recovery afterwards. (3 hr. lecture)

DSC1006
Introduction to Homeland Security 3 credits

This course will introduce students to the vocabulary and important components of Homeland Security. Students will learn about the agencies associated with Homeland Security and their interrelated duties and relationships. (3 hr. lecture)

DSC1700
Introduction to Emergency Management 3 credits

This course focuses on the philosophical and theoretical underpinnings of the emergency management profession, and the principles that define effective practice. The student will learn the current definitions of emergency management, including the mission and vision of the profession. (3 hr. lecture)

DSC2242
Transportation and Border Security 3 credits

This course introduces students to global supply chains and intermodal transportation systems. Students will learn the threats to these systems, their vulnerabilities and potential for terrorist attacks, and the measures being undertaken to secure them. (3 hr. lecture)

DSC2590
Intelligence Analysis and Security Management 3 credits

This course examines intelligence analysis and its indispensable relationship to the security management of terrorist attacks, man-made disasters and natural disasters. Students will learn substantive issues regarding intelligence support of Homeland Security measures implemented by the United States and explore how the intelligence community operates. (3 hr. lecture)

DSC4012
Terrorism 3 credits

A study of domestic and international terrorism, using current events and past incidents for analysis, to include the events, the responses, and the outcomes. Prerequisite: CCJ 1020. (3 hr. lecture)

DSC4014
Domestic & International Terrorism 3 credits

A study of the causes and effects of domestic and international terrorist events. Prerequisite: DSC4012. (3 hr. lecture)

DSC4214
Catastrophic Event Response Management 3 credits

An analysis and evaluation of domestic and international terrorism, the events, the responses, and the outcomes. (3 hr. lecture)

DSC4215
Emergency Planning & Security Measures 3 credits

A study of empirical vs theoretical approaches; human behavior in disasters; myths and realities; group disaster behavior; community social systems, and disaster; cultures, demographics and disaster behavior distinctions; and model-building in sociological disaster research. Corequisite: DSC 4214. (3 hr. lecture)

FES4003
Public Policy in Emergency Management 3 credits

An exploration of public policy used in emergency management, including how policy is made and conveyed. (3 hr. lecture)

FES4823
Integrated Emergency Management Planning Systems 3 credits

An analysis of technology applications and its role in emergency planning, responses, recovery, and mitigation. Prerequisite: CGS 1060. (3 hr. lecture)

SCC1000
Introduction to Security 3 credits

Students will explore and learn various aspects of security, including community retail, corporate, business and industrial problems and concerns. In addition, to legal elements as it pertains to crime prevention in a commercial environment. (3 hr. lecture)

SCC2020
Problem Solving in Security 3 credits

This course provides the student with an overview of problem solving concepts within the field of private security. Students will examine and learn the critical processes underlying problem solving and the application of the process through the use of scenarios. The scenarios encompass a wide range of private security problems and venues that require the student to conduct risk analysis, propose viable solutions, and evaluate the utility of those initiatives. (3 hr. lecture)

SCC4111
Special Security Problems 3 credits

A study of executive level security measures pertaining to dignitary protection, client confidentiality, and legal issues. (3 hr. lecture)

SCC4210
Private Investigations 3 credits

An analysis and interpretation of the role of the private investigator within the legal environment. Prerequisite: CJE 4615. (3 hr. lecture)

SCC4311
Security Administration 3 credits

An analysis and evaluation of leadership styles best suited for success in the field of security. Prerequisite: CCJ 1020. (3 hr. lecture)

SCC4410
Risk Management 3 credits

A study of risk management theories as it pertains to insurance coverage, facility assessment, as well as employee and pre-employment background investigations. Corequisite: SCC 4311. (3 hr. Lecture)

SCC4612
Hospital Security Management 3 credits

An analysis of hospital organizational structure, environment, personnel, visitors, and the requirements of regulatory agencies within the security area. (3 hr. lecture)

Dance

DAA1100
Modern Dance 1 2-3 credits

Beginning exploration of techniques, creative aspects, and theoretical concepts of modern dance which includes but is not limited to proper body alignment and mechanics of breathing and phrasing, verbal movement vocabulary, including structural improvisation. No previous experience required. (1 hr. Lecture; 2-4 hr. lab)

DAA1101

Intermediate Modern Dance 2-3 credits
Further development of modern dance techniques, creative aspects, and theoretical concepts emphasizing components based on Graham Cunningham and Limon techniques. Prerequisite: Completion of DAA 1100 or permission of the department. (1 hr. lecture; 2-4 hr. lab)

DAA1104

Modern 1 2-3 credits
Beginning exploration of techniques, creative aspects, and theoretical concepts of modern dance which includes but is not limited to proper alignment and mechanics of breathing and phrasing, verbal and movement vocabulary, including structural improvisation, and exercises utilizing Laban's movement analysis. No previous experience required. Dance Majors only. (1 hr. lecture; 2-4 hr. lab)

DAA1105

Intermediate Modern 2-3 credits
Further development of modern dance techniques, creative aspects, theoretical concepts emphasizing components based on Graham, Cunningham and Limon techniques. Prerequisite: Completion of DAA 1104 or permission of the department. Dance Majors only. (1 hr. lecture; 2-4 hr. lab)

DAA1200

Ballet Dance 1 2-3 credits
Designed to provide experiences relative to the various aspects of ballet techniques and terminology at a primary level. Special fee. (1 hr. lecture; 2-4 hr. lab)

DAA1201

Intermediate Ballet Dance 2-3 credits
The continued development of various aspects of ballet technique terminology. Prerequisite: DAA 1200 or permission of the department. May be repeated for credit. (1 hr. lecture; 2-4 hr. lab)

DAA1204

Ballet 1 2-3 credits
Beginning exploration of techniques and theoretical concepts of ballet increasing awareness of proper alignment, balance, coordination and application of various musical meters. No previous experience required. Dance Majors only. (1 hr. lecture; 2-4 hr. lab)

DAA1205

Intermediate Ballet 2-3 credits
Continuing exploration of techniques and theoretical concepts of ballet placing further emphasis on precision of lines and exactness of movement. Prerequisite: DAA 1204 or permission of the department. Special fee. Dance Majors only. (1 hr. lecture; 2-4 hr. lab)

DAA1290

Ballet for the Theater 1 1-3 credits
Music Theatre students will be receiving a systematic training of the body through a progressive study of the traditional classic ballet vocabulary. Stress is on placement, flexibility and coordination. (2-6 hr. lab)

DAA1291

Ballet for the Theater 2 1-3 credits
A continuation of the systematic training of the body through a progressive study of the traditional classic ballet vocabulary. More bare exercises and simple adagio jumps and turns will further the concentration on flexibility and coordination. Prerequisite: DAA 1290. (2-6 hr. lab.)

DAA1330

Afro-Caribbean Dance 1-3 credits
Designed for those students wishing to learn the dance skills and techniques of the dance from Africa and the Caribbean. Special fee. (1 hr. lecture; 2-4 hr. lab)

DAA1500

Jazz Dance Technical 1 2-3 credits
Designed to provide experiences in the styles of theatrical jazz dance at a primary level. (1 hr. lecture; 2-4 hr. lab)

DAA1504

Jazz Dance 1 2-3 credits
This course is designed to introduce the student to the vocabulary and technique of jazz dance, incorporating a fusion of styles from popular, Afro-Caribbean, and contemporary modern jazz choreographers. For majors only. Audition required. May be repeated for credit. (1 hr. lecture; 2-4 hr. lab)

DAA1505

Jazz Dance 2 2-3 credits
This course continues the student's introduction to the vocabulary technique of jazz dance, incorporating a fusion of styles from popular dance, Afro-Caribbean, and traditional and contemporary modern Jazz choreographers. For majors only. Audition required. (1 hr. lecture; 2-4 hr. lab)

DAA1520

Tap Dance 2-3 credits
Designed for students interested in learning the skills and techniques of tap dancing. (1 hr. lecture; 2-4 hr. lab)

DAA1680

Repertory 1 2-3 credits
A special workshop course designed to provide the student with experience relative to the performance of dance concerts. Works choreographed by students as well as faculty will be featured. (1 hr. lecture; 2-4 hr. lab)

DAA2103

Advanced Modern Dance 2 2-3 credits
Further development of modern dance techniques, creative aspects and theoretical concepts based on Graham, Cunningham, and Limon technique. Prerequisite: DAA 2102 or permission of the Department. (1 hr. lecture; 2-4 hr. lab)

DAA2106

Modern 2 2-3 credits
Further development of modern dance techniques, creative aspects and theoretical concepts emphasizing components based on Graham, Cunningham and Limon techniques.

The use of improvisation as an introduction to basic principles of form and their application to dance composition will be emphasized. Prerequisite: DAA 1104 or permission of the department. Dance Majors only. (1 hr. lecture; 2-4 hr. lab)

DAA2107

Advanced Modern 2 2-3 credits
Further development of modern dance techniques, creative aspects and theoretical concepts based on Graham, Cunningham, and Limon techniques. Prerequisite: DAA 2106 or permission of the department. May be repeated for credit. Dance Majors only. (1 hr. lecture; 2-4 hr. lab)

DAA2202

Ballet Dance 2 2-3 credits
The continued development of various aspects of ballet technique and terminology. Prerequisite: DAA1201 or permission of the department. (1 hr. lecture; 2-4 hr. lab)

DAA2203

Advanced Ballet Dance 2-3 credits
The continued development of various aspects of ballet technique and terminology. Prerequisite: DAA2202 or permission of the department. May be repeated for credit. (1 hr. lecture; 2-4 hr. lab)

DAA2206

Ballet 2 2-3 credits
Continuing exploration of techniques and theoretical concepts of ballet placing further emphasis on precision of line and exactness of movement. Prerequisite: DAA 1204 or permission of the department. Dance majors only. (1 hr. lecture; 2-4 hr. lab)

DAA2207

Advanced Ballet 2-3 credits
Continuing exploration of techniques and theoretical concepts of ballet placing further emphasis on precision of line and exactness of movement. Prerequisite: DAA 2206 or permission of the department. May be repeated for credit. Dance majors only. (1 hr. lecture; 2-4 hr. lab)

DAA2293

Ballet for the Theater 2 1-3 credits
Music theatre students will continue receiving an advanced systematic training of the body through a study of the traditional classic ballet vocabulary. Emphasis will continue on longer and more advanced combinations in the center and developing different kinds of movements. (2-6 hr. lab)

DAA2570

Modern Dance for Theater 1 1-3 credits
Music theatre students will be receiving training of the body through the study of modern dance vocabulary as developed by the originators of this dance form in the twentieth century. In the first semester concentration will be put on alignment, rhythm and phrasing, introducing the students to the fundamentals of jazz techniques. (2-6 hr. lab)

DAA2571**Modern Dance/Jazz for the Theater 2****1-3 credits**

Music theatre students will continue receiving training of the body through the study of modern dance vocabulary. In the second semester emphasis will be on developing carriage, rhythm and more advanced phrasing through jazz techniques and styles. Prerequisite: DAA 2570. (2-6 hr. lab)

DAA2610**Dance Composition and Improvisation 1****2-3 credits**

Individual experience in developing movement phrases and combinations based on solving problems within a form and a movement framework, as well as the movement imagery designed to develop the dancer's creative imagination. Individuals will experience composition using the basic elements of movement theory in an improvisational framework. (1 hr. lecture; 2-4 hr. lab)

DAA2611**Dance Composition and Improvisation 2****2-3 credits**

Further exploration of choreographic tools with emphasis on group forms, usage space, and orchestrations of movement. The formal study of compositional principles of choreographic invention with emphasis on developing personal style. Prerequisite: DAA 2610. (1 hr. lecture; 2-4 hr. lab)

DAA2680**Repertory 1****2-3 credits**

Dance works in both ballet and many different styles of modern and ethnic dance vocabularies are studied. Works include both standard repertory and commissioned dances. Students work with choreographers, directors and reconstructors of classic works, giving the dancer the experience of being choreographed on and being directed in repertory works. The works learned are performed by the students in workshop and public performances throughout the year. (1 hr. lecture; 2-4 hr. lab)

DAA2681**Repertory 2****2-3 credits**

A continuation of DAA 2680. Prerequisite: DAA 2680. (1 hr. lecture; 2-4 hr. lab)

DAN1500**Practicum in Dance Production 1****1 credit**

Emphasis is on the production aspects of dance. Along of all dance activity and concerns culminating in studio performance will be required. Admission by audition or department placement. (2 hr. lab)

DAN2100**Dance Appreciation****3 credits**

This course is a comprehensive overview of dance as an art form, as entertainment, and as a social activity. Specific dance genres such as ballet, modern dance, jazz dance, and world dance forms and the importance of the roles of dancers, choreographers and the au-

dience will also be the focus of this course. This course is designed to give the student a foundation level understanding of dance as an art form and its historical and cultural significance from ancient times into the 21st Century. (3 hr. lecture)

DAN2130**Dance History 1****3 credits**

Study of origins and development of dance as an art form from its inception in primitive cultures to present. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

DAN2131**Dance History 2****3 credits**

Examine the dance through the ages from the Stone Age participatory dances to the spectator dances of the Orient, the Classical period in Greece and Rome and the Early Middle Ages. Concluding with the historical development of dance forms from the late Middle Ages through the Renaissance into the 20th Century. Emphasis is on the dance as a spectator event and a participatory art in relationship to other arts forms. Prerequisite: DAN 2130. (3 hr. Lecture)

DAN2430**Laban Movement Analysis 1****3 credits**

An introduction to Rudolf Laban's basic principles of effort, shape and space harmony. The class will explore ways of varying movement dynamics, and will assist the student in discovering the many ways that the body can shape itself and project into space. Prerequisite: Permission of department chairperson. (3 hr. lecture)

DAN2431**Laban Movement Analysis 2****3 credits**

A further study of Laban's basic principles, this course provides insights into one's personal movement style and increases awareness of what movement communicates and expresses. Prerequisite: DAN 2430 or permission of department chairperson. (3 hr. lecture)

DAN2630**Literature & Materials of Music for Dance 1****2-3 credits**

This course serves to develop the personal musical interest of choreographers and dance artists. The composition and performance of simple musical works will be taught. Actual hands on skills with dance accompaniment will be developed. (2-3 hr. lecture)

DAN2631**Literature & Materials of Music for Dance 2****2-3 credits**

This course provides an intensive survey of the history of music and music for the dance. Touching on the Greek heritage, important composers of the Renaissance to the common practice period will be covered. Careful study of the 20th-Century masterworks concludes the course. Prerequisite: DAN 2630. (2-3 hr. lecture)

Dental Hygiene

DEH1002**Pre-Clinical Dental Hygiene 2 credits**

Introduction to procedures relevant to the practice of dental hygiene. Corequisites: DEH 1002L, 1133, 1133L (2 hr. lecture)

DEH1002L**Pre-Clinical Dental Hygiene Laboratory****2 credits**

Laboratory for DEH 1002. Corequisite: DEH 1002. Laboratory fee. (6 hr. lab)

DEH1133**Dental Anatomy, Histology and Physiology****2 credits**

This course covers specific tissues of the oral cavity, head, neck and their embryonic development. The students will learn structure, morphology and function of the primary and permanent dentitions. (2 hr. lecture)

DEH1400**General and Oral Pathology 3 credits**

Processes of inflammation, necrosis, retrograde changes, diseases caused by bacteria, viruses, and other organisms. Emphasis will be placed on differentiating between normal and abnormal conditions of the oral cavity. Prerequisite: DEH 1130, DES 1200. (3 hr. lecture)

DEH1710**Oral Health Literacy****1 credit**

Students will learn the concepts of oral health literacy. Students will also identify how to improve patient's oral health literacy and the barriers that impede oral health care. (1 hr. lecture)

DEH1720**Preventative Dentistry****2 credits**

This is a foundation course in dental hygiene preventive care. Students will learn the concepts of oral health and how to prevent future disease. Students will become engaged in developing their own prevention strategies by selecting with a rationale, appropriate oral health devices used for self-care. A.S. degree only. (2 hr. lecture)

DEH1800**Dental Hygiene 1****2 credits**

Theory of the removal of hard and soft deposits from the teeth, and other related postoperative and preventive procedures. Prerequisites: DEH 1002, 1002L, 1133; corequisite: DEH 1800L. (2 hr. lecture)

DEH1800L**Dental Hygiene 1 Clinic****3 credits**

Clinic for DEH 1800. Corequisite: DEH 1800. Laboratory fee. Prerequisite: DEH 1002, 1002L; corequisite: DEH 1800. Laboratory fee. (144 hr. clinic)

DEH1802L**Dental Hygiene 2 Clinic****1 credit**

Continuation of clinical skills from DEH 1800L. Prerequisites: DEH 1800, 1800L. Laboratory fee. (48hr. clinic)

DEH1804L

Dental Hygiene 3 Clinic 1 credit
Designed to further student's knowledge and skills through clinical experiences more difficult than those experienced in DEH 1802L. Prerequisite: DEH1802L. Laboratory fee. (48 hr. clinic)

DEH1811

Professional Issues 2 credits
This course is designed to provide the dental hygiene student with an understanding of the political, social, environmental and professional issues that affect the practice of dental hygiene. These issues include: a) cultural diversity, b) legal and ethical responsibilities, c) sexual harassment, d) child abuse, e) problem solving, and f) communication style. Corequisite: DEH 1800L. (2 hr. lecture)

DEH1840L

Advanced Radiographic & Clinical Assessment Techniques 1 credit
A laboratory course introducing advanced digital radiographic techniques, the intraoral camera, periodontal probing and dental charting software and other clinical assessment tools. These skills will enable the student to provide comprehensive patient treatment and enhance their ability to interpret intraoral conditions. (48 hr. clinic)

DEH1940L

Dental Hygiene 1 Optional Learning Support 1 credit
DEH 1940L runs concurrently with DEH 1800L and is designed to enhance student's basic clinical skills and critical thinking abilities. Special emphasis is placed on collaborative learning techniques, effective decision-making, proper time management and self-assessment as students interact with their peers and apply their skills and knowledge in the treatment of clinical patients. (3 hr. clinic)

DEH2202

Nutrition and Dental Health 2 credits
This course provides a study of nutrients, their nature, source, and utilization. Students will learn the relationship between diet and oral health care and oral manifestations of nutritional deficiencies. (2 hr. lecture)

DEH2300

Pharmacology and Pain Control 1 credit
This course introduces the student to a broad range of Pharmacological concepts including drug categories, drug action, and adverse drug effects. Dental prescriptions such as the antibiotics, antifungals and antivirals will be studied. Students will learn the common medical conditions affecting dental hygiene care, such as cardiovascular disease, endocrine and neurological disorders as well as their drug management will be examined. Prerequisite: DES 1044; corequisite: DEH 1802L, 2300L. (1 hr. lecture)

DEH2300L

Pharmacology and Pain Control Laboratory 1 credit

This course is designed to prepare the dental hygiene student for the safe and effective administration of local anesthesia. Students will learn about the psychology of pain management, pharmacology of anesthetic agents, emergency precautions, and are view of anatomy and physiology as they relate to the administration of anesthetic agents. This course will include online and clinical instruction. Co-requisite: DEH2300. Special Fee. (2 hr. lab)

DEH2602

Periodontology 1 1 credit
This course will introduce the student to the concepts of non-surgical periodontal therapy, risk factors in periodontal diseases, classifications of periodontal diseases, the components of the comprehensive periodontal assessment and care plan. Ultrasonic periodontal debridement will be studied. Furthermore, the course will include the study of behavior motivation, the dental hygiene human needs conceptual model, the phases of self-care education and the importance of case presentation in modifying client self-care. (1 hr. lecture)

DEH2603

Periodontology 2 2 credits
Etiology, classification, diagnosis, treatment and maintenance of the periodontal patient. Prerequisites: DEH 1400, DEH 1802L. (2 hr. lecture)

DEH2603L

Periodontology 2 Laboratory 1 credit
Laboratory for DEH 2603. Corequisite: DEH 2603. Prerequisite: DEH 1400; corequisite: DEH 2603. Laboratory fee. (2 hr. lab)

DEH2701

Community Dental Health 1 3 credits
Public Health Dentistry and the role of the dental hygienist. Prerequisite: DEH 1804L. (3 hr. lecture)

DEH2702L

Community Dental Health 2 Clinic 2 credits
Provides the student an opportunity for application of the principles of public and community dentistry. Corequisite: DEH 2701. (4 hr. field experience)

DEH2806

Dental Hygiene 4 2 credits
This course is a continuation of dental hygiene theory and practice. Students will learn the process and procedures for gingival curettage and root planning. Prerequisite: DEH1804L; Corequisite: DEH2806L (2 hr. lecture)

DEH2806L

Dental Hygiene 4 Clinic 4 credits
Clinic for DEH 2806. Corequisite: DEH 2806. Laboratory fee. (192 hr. clinic)

DEH2808

Dental Hygiene 5 2 credits

Students will learn the basic dental and behavioral sciences within the practice of dental hygiene. Special emphasis is given to Florida laws governing dental hygiene practices. Prerequisite: DEH2806, DEH2806L; Corequisite: DEH2808L. (2 hr. lecture)

DEH2808L

Dental Hygiene 5 Clinic 4 credits
Ongoing experience in total dental hygiene care of the periodontally involved patient. Prerequisites: DEH 2603, 2603L, 2806L; corequisite: DEH 2808. Laboratory fee. (8 hr. clinic)

DEH2810L

Interprofessional Practice and Education Lab 1 credit
Students will learn to examine the Dental Hygiene scope of practice through professional identity by way of interprofessional collaboration. Students will also develop knowledge and skills to serve on health professional teams to improve health outcomes. Prerequisite: DEH1811. (2 hr. lab)

DES1200

Dental Radiology 2 credits
Techniques and theory for the safe and effective use of radiographs as related to dentistry. Corequisites: DEH 1002, 1002L, DES 1200L. (2 hr. lecture)

DES1200L

Dental Radiology Laboratory 2 credits
Laboratory for DES 1200. Prerequisite: Acceptance into the Dental Hygiene Program; corequisite: DES1200. Laboratory fee. (4 hr. lab)

DES1600

Dental Office Emergency 2 credits
This course is designed to instruct students in the fundamental patient assessment skills needed to identify and manage emergencies that may arise in the dental office. (2 hr. lecture)

DES2100

Dental Materials 2 credits
Physical properties of dental materials and their use in the oral cavity. Prerequisite: DEH 2806L, DEH 1133; corequisite: DES 2100L. (2 hr. lecture)

DES2100L

Dental Materials Laboratory 1 credit
Laboratory for DES 2100. Corequisite: DES 2100. Laboratory fee. (2 hr. lab)

Economics

ECO1949

Co-op Work Experience 1: ECO 3 credits
This course is designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as

reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. (3 hr. lecture)

ECO2013**Principles of Economics (Macro)****3 credits**

An overview of the basic economic concepts and institutions. Students will learn the modern national income formation theory, economic fluctuations, money, banking, monetary and fiscal policy, economic stabilization theory and policy, the public sector, theory of economic growth and development comparative economic systems. Fulfills Gordon Rule writing requirement. Special fee. (3 hr. lecture)

ECO2023**Principles of Economics (Micro)****3 credits**

The student will learn the theory of markets, price mechanism, production, distribution and resource allocation; application of marginal analysis and equilibrium theory to the price and output decisions of the individual firm in pure competition, monopolistic competition, oligopoly and monopoly; agriculture; labor, rent interest and profits theory; international trade; and the economics of change. Special fee. (3 hr. lecture)

ECO2071**Economics Institute****Elementary Education 1****3 credits**

This course is designed for Elementary Teachers. It provides coverage of major micro-economic concepts and their infusion into the K-12 curriculum through an activity oriented approach. This course will include those economic concepts required in the minimum Student Performance Standards for Social Studies. These concepts will be handled through various methodologies appropriate for the elementary curriculum. The latest economic education materials will be utilized. (3 hr. lecture)

ECO2301**History of Economics Ideas and Their Consequences****3 credits**

An interdisciplinary study with major elements of economics, philosophy, history, sociology, anthropology, and political science that begins in the agricultural landscape of the 1700s and brings one forward into the age of the corporate giant and the nuclear warfare of modern industrial society. (3hr. lecture)

ECO2949**Co-op Work Experience 2:****ECO****3 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of

1949 Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

Education**EDF1005****Introduction to the Teaching Profession****3 credits**

The student will learn the historical, sociological, and philosophical foundations of education, governance, finance, policies, legal, moral and ethical issues, and the professionalism of teaching. The student will develop an understanding of the Florida Educator Accomplished Practices, standards, and Professional Educator Competencies will be provided. Fifteen hours of service learning experience are required. (3 hr. lecture)

EDF2085**Introduction to Diversity****3 credits**

The student will learn about issues of diversity, including understanding the influence of exceptionalities, culture, family, gender, sexual orientation, socioeconomic status, religion, language, race, ethnicity, and age upon the educational experience. The student will explore personal attitudes toward diversity and exceptionalities. Fifteen hours of service learning experience are required. (3hr. lecture)

EDF3115**Child Development for Inclusive Settings****3 credits**

This course provides an overview of human life from fertilization through eight years of age. The student will examine growth and developmental characteristics during the prenatal, infancy, and early childhood periods. The student will learn to analyze typical and atypical development, developmental theories, learning theories, brain research, attachment, and relationships. Pre/Co-requisites: EEC1000 or 1001, EEC2224, EEC2271, EEC2401, EEC2407, EEC2601. Special Fee. (3 hr. lecture)

EDF4430**Measurement and Assessment in Education****3 credits**

The student will learn research-based principles of assessment. The student will select specific standards and competencies and develop formative and summative traditional and alternative assessments. The student will interpret assessment data that will improve academic achievement and ensure equity in the application of quantitative and qualitative assessments. Pre-requisite: EDG3321. Special Fee. (3 hr. lecture)

EDF4433**Data-Driven Instructional Change****3 credits**

This course on data-driven decision-making is designed for current teachers. The student will learn to set measurable goals, collect and analyze data, implement instructional interventions, and align practice to school improvement. Prerequisite: Bachelor's degree in education. (3 hr. lecture)

EDG2311**Substitute Training****1 credit**

Provides students with the necessary knowledge, skills, and dispositions to successfully serve as temporary instructors for the Miami-Dade County Public School (M-DCPS) Board. The course provides best practices in classroom management and effective teaching strategies; key items of M-DCPS Board policy and Florida statutes; and the Code of Ethics and Principles of Professional Conduct of the Education Profession in Florida. (1 hr. lecture)

EDG2313**General Teaching Skills****for Temporary Instructors****1 credit**

This one credit course is intended to extend the basic knowledge introduced in EDG 2311. Competencies provide best practices in effective teaching strategies. Students will learn the link between instructional objectives-matching strategies and activities-assessing learner competency; Bloom's Taxonomy and higher order thinking skills. The course content has been selected to comply with Florida statute 1012.35. Prerequisite: EDG 2311 and MDCPS Temporary Instructor Certification. (1 hr. lecture)

Introduction to Teaching**Mathematics and Science****for Paraprofessionals****3 credits**

This course provides an introduction to theoretical and practical frameworks for enabling the learning of mathematics and understanding the scientific process using approaches to accommodate diverse student population. The course also presents best practices (methods & strategies) specific to Florida's Sunshine State Standards, subject matter competencies, and pedagogy pertinent to the discipline. A minimum of 10 hours of structured field experience is required. Pre/corequisites: BSC 1005, MAC 1105. (3 hr. lecture)

EDG2370**Introduction to Teaching****Reading and Language Arts****for Paraprofessionals****3 credits**

The student will become familiar with a variety of teaching strategies by being involved in discussions, collaborative planning, group projects, roleplaying, and problem solving. In addition, this course will provide current research and practice and demonstrate instruction in preparing learners to develop as readers and writers. The student will also learn a variety of assessment tools that are aligned with the Sunshine State Standards and the Competency Based Curriculum. A minimum of 10 hours of structured field experience is required. (3 hr. lecture)

EDG2413**Effective Classroom Management for Temporary Instructors 1 credit**

This one credit course is intended to extend the basic classroom management techniques for Temporary Instructors introduced in EDG 2311. Students will learn how to implement effective classroom rules, natural and logical consequences, positive and negative reinforces, motivation to learn, teacher "wittiness," bell-to-bell instruction, effective grouping, and handling of severe discipline problems. Prerequisite: EDG 2311 and MDCPS Temporary Instructor Certification. (1 hr. lecture)

EDG2704**Teaching the Holocaust 3 credits**

The student will learn the history and issues of the Nazi Holocaust in order to prepare research-based instruction of Florida's mandated curriculum using a variety of resources, media, and literature. This course satisfies Florida Department of Education requirements for teacher recertification. (3 hr. lecture)

EDG2943**Educational Service Field Work 1-3 credits**

The student will learn to compile the necessary documents and complete the process of obtaining a state and/or national early childhood credential. The student must complete the four courses in either the Infant/Toddler Specialization or the Preschool Specialization in order to take this course. Prerequisite: EEC1311, EEC1200, EEC1000, EEC2202, EEC1001, EEC1522, EEC2201, EEC2407 (1 3 hr. lecture)

EDG3321**General Teaching Skills 3 credits**

The student will learn how human development and learning theories, developments in educational neuroscience, and current research based pedagogy apply to the teaching and learning process. The student will incorporate principles and skills of effective instruction in the planning and completion of a variety of activities and simulations. Special Fee. (3 hr. lecture)

EDG3410**Classroom Management and Communication for P-12 Teachers 3 credits**

In this teacher certification course, the student will learn to develop practical strategies and use applicable skills to create a positive, safe, organized, equitable, flexible, inclusive, collaborative, and student-centered P-12 classroom environment that promotes learning. (3 hr. lecture)

EDG3443**Classroom and Behavior Management 3 credits**

The student will learn behavior management and intervention principles to create a learning environment for general and exceptional students that encourages positive interaction and effective communication. The student will learn strategies for observing, assessing,

and modifying behavior, communicating with stakeholders, and structuring discipline. Fifteen hours of clinical experience are required. Pre/Co-requisites: EDG3321. Special Fee. (3 hr. lecture)

EDG4045**Civic Engagement through Service Learning 3 credits**

This course will prepare K-12 teachers to actively involve their students in civic responsibility and social action through the development and implementation of high-quality service learning experiences. Students will learn research based practices including utilization of quality literature, curricular integration, and collaboration between students, teachers, and the community will be modeled and practiced. Prerequisite: Must possess a B.S. degree. (Recertification Only). (3 hr. lecture)

EDG4343**Instructional Strategies for P-12 Teachers 3 credits**

In this teacher certification course, the student will utilize research-based instructional design models to create lesson plans and instruction that aligns with state standards. The student will learn to incorporate educational theories and educational neuroscience to develop strategies for inclusive P-12 classrooms serving diverse populations. (3 hr. lecture)

EDG4376**Integrated Language Arts and Social Sciences 3 credits**

This student will be provided with an overview of current methods of instruction in the language arts and the social sciences. The student will learn to plan and integrate language arts and social science strategies and content to create accessibility of the curriculum to a diverse population. Fifteen hours of service learning experience are required. Prerequisites: EDG3321, Pre/Co-requisites: EDF4430, RED3393. Special Fee. (3 hr. lecture)

EDS4940**Clinical Supervision for Educators 3 credits**

The course content is congruent with the Florida DOE Training, Clinical Supervision for Educators. Successful completion meets the FS 240.549 mandate for clinical supervision training required for hosting college teacher preparation students in field settings. Students will learn to observe and diagnose teacher classroom performance, write remedial plans, conduct post observation conferences, and evaluate performance. (3 hr. lecture)

EEC1000**Introduction to Early Childhood Education 3 credits**

The student will develop an understanding of the early childhood profession by analyzing family and societal influences on young children, principles of child growth and development, and the role of play in young children's learning. They will apply methods of observing and recording behavior. The students will

examine techniques of guiding behaviors, characteristics of appropriate early childhood programs, and teachers as professionals. (3 hr. lecture)

EEC1001**Introduction to Early Childhood Infant/Toddler Education 3 credits**

This is a foundation course in early childhood education and services for young children and their families. Students will learn historical roots, societal changes, program differentiation, and future trends. (3 hr. lecture)

EEC1200**Early Childhood Curriculum 1 3 credits**

The student will learn developmentally appropriate curriculum planning and its impact on children's total development. The student will examine the importance of dramatic play, proper room arrangement, outdoor environments, advances in technology, scheduling, classroom management, and activity planning for first and second language development, early literacy, and social studies. (3 hr. lecture)

EEC1311**Early Childhood Curriculum 2 3 credits**

The student will learn developmentally appropriate curriculum planning and its impact on children's total development. The student will examine the importance of integrating appropriate experiences across curriculum including math, science, art, music, creative movement, cooking, nutrition, and health and safety. (3 hr. lecture)

EEC1522**Infant and Toddler Environments 3 credits**

This is a foundation course for planning the physical facilities, equipment and materials for quality infant and toddler environments. Students will learn how the physical environment affects development of children and supports individual differences. (3 hr. lecture)

EEC2002**Operation of an Early Childhood Facility 3 credits**

A study of the facilities, equipment, and program planning, using educational objectives and lesson plans in the preschool; an overview of exceptional children; supervised field experience. Prerequisite: EEC 1000 or 1200; must have a grade of "C" or better. (3 hr. lecture)

EEC2201**Developing Curriculum for Infants and Toddlers 3 credits**

This is a foundation course in developing appropriate curriculum and learning opportunities for infants and toddlers. Students will learn health, safety, physical, social, emotional, cognitive, language and communication development. (3 hr. lecture)

EEC2202**Program Development in Early Childhood Education 3 credits**

Program development in Early Childhood Education is the fourth in a sequence of four courses in Early Childhood Education. The course is primarily concerned with the investigation of effective Early Childhood programming and includes the major areas of the learning environment, disadvantaged children, federal and state programs, special needs and at risk children, current model programs, rules and regulations, and professionalism. Assessment of children and reporting of progress will be examined. The course will emphasize the fostering of effective family/school relationships. (The module on rules and regulations satisfies H.R.S. requirements as mandated by the State of Florida.) The course combines three hours per week in the college classroom with a supervised field experience of at least 40 Hours per semester. Prerequisite: EEC 1000 must earn a grade of "C" or better. (3 hr. lecture)

EEC2221
Curriculum High/Scope Approach 3 credits

The student will learn about the High/Scope curriculum, its implementation in the classroom and the different components of this approach: the daily routine, planning time, work time, recall time, small-group time, large-group time, and outside time. The student will also learn to use key experiences to set up the learning environment, support children's learning in their play, encourage them to interact in groups, and plan related learning experiences, that will directly impact on the advancement of children's social, emotional, physical, and cognitive development in the areas of language, math, science, art, music, and creativity. (3 hr. lecture)

EEC2224
Emergent Literacy through the Use of Children's Literature 3 credits

The student will learn about the early childhood teacher's role in promoting emergent literacy in early childhood education (birth age 8). Topics will support a curriculum that builds an understanding of oral language, fluency, vocabulary, comprehension, phonics, phonological awareness, children's literature, family literacy, and literature perspectives to celebrate diversity. (3 hr. lecture)

EEC2271
Working with Young Children with Special Needs and their Families 3 credits

This course provides the student with an overview of young children birth through five years of age with special needs and their families. The student will learn the possible causes and characteristics of exceptionalities, federal laws, and methods of observation, referral process, educational intervention, resources, and advocacy (20 hours in a B-4 SPED setting). (3 hr. lecture)

EEC2401
Family Interaction and Cultural Continuity 3 credits

The student will incorporate practices re-

flecting the values beliefs of families and the cultures of their communities in establishing positive and productive relationships within an educational setting. Emphasis is given to trusting, supportive relationships, and to sustaining a successful partnership with families. (3 hr. lecture)

EEC2407
Facilitating Social Development 3 credits

This course provides a general introduction to promoting social competency in young children. The major areas of study include: current brain research, developing empathy, creating prosocial classroom environments, developing self-control and the study of current classroom models of behavior guidance. (3 hr. lecture)

EEC2520
Early Childhood Organization Leadership and Management 3 credits

This course is designed to provide potential and current child care administrators the opportunity of satisfying one of the educational requirements for the Advanced Level Child Care and Education Administrator Credential as defined by the State of Florida. It is intended to present the needed skills and information in the following areas: organizational structure and dynamics; ethics and professionalism; leadership personnel policies and relationships; and the evaluation and retention involved in staff development. Prerequisite: Florida 40 hour Introductory Child Care Course and Child Development Associate, CDA equivalency or above. (3 hr. lecture)

EEC2523
Programming & Management for Early Childhood Administrators 3 credits

This course is one of four courses required for a Florida Advanced Level Credential in Child Care Management. The competencies include developmentally and culturally appropriate environments for childcare centers; developmentally and culturally appropriate curriculum for childcare centers; professional standards for child care managers; child observation, assessment, documentation and referral in child care centers; health, safety and nutrition practices in childcare centers; and alliances with the families of children enrolled in childcare centers. Prerequisite: Florida 40 hour Introductory Childcare Course and Child Development Associate (CDA), Child Development Associate Equivalent (CDAE) or above. (3 hr. lecture)

EEC2527
Legal & Financial Issue in Child Care 3 credits

This course will provide opportunities for administrators or future administrators of early childhood facilities to develop and enhance knowledge in financial and legal issues in the design and implementation of quality early care and education programs. Areas to be covered include financial planning and on-going monitoring, budgeting and accounting, compensation and benefits, facilities

and equipment, financial resource development and marketing, technology and record-keeping, legal obligations tax law, insurance and licensure, regulatory requirements and personnel law. This course meets the requirements for one of the three courses required for Florida child Care and Education Program Administrator Advanced Level Credential. (3 hr. lecture)

EEC2601
Observation and Assessment in Early Childhood 3 credits

The student will learn the process and importance of observing, documenting, and interpreting the behavior of young children. Students will learn and apply various methods to document the ongoing development of children and the value of using this information to plan. (20 hours service learning in a B-4 NAEYC accredited setting). (3 hr. lecture)

EEC3301
General Teaching Methods for Early Childhood Education 3 credits

The student will develop skills and utilize instructional models to design lesson plans and instruction based on state standards. The student will learn to incorporate educational theories and neuroscience to develop strategies for early childhood inclusive classrooms serving diverse populations. Fifteen hours of clinical experience required in B-4, 3-5, and K-3 settings. Pre-requisites: EEC2401, Pre/Co-requisites: EDF3115, EEC1000, EEC2224, EEC2271, EEC2407, and EEC2601. Special Fee. (3 hr. lect.)

EEEX2000
Introduction to Special Education 3 credits

This introductory course is designed to familiarize pre-service and in-service educators with issues related to the instruction of students with special needs. Pre-service and in-service educators will learn the history of the special education field, litigation and legislation, and an overview of exceptionalities. Prerequisite: EDF1005 (3 hr. lecture)

EEEX2010
Teaching Exceptional Children for Temporary Instructors 1 credit

This one credit course is intended to extend the basic concepts introduced in EDG 2311. Students will learn research-based child development concepts; federal, state, and local Exceptional Student Education Legislation, programs and procedures; cultural and diversity issues in local schools; the district TESOL program, developmentally appropriate content and activities, and school/classroom organization patterns. Prerequisite: EDG 2311 and MDCPS Temporary Instructor Certification. (1 hr. lecture)

EEEX2776
The Challenged Citizen in the Workplace 3 credits

This course is designed to provide the necessary skills and attitudes to comprehend, analyze, apply, discuss, and incorporate ef-

fective practice principles when working in a diverse workforce that includes people with mental and physical challenges. This course emphasizes the perspectives, challenges, and processes regarding making the workplace more inclusive for all employees across a wide variety of professional disciplines. (3 hr. lecture)

**EEX4094
Nature and Needs of Students
with Autism Spectrum
Disorders** 3 credits

The student will learn basic skills, knowledge, and strategies associated with teaching students with autism spectrum disorders (ASD). The student will acquire content and pedagogical knowledge to provide effective instructional practices to students with ASD. Six hours of clinical experience hours are required. Prerequisite: BS in Exceptional Student Education (ESE) plus experience working with students with varying exceptionalities. Special fee. (3 hr. Lecture)

**EEX4200C
Medical Needs of Students
with Exceptionalities** 4 credits

The student will learn to address low acuity/high frequency and high acuity/low frequency routine medical situations and emergency medical situations through evidence-based practices. The student will plan, intervene, and evaluate the medical needs of students with exceptionalities through active learning, role-playing and high-fidelity simulations. The student will also learn to use appropriate interventions until qualified personnel are available. Departmental Permission and evidence of current CPR certification. (3 hr. lecture; 1 hr. lab)

**EEX4232
Assessment and Diagnosis
of Autism Spectrum Disorders** 3 credits

The student will learn assessment instruments and strategies used for the referral, diagnosis, and remediation of academic and behavioral difficulties of students with autism spectrum disorders. The student will learn to utilize assessment instruments for instructional planning and evaluating learning outcomes. Six hours of clinical experience are required. Special fee. Prerequisite: EEX4094 (3 hr. lecture)

**EEX4613
Behavior Supports and
Management for Students with
Autism Spectrum Disorders** 3 credits

The student will learn disability specific assessment tools used to evaluate social, emotional, and behavioral skills of students with autism spectrum disorders. The student will learn intervention strategies for teaching positive behavior support and appropriate adaptive behavior. Six hours of clinical experience are required. Prerequisite: BS in Exceptional Student Education (ESE) plus experience working with students with varying exceptionalities. Special fee. (3 hr. lecture)

**EEX4761
Assistive Technology and
Communication Systems for
Students with Autism
Spectrum Disorders** 3 credits

The student will learn about assistive technology (AT) strategies including its use for improving the communication and functional capabilities of students with autism spectrum disorders. The student will learn about instructional and assistive technology devices used to support students with autism spectrum disorders. Six hours of clinical experience are required. Special fee. Corequisite: EEX4094. (3 hr. lecture)

**EGI4050
Nature and Needs of Gifted
Students** 3 credits

This is one of five courses designed to provide students characteristics and educational needs of adverse gifted population; giftedness is examined historically, theoretically, and practically. Students will learn the changing views of intelligence and giftedness, understanding the diverse socio-cultural, linguistic, and economic backgrounds of the gifted, policy and practice, program models, and the process of giftedness identification. Must hold FLDOE Teaching Certificate. (3 hr. lecture)

**EGI4230
Curriculum and Educational
Strategies for the Gifted** 3 credits

This course focuses on the implementation of research-based strategies, differentiated curriculum planning, and instructional design for the education of gifted students. Students will learn a variety of enrichment and acceleration approaches and techniques for use in the organization of the learning environment to promote student achievement. Prerequisite: EGI4050 (3 hr. lecture)

**EGI4244
Educating Special Populations
of Gifted Students** 3 credits

This course emphasizes the socio-cultural and educational similarities and differences of gifted students. Students will learn the instructional strategies, resources, and materials necessary for the implementation of an equitable system of instruction. Prerequisite: EGI4050 (3 hr. lecture)

**EGI4301
Theory and Development
of Creativity** 3 credits

This course focuses on practical applications of the psychological, environmental, and socio-cultural aspects of creativity. Students will learn effective teaching and assessment strategies to manifest and nurture creative thinking and expression are modeled and practiced. Prerequisite: EGI4050 (3hr. lecture)

**EGI4410
Guidance and Counseling
of Gifted Students** 3 credits

This course focuses on psychological, cultural, and environmental factors that influence the affective growth and development of

gifted students. Students will learn guidance, mentoring, and counseling interventions that address the unique needs of gifted students. Prerequisite: EGI4050 (3 hr. lecture)

**EME2040
Introduction to Technology
for Educators** 3 credits

The student will learn instructional design principles for the use of technology in teaching and learning. The student will participate in hands-on experiences with educational media, emerging technologies, hardware, software, and peripherals for the personal computer will be provided. The student will use data driven decision-making to identify appropriate software for classroom applications. Prerequisite: CGS1060 (3 hr. lecture)

**EME2071
Educating Young Children
for Digital Literacy in the
21st Century** 3 credits

This course provides an overview of technology and interactive media in early childhood. The student will learn ways in which to optimize opportunities for young children's cognitive, social, emotional, physical, and linguistic development by using technology and media in ways that are grounded in principles of early childhood development and developmentally appropriate practices. The student will learn how to make informed decisions regarding the intentional use of technology and media in ways that support children's learning and development. Prerequisite: Departmental permission. (3 hr. lecture)

**EME3430
Instructional Technology in
Mathematics and Science** 2 credits

The student will apply knowledge of mathematics and science content to select appropriate technology tools in the planning and instructing of diverse populations in the secondary classroom. The student will learn to utilize spreadsheets, statistical packages, graphing calculators, data-collection devices, probe ware, virtual manipulatives, virtual labs, simulations, software, Internet resources, and assistive technology. Special Fee. (2 hr. lecture)

**TSL1084
Introduction to ESOL Principles
and Practices** 3 credits

The student will learn about the major elements of first and second language acquisition. Course activities are designed to increase students' understanding of ways to improve the quality of language teaching and learning and to expand their communication and critical thinking skills. Course assignments are designed to enhance students' skills in creating a positive learning environment for all K-12 learners, including those at-risk and those from diverse language backgrounds. A minimum of 10 hours of structured field experience is required. (3 hr. lecture)

Education Foundations & Policy Studies

EEC3211 Science, Technology, and Mathematics (STEM) Methods for ECE I 3 credits

The student will learn to use scientific and mathematical educational neuroscience research based methods and strategies to teach inquiry and problem-solving skills and plan activities for young children that foster exploration in the sciences. Fifteen hours of clinical experience required in an infant/toddler and Pre-K setting; 1 observation required. Pre/Co-requisites: EDF3115, EEC3301. Special Fee. (3 hr. lecture)

EEC3212 Integrated Social Sciences, Humanities, and Arts 3 credits

The student will learn to plan, implement, and assess developmentally appropriate activities for an interdisciplinary unit (social studies, humanities, and the fine arts) that integrate the diverse sociological and cultural influences on the young child. Fifteen hours of clinical experience in a PreK and K-3 setting; 1 observation required. Pre-requisites: EEC3301. Special Fee. (3 hr. lecture)

EEC4219 Science, Technology, and Mathematics (STEM) Methods for ECE II 3 credits

The student will learn to use scientific and mathematical research-based methods and strategies to teach inquiry and problem solving skills and plan activities for young children that foster exploration in the nature of science, mathematics, and technology. Fifteen hours of clinical experience in aK-3 classroom; 1 observation required. Pre-requisites: EEC3211. Special Fee. (3 hr. lecture)

EEC4268 Designing and Implementing an Integrated Curriculum (Practicum) 3 credits

The student will plan, develop, and implement action research strategies to meet the needs of struggling readers. The student will attend professional development experiences designed to develop knowledge and pedagogy. The student will learn to prepare for interviews and entry into the profession. Sixty hours of clinical experience are required. Pre-requisites: EDF3115, EEC3301, EEX3226, EEX3603, Co-requisites: LAE4211. Recommended Preparation: Passing score on the Professional Education Exam. Special Fee. (144 hr. practicum)

EEC4936 Student Teaching Seminar I: ECE 1 credit

The student will learn to discuss and reflect on their development and mastery of the Pre-Professional Florida Educator Accomplished Practices during the completion of their in-

ternship in a Birth-Four classroom setting. Co-requisites: EEC4940. (1 hr. lecture)

EEC4936C Student Teaching Seminar II: ECE 1 credit

The student will learn to discuss and reflect on their development and mastery of the Pre-Professional Florida Educator Accomplished Practices during the completion of their internship in a K-3 classroom setting. Co-requisites: EEC4940c. (1 hr. lecture)

EEC4940 Internship in Early Childhood Education I 5 credits

The student will complete a full time (10 weeks), supervised teaching experience in a Birth - Four setting. The student will learn and experience all of the educational and professional responsibilities common to teachers within their area of expertise. Co-requisites: EEC4936. (240 hr. Internship)

EEC4940C Internship in Early Childhood Education II 5 credits

The student will complete a full time (10 weeks), supervised teaching experience in the K-3 setting. The student will learn and experience all of the educational and professional responsibilities common to teachers within their area of expertise. Pre-requisites: Co-requisites: EEC4936C. (240 hr. Internship)

EEX3071 Teaching Exceptional and Diverse Populations in Inclusive Settings 3 credits

The student will learn current research-based instructional strategies, educational neuroscience, and legal and ethical issues necessary in addressing the needs of diverse learners in inclusive classrooms. The student will make informed decisions in adapting, accommodating, and modifying the curriculum for students with special needs. Fifteen hours of clinical experience are required. Pre-requisites: EEX2000 and EDG3321. Special fee. (3 hr. lecture)

EEX3103 Survey of Language Development & Common Disorders 1 credit

This course is designed for the student to acquire a basic understanding of normal language development, identify major communication disorders, and plan for a diverse population. (1 hr. lecture)

EEX3120 Language Development and Communication Disorders 3 credits

The student will learn about typical language and speech development, characteristics and manifestations of communication disorders, and educational neuroscience research concerning first and second language acquisition. Strategies and accommodations will be studied, identified, and used in planning instruction for K 12 students with speech and language disorders and differences. Pre/Co-requisites: EDG3321. (3 hr. lecture)

EEEX3226 Assessment of All Young Children 3 credits

The student will utilize guidelines and techniques for observing, assessing, evaluating, and planning curriculum for young children. The student will learn to use formal and informal assessments to evaluate social-emotional, cognitive, language, and motor development and will use data to plan for instruction. Fifteen hours clinical experience required in inclusive settings. Pre-requisites: EEC2601, EEC2271; Pre/Co-requisites: EDF3115, EEC3301. Special Fee. (3 hr. lecture)

EEEX3603 Positive Behavior Supports in Inclusive Settings 3 credits

This course provides a holistic approach in guiding young children's behavior. The student will learn to utilize strategies that emphasize the importance of relationships to learning, self-awareness, and pro-social behaviors focusing on individual needs of each child. Fifteen hours of clinical experience in inclusive settings. Pre-requisites: EEC2271. Special Fee. (3 hr. lecture)

EEEX3760 Instructional & Assistive Technology in Special Education 2 credits

This course provides a basic foundation for the use of technology in special education. Students will learn the educational and assistive technologies (AT) used to support low-incidence special education students and select the best technology applications for the classroom. (2 hr. lecture)

EEEX4012 Introduction to Brain-Based Teaching Strategies 1 credit

The student will learn how the brain processes information and how to best engage the brain during learning. In this overview course, the student will acquire research-based, brain-friendly strategies that focus on students with disabilities, English language learners, reading, and mathematics. (1 hr. lecture)

EEEX4024 Legal Issues for Working with Students with Exceptionalities 3 credits

The student will learn about the history, governing legislation, and current status of special education in the US. Through case analyses and simulations, the student will correlate and evaluate P-12classroom and administrative practices and issues with current legislation and mandates. (3 hr. lecture)

EEEX4221 Assessment in Special Education 3 credits

The student will study, analyze, and administer informal and formal assessments to K-12 learners with special needs. The student will learn to prepare and present assessment data for use in instructional planning and developing individualized educational plans for

K-12 learners with disabilities. Pre-requisites: EDG3321, and EDF4430. Special Fee. (3 hr. lecture)

EEX4264
Curriculum and Instructional Strategies for Students with Disabilities K-5 3 credits

This course focuses on specialized methods for the creation of instructional curricula and appropriate pedagogic methods for students with disabilities in grades K-5. The development of curricula and the use of instructional approaches that correspond to the capabilities and styles of the various learners will be emphasized. This course meets the guidelines of the Educator Accomplished Practices, and incorporates The Council for Exceptional Children's Content Standards for All Beginning Special Education Teachers. A minimum 20 hours of structured field experience required. Prerequisites: EDF 3214, EEX 3111. (3 hr. lecture)

EEX4265
Curriculum and Instructional Strategies for Students with Disabilities 6-12 3 credits

This course focuses on specialized methods for the creation of instructional curricula and appropriate pedagogic methods for students with disabilities in grades 6-12. The development of curricula and the use of instructional approaches that correspond to the capabilities and styles of the various learners will be emphasized. This course meets the guidelines of the Educator Accomplished Practices, and incorporates the Council for Exceptional Children's Content Standards for All Beginning Special Education Teachers. A minimum 20 hours of structured field experience required. Prerequisites: EDF3214, EEX 3012. (3 hr. lecture)

EEX4294
Differentiated Instruction in Mixed-Ability Classrooms 3 credits

The student will learn the educational neuro scientific basis for providing differentiated instruction in mixed-ability classrooms. The student will utilize research-based instructional and assessment strategies to create differentiated instruction to meet the needs of all learners in P-12 classrooms. (3 hr. lecture)

EEX4601
Effective Behavioral Practices & Interventions in Exceptional Student Education 3 credits

This course is designed to familiarize the students with the educational management of exceptional learners. Emphasis is on behavior practices and consultation skills leading to students managing their own behavior. Strategies to create and maintain safe, healthy environments for learning in exceptional and inclusive classrooms are presented. Students will demonstrate the Educator Accomplished Practices in this course. The Council for Exceptional Children's Content Standards for all Beginning Special Education Teachers are addressed. Prerequisites: EDF 3111, EEX 3012. (3 hr. lecture)

EEX4614
Conflict Resolution 3 credits

This course emphasizes techniques and procedures designed to assist individuals in their development as self-directed problem solvers. Students will learn ways to assess and de-escalate conflict situations utilizing a cross-cultural perspective and research-based techniques. A conflict resolution program will be developed for implementation at the organizational or school site. (For Recertification Only)

EEX4764
Instructional and Assistive Technology in Special Education 3 credits

The student will acquire a basic foundation of the use of technology in special education. The student will learn about the educational and assistive technologies (AT) used to support K-12 learners with low and high incidence disabilities and select the best technology applications for the classroom. Prerequisites: EEX3071. (3 hr. lecture)

EEX4833
Practicum in Special Education 3 credits

The student will plan, develop, and implement literacy pedagogic methods that meet the needs of a diverse population of K-12 learners. The student will learn to utilize action research methodology, assessment principles, educational neuroscience research, and best practices to determine the effectiveness of a literacy strategy. Sixty hours of clinical experience are required. Prerequisites: EDF4430, EDG3321, EDG4376, EEX3071, EEX3120, RED3393, and TSL3243; Pre/Co-requisites: EEX4221 or, MAE4360 or, RED4519 or, SCE4362 or, TSL4311. (144 hr. practicum)

EEX4834
Practicum in Special Education 3 credits

This course provides opportunities to plan, collaborate, and implement strategies and pedagogic methods for creating a research based instructional curricula for students in grades K-12. Students will learn to develop and implement curricula and instructional approaches that correspond to diverse learning styles. Forty hours of field experience are required. (3 hr. lecture)

EEX4930
Seminar in Special Education 3 credits

The student will learn to discuss and reflect on their development and mastery of the Pre-Professional Florida Educator Accomplished Practices during the completion of their internship in a K-12 classroom setting. Co-requisites: EEX4940. (3 hr. lecture)

EEX4940
Internship in Special Education 9 credits

The student will complete a full time, supervised teaching experience in the K-12 setting. The student will learn and experience all of the educational and professional responsibilities common to teachers within their area of

expertise. Co-requisites: EEX4930. (432 hr. Internship)

MAE4360
Methods of Teaching Mathematics 3 credits

The student will learn and utilize theory and educational neuroscience research in developing knowledge and pedagogy essential for K-12 mathematics instruction which accommodates the needs of diverse learners. The problem-solving approach will be used to design, implement, and assess mathematics instruction and curriculum. Fifteen hours of clinical experience are required. Pre-requisites: EDG3321; Pre/Co-requisites: EDF4430. Special Fee. (3 hr. lecture)

MAE4383
Instructional Methods in Secondary Mathematics Using Technology 3 credits

This course addresses the required instructional methods, techniques, strategies, resources, and assessment considerations for effective teaching of secondary mathematics classroom. It also incorporates appropriate technology to support the learning of mathematics. This course addresses specific Sunshine State Standards, subject matter competencies, and pedagogy pertinent to the discipline and required for certification Pre-requisite: MAC 2312 or department approval. (3 hr. lecture)

MAE4940
Advanced Topics in Mathematics Education Practicum 3 credits

The student will plan and implement mathematics instruction that meets the needs of a diverse population of learners. The student will learn to utilize action research methodology, assessment principles, educational neuroscience research, and best practices to identify and address issues related to mathematics learning in grades 6-12. Sixty hours of clinical experience are required. Special Fee. (432 hr. practicum)

MAE4942
Seminar in Mathematics Education 3 credits

The student will learn to discuss and reflect on their development and mastery of the Pre-Professional Florida Educator Accomplished Practices during the completion of their internship in a grades 6-12 mathematics setting. Co-requisites: MAE4945. Special Fee. (3 hr. lecture)

MAE4945
Internship in Mathematics Education 9 credits

The student will complete a full time, supervised teaching experience. The student will learn and experience all of the educational and professional responsibilities common to mathematics teachers. Co-requisites: MAE4942. (432 hr. practicum)

MHF4404

History of Mathematics 3 credits
A study of the development of mathematics from ancient civilizations to the present time. Prerequisite: MAC 2312 or approval of department. (3 hr. lecture)

SCE3893

Teaching and Learning the Nature of Science 3 credits
Students will identify the philosophical, historical, and sociological views of the nature of science and its role in science education reform. The student will learn to develop instructional materials and strategies focusing on the nature of science. Fifteen contact hours of clinical experience are required. Special fee. (3 hr. lecture)

SCE4362

Methods of Teaching Science 3 credits
The student will develop theoretical knowledge and skills that are essential for successful K-12 science instruction. The student will learn to design, implement, and assess science instruction and curriculum utilizing the inquiry method, educational neuroscience research, and best practices that accommodate the learning needs of a diverse population. Fifteen hours of clinical experience are required. Pre/Co-requisites: EDF4430. Special Fee. (3 hr. lecture)

SCE4363

Advanced Topics in Science Education Practicum 3 credits
The student will plan and implement science instruction that meets the needs of a diverse population of learners. The student will learn to utilize action research methodology, assessment principles, educational neuroscience research, and best practices to identify and address issues related to science learning in grades 6-12. Sixty hours of clinical experience are required. Pre-requisites: EDF4430, EDG3321, RED3393, SCE4362, TSL4324C; Pre/Co-requisites: EEX3071, SCE3893. (144 hr. practicum)

SCE4943

Seminar in Science Education 3 credits
The student will learn to discuss and reflect on his/her development and mastery of the Pre-Professional Florida Educator Accomplished Practices during the completion of their internship in a grades 6-12 science setting. Co-requisites: SCE4945. Special Fee. (3 hr. lecture)

SCE4945

Internship in Science Education 9 credits
The student will complete a full time, supervised teaching experience. The student will learn and experience all of the educational and professional responsibilities common to science teachers. Co-requisites: SCE4943. (432 hr. Internship)

Education: American Sign Language and ASL Interpretation

INT1000

Interpreting Ethics and Professionalism 3 credits

The course provides an overview of the career of sign language interpreter. Included are the interpreter's role and responsibilities, Code of Ethics issues, evaluation systems for determining competency and logistical considerations. Various statutes will be examined with regard to their implications for interpreting and related services. These include The American with Disabilities Act (ADA), the education for all Handicapped Children Act and the Rehabilitation Act. Prerequisites: ASL 1150C, 1000. (3 hr. lecture)

INT1202

Sign to Voice Interpreting 3 credits

In-depth discussion and application of techniques and principles for interpreting legal, medical, oral and deaf/blind situations. Prerequisites: ASL 2160C, INT 1240. A.S. degree credit only. (3 hr. lecture)

INT1240

Voice to Sign Interpreting 3 credits

In-depth discussion and application of techniques and principles for interpreting situations in educational, social service, free-lance interpreting and the business aspects of interpreting. Prerequisites: ASL 2160C, INT 1000. (3 hr. lecture)

INT1400

Educational Interpreting 3 credits

Provides an overview of the field, including the role and responsibilities of educational interpreters, their working conditions and related issues. Also covered are evaluation systems for educational interpreters and the Florida Educational Code of Ethics. Opportunities for skill building will be included with emphasis placed on signing with conceptual accuracy, mastering various sign systems and developing expertise in the use of technical signs. Prerequisite: INT1000. (3 hr. lecture)

INT1480

Interpreting: Special Settings & Populations 3 credits

The course examines various settings in which interpreters work. These include social service and rehabilitation, employment-related, mental health and substance abuse treatment, religious, performing arts, legal and other settings. Also considered are specific deaf and hard of hearing consumers who present unique challenges for interpreters such as oral deaf persons, people who are both deaf and blind and those who would be classified as having minimal language skills (MLS). The course includes lecture and skill building opportunities. Prerequisites: ASL 2160C, INT 1000. (3 hr. lecture)

INT1941

Interpreting Internship 5 credits

The course includes field observation and supervised practical interpreting experience in a one-to-one interpreting situation in the community. The student is assigned to a practicing interpreter who acts as a mentor for the duration of the internship. A minimum of 240 hours is spent in the internship experience. This includes meetings with college staff and the interpreter/mentor. Prerequisites: All courses in the subject major must have been completed prior to enrolling in this course. (240 hrs.)

Emergency Medical Services

EMS1059

1st Responder Emergency Care 1 credit

Provides training in emergency medical care for those who may be first to respond to an accident. The course meets the basic requirements of the U.S. Department of Transportation. Recommended for students who are not required to be certified EMT's. A.S. degree credit only. Co-requisite EMS 1059L. Special fee. (2 hr. lecture)

EMS1059L

1st Responder Emergency Care Laboratory 1 credit

Provide training in emergency medical care for those who may be first to respond to an accident. The course meets the basic requirements of the U.S. Department of Transportation. Corequisite: EMS 1059. A.S. Degree credit only (2 hr. lab)

EMS1119

Emergency Medical Technician 4 credits

A review of basic life support theory. Areas of emphasis include the prehospital environment, preparatory information, patient assessment, medical emergencies, behavioral emergencies, OB/GYN emergencies, trauma emergencies, pediatric emergencies and EMS operations. Corequisites: EMS 1119L, EMS 1431. (4 hr. lecture)

EMS1119L

Emergency Medical Technician Lab and Clinic 2 credits

Practical application of the content covered in EMS 1119 with an emphasis on cardiopulmonary resuscitation, splinting, bandaging, patient movement, and other skills as recommended by the U.S. Department of Transportation for the EMT-A level practitioner. Corequisites: EMS 1119, 1431. Laboratory fee. A.S. degree credit only. (8 hr. lab)

EMS1431

EMT Hospital/Field Experience 3 credits

Practice in local emergency departments and rescue agencies under professional supervision. This course meets the skills recommended by the U.S. Department of Transportation. Corequisite: EMS 1119, 1119L. A.S. degree credit only. (9 hr. clinic)

EMS2311**Emergency Medical Operations****3 credits**

Advanced theory of management operations currently used nationally by comprehensive emergency medical service systems. Legal issues as related to various aspects of the system, personnel policies, provider versus client roles, disaster planning, communications, budgeting and evaluation of the system will be discussed. Prerequisite: MNA 1345. A.S. degree credit only. (3 hr. lecture)

EMS2601**Paramedic Lecture 1****8 credits**

EMS2601 is the first course in the sequence necessary for completion of the Paramedic Certificate program. The course is designed to reinforce concepts and clinical skills learned at the EMT level and to integrate this knowledge beginning with advanced life support concepts and skills. Emphasis is placed on EMS systems, illness and injury prevention, medical-legal issues, patient assessment, airway management and ventilation, pathophysiology, pharmacology, shock, decision-making, and the management of trauma related injuries. This course includes Modules 1-4 of the 1998 DOT National Standard Curriculum for Paramedic Programs. Prerequisites: EMS 2601L, 2664. A.S. degree credit only. (8 hr. lecture)

EMS2601L**Paramedic Laboratory 1****4 credits**

A review of basic life support practice and an introduction to advanced life support practice. Areas of emphasis include the patient assessment, trauma emergencies, obstetric emergencies, gynecological emergencies, pediatric emergencies and psychiatric emergencies. Students will be expected to master the techniques of patient assessment, intravenous techniques and endotracheal intubation. Corequisite: EMS 2601, 2664. Laboratory fee. (8 hr. lab)

EMS2602**Paramedic Lecture 2****8 credits**

EMS 2602 is the second course in the sequence necessary for the completion of the Paramedic Certificate Program. This course is designed to reinforce and expand upon the material and skills learned in Paramedic 1 level and to integrate prior learning with enhanced life support concepts and skills. Emphasis is placed on patient assessment and recognition of significant findings, pre-hospital diagnosis and differential diagnosis, treatment strategies, anatomy and physiology, pathophysiology, and the management of various emergencies, patients with special challenges, assessment based management, and EMS operations. This course includes Modules 5-8 of the 1998 DOT National Standard Curriculum for Paramedic Programs. Prerequisites: EMS 2602L, 2665; corequisites: EMS 2601, 2601L, 2664. A.S. degree credit only. (8 hr. lecture)

EMS2602L**Paramedic Laboratory 2****4 credits**

Continuation of advanced life support practice. Areas of emphasis include the patient assessment, trauma emergencies, obstetric emergencies, gynecological emergencies, pediatric emergencies and psychiatric emergencies. Students will be expected to master the techniques of patient assessment, intravenous techniques, endotracheal intubation, and advanced life support. Corequisites: EMS2602, 2665. Laboratory fee. A.S. degree credit only. (8 hr. lab)

EMS2659**EMS-Field Internship and Conference****8 credits**

A supervised clinical experience on an advanced life Support (ALS) vehicle. The student obtains increasing patient care responsibilities as a working member of the EMS team under the direct supervision of a designated preceptor. Prerequisites: EMS 2601, 2601L, 2602, 2602L, 2664, 2665. A.S. degree credit only. (24 hr. clinic)

EMS2664**PARAMEDIC CLINIC 1****3 credits**

EMS 2664 is designed to allow the students "hands-on" practice of the skills and theories learned in EMS 2601 and 2601L. Clinical experience will take place in many areas including the emergency department, operating room and medical examiner's office. All patient care experience will be practiced under the direct supervision of a medical professional (Paramedic, Nurse, Physician, etc.). Corequisites: EMS 2601L, 2601. A.S. degree credit only. (9hr. lab)

EMS2665**Paramedic Clinic 2****3 credits**

EMS 2665 is designed to allow the students "hands-on" practice of the skills and theories learned in EMS 2602 and 2602L. Clinical experience will take place in many areas including the emergency department, operating room and critical care unit. All patient care experience will be practiced under the direct supervision of a medical professional (paramedic, Nurse, Physician, etc.). Corequisites: EMS 2602, 2602L. A.S. degree credit only. (9 hr. lab)

Engineering - General

EGN1008C**Introduction to Engineering****3 credits**

An introduction to the opportunities, challenges, and required skills of the engineering profession. Students explored the different disciplines of engineering, their function in industry, and required education. Professional issues such as registration, ethics, safety, and design are discussed. Projects and activities are used to develop problem solving, communication and computer skills (word-processing, spreadsheets, presentations, mathematical analysis, email, Internet). Prerequisite: MAC 1105. (3 hr. lecture)

EGN1949**Co-op Wrk Exp 1****1-4 credits**

This is a capstone course designed for students majoring in engineering programs. Students will learn to apply the skills and knowledge that they have acquired through their program of study in a real work environment. Prerequisite: Successful completion of required program course work and department approval. A.S. degree credit only. (1-4 hr. lecture)

EGN2312**Engineering Mechanics - Statics (With Vectors)****4 credits**

This is a foundation course in engineering mechanics. Students will learn the basic principles of statics covering resultants, equilibrium, trusses, frames, friction, centroids and moments of inertia with vector notation and calculus. The content prepares students for further study in engineering dynamics. Prerequisites: MAC 2312, PHY 2048. Laboratory fee. (3 hr. lecture; 2 hr. lab)

EGN2949**CO-OP WRK EXP 2****1-3 credits**

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. (3 hr. Lecture)

EGN2990**CO-OP WRK EXP 3****3 credits**

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. (3 hr. Lecture)

EGN2991**CO-OP WRK EXP 4****3 credits**

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. (3 hr. Lecture)

EGS1010**Applied Research Methods****1-3 credits**

This course is designed for STEM majors. Students will learn basic research practices: research methods, experimentation, validation, technical writing, and presentations. Using

the Affinity Research Group model, students will work in groups to conduct theory-based STEM research, develop poster presentations, and write conference and journal publications. (1-3 hr. lecture)

Engineering Technology Civil

ETC2450 Concrete Construction 3 credits

The use of concrete in construction to include foundations, columns, beams, slabs, hydraulic conduits. Prerequisite: ETG 2502. (3 hr. lecture)

Engineering Technology Drafting

ETD1110 Technical Drawing 1 4 credits

Introduces students to the principles of instrument drawing, orthographic projection, visualization, specialized computer processes and introductory computer aided drawing (CAD). Students develop drawing and sketching techniques common to industry. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ETD1340 Computer Aided Drawing & Design 3 credits

This course is recommended for all engineering students as an introduction to the basic concepts of drafting and designing using a computer. Students will learn industry standard drafting and design practices using AutoCAD in a laboratory environment. Prerequisites: EGS1001C, and MAC 1114 or 1147. Special fee. (2 hr. lecture; 2 hr. lab)

ETD1542 Structural Drafting 4 credits

Development of structural, fabrication and erecting drawings. Course involves study of structural shapes, their properties, and methods of developing connections, as well as study of common reinforced concrete practices. Prerequisite: ETD 1110. Laboratory fee. (2 hr. lecture; 4 hr. lab)

Engineering Technology Electrical

CET1110C Digital Circuits 4 credits

This course is intended for students majoring in Electronics or Computer Engineering Technology. Students will learn how to apply electronic principles to digital computer circuits and systems. Students will also learn how to simplify logic circuits, build digital circuits, and perform other laboratory activities. Prerequisite: EET1015C, MAC1105. Pre/

corequisite: COP2270. Special Fee. (2 hr. lecture; 4 hr. lab)

CET1171 Introduction to Computer Service and Maintenance 3 credits

This course is designed as an introduction for students new to IT. Students will learn about the history, design, construction, and maintenance of microcomputers, including the proper handling and use of computer components and tools; how to assemble and disassemble computers; how to perform preventive maintenance; how to identify and upgrade components; how to interpret error messages, and how to perform basic troubleshooting. Laboratory fee. A.S. degree credit only. (3 hr. lecture)

CET1178C A+ Computer Hardware Service 3 credits

This is an intermediate level course that prepares students for A+ hardware certification. Students will learn how to: install, configure, and upgrade components diagnose and troubleshoot computer systems, identify, test, and troubleshoot motherboards, processors, memory, and printers, and connect network equipment. Prerequisite: CET1171. Special fee. A.S. credit only. (3 hr. lecture)

CET1487C Network+ 3 credits

This is an intermediate level course designed for students preparing for the hardware component of the Network+ certification. Students will learn how to install, configure, manage, troubleshoot and upgrade network devices including network interface cards, switches, hubs, wireless access points, routers, and patch panels. They will also learn about the construction, installation, testing and repair of the physical layer of the network, including wired cables, fiber optic media, wireless transmitters and antennas. Demonstrated knowledge of microcomputer fundamentals and system components is required. Recommended Preparation: CET1178C or A+ certification. Laboratory fee. A.S. degree credit only. (2 hr. lecture; 2 hr. lab)

CET2113C Advanced Digital Circuits 4 credits

This is a second level course in digital circuits for students majoring in electronics and related engineering technologies that extends the application of sequential and combinational logic circuits and other digital applications. Students will learn to program, operate, and interface with a micro-computer and its elements. Prerequisite: CET1110C, COP2270. Pre/Co-requisite: EET1141C. Laboratory fee. (2 hr. lecture; 2 hr. lab)

CET2123C Microprocessors 4 credits

This course is intended for students majoring in Electronics or Computer Engineering Technology. Students will learn to apply digital principles to the understanding of mi-

croprocessor parameters and characteristics (addressing range and models, instruction set, architecture, input/output, interrupts, and programming). Students will build practical microprocessor and/or microcontroller based systems to perform a variety of engineering applications. Prerequisite: CET 1110C and COP 2270. Special Fee. (2 hr. lecture, 4 hr. lab)

CET2588C Server + Service and Maintenance 3 credits

This course is designed for students preparing for the hardware component of the Server + certification. Students will learn how to install, configure, and upgrade workstations and servers, configure and test network and peripheral equipment, and diagnose and troubleshoot advanced computer systems. Laboratory fee. College readiness in reading and math required. Recommended Preparation: CET1178C or A+ certification. Special fee. (3 hr. lecture)

CET3126C Advanced Microprocessors 4 credits

This course is intended for upper division students majoring in Electronics Engineering Technology. This course introduces the study of advanced microprocessor design. Students will learn the basic organization of computer systems including instruction-set architecture, execution pipeline, memory hierarchy, virtual memory, and I/O subsystems. Students also learn advanced processor microarchitecture issues such as dynamic instruction scheduling, branch prediction, lock-up free caches, instruction fetch/issuing, speculative execution, etc. to improve computer processor performance. Students will experimentally verify microarchitecture designs using industry standard microarchitecture simulators. Prerequisite: CET 2123C. Special Fee. (2 hr. lecture; 4 hr. lab)

CET4190C Applied Digital Signal Processing 4 credits

This is an upper division level course for students majoring in electronics engineering technology. Students will learn how to model digital signal processing (DSP) systems, apply the Z transform, and develop algorithms for convolution, correlation, the Discrete Fourier Transform (DFT), and the Fast Fourier Transform (FFT). Students will apply these concepts in the design and implementation of digital filters and DSP algorithms in an embedded system. Prerequisite: COP 2270, EET 4732C, and EET 23232C, or EET 2351C. Special Fee. (2 hr. lecture; 2 hr. lab)

CET4663 Electronic Security 3 credits

This is an upper division course for students who are majoring in electronics engineering technologies. The student will learn information and communication security principles for computer systems and networks including authentication, protection, security models, cryptography, applications, and public

policy, along with case studies. (3 hr. lecture)
Pre-requisites: CET2123C, and COP2270.

EET1015C

Direct Current Circuits 4 credits
This course is intended for students majoring in electronics engineering technology and related disciplines. Students will learn basic electrical safety, the various basic electrical components and resistive circuit network analysis. Students will learn to verify and apply basic theories and principles through hands-on, laboratory experiments utilizing modern testing equipment. Prerequisite: MAC 1105. Special Fee. (2 hr. lecture; 4 hr. lab)

EET1025C

Alternating Current Circuits 4 credits
This course is intended for students majoring in electronics engineering technology and related disciplines. Students will learn inductance, capacitance, vector notation, AC circuits, impedance, phase shift, networks, transformers, and resonance. Students will apply and verify theories and principles through hands-on, laboratory experiments utilizing modern testing equipment. Prerequisite: EET 1015C; Pre/Corequisite: MAC 1114 or 1147. Special Fee. (2 hr. lecture; 4 hr. lab)

EET1037C

Electronic Computer Simulations 3 credits
An investigation of network theorems with practical illustrations. Thevenin's, Norton's, Kirchhoff and the superposition methods of analysis are applied to the solution of resistive and reactive networks. Resonant circuits and transient voltages and currents are analyzed. Prerequisite: EET 1141C; Corequisite: MTB 1322 (3 hr. lecture)

EET1082

Introduction to Electronics 3 credits
Learn by building practical electronic circuits. Survey course suitable for both majors and non-majors. Instructor and tutors available to assist in project completion. Topics include: schematics, pictorials, amplifiers, oscillators, burglar alarms, radios, digital circuits. Students will develop individual career plans and learn about employment opportunities within the field. (3 hr. lecture)

EET1141C

Electronics 1 4 credits
This course is intended for students majoring in Electronics Engineering Technology or related fields. Students will learn how to apply electronic principles to analog circuits and systems, including semiconductor diodes, applying the fundamental theory of transistors and other solid-state devices; analysis of amplifiers, oscillators, and other applications using a sinusoidal wave. Students also learn basic safety procedures to follow when working in an electronics laboratory and with electronic circuits and systems. Prerequisite: EET1025C and MAC 1114 or MAC 1147. Special Fee. (2 hr. lecture; 4 hr. lab)

EET2101C

Electronics 2 4 credits
This course is intended for students majoring in electronics or computer engineering technologies. Students will learn how to apply electronic principles to analog circuits including transistor amplifiers, feedback and frequency response of linear circuits, operational amplifiers, MOSFET and oscillators. Prerequisite: EET 1141C. Special Fee. (2 hr. lecture, 4 hr. lab)

EET2323C

Analog Communications 4 credits
This course is designed for students majoring in Electronics Engineering Technology, Telecommunications Engineering Technology, and related disciplines. Students will learn the principles of radio wave transmission and reception, including AM and FM transmitters, receivers, single sideband, television and digital data transmission lines, wave propagation antennas and microwaves. Prerequisite: EET 1141C. Special Fee. (2 hr. lecture; 4 hr. lab)

EET2351C

Digital and Data Communications 4 credits
This course is intended for students majoring in Electronics or Computer Engineering Technology. It provides a theoretical and practical background in the basic concepts and applications of digital and data communications. Students will learn analog-to-digital (A/D) and digital-to-analog (D/A) conversions; data communications codes and standards; wired and wireless digital communications; modulation, transmission impairment, the telephone system, modems, multiplexers, and electrical interface standards. Prerequisite: CET 2123C. Special Fee. (2hr. lecture, 4 hr. lab)

EET2515C

Motors and Generators 3 credits
This course is designed for students specializing in industrial equipment maintenance. Students learn how to analyze, troubleshoot, and repair rotating electric machinery with emphasis on industrial applications. Students learn terminology specific to motors, generators, and transformers; electromechanical device theory; circuits connecting electromechanical devices to voltage sources and loads; and how to apply mathematical analysis to determine quantitative circuit functioning in terms of voltage, current, and power. Prerequisite: EET 1025C. corequisite: EET 1141C. A.S. degree credit only. Special fee. (2 hr. lecture; 2 hr. lab)

EET2527C

Motor Starters, Controllers, and Breakers 3 credits
This course is designed for students specializing in industrial equipment maintenance covering AC and DC power distribution in the plant. Students learn operating principles, troubleshooting, repair, and maintenance of switch gear, motor control centers, breaker panel power, control, and instrument cable, raceways, protective devices and grounding as related to the generating station. Hands-on, laboratory exercises reinforce each major

concept studied. Prerequisites: EET 1141C, EET 2515C. A.S. degree credit only. Special fee. (2 hr. lecture; 2hr. lab)

EET2547C

Transformers and Power Distribution 3 credits
This course is designed for students specializing in industrial equipment maintenance. Students acquire an understanding of the components and devices used to distribute power, and how to protect major elements involved in power distribution. Students learn about the uses and maintenance of fuses, circuit breakers, enclosures, and relay coordination; how to protect against lightning and other abnormal conditions; and the protection of transformers, motors, and generators. Prerequisite: EET 2515C; Corequisite: EET 2527C. A.S. degree credit only. Special fee. (2 hr. lecture; 2 hr. lab).

EET3158C

Linear Integrated Circuits and Devices 4 credits
This is an upper division level course for students majoring in electronics engineering technology designed to provide students with practical skills and knowledge needed for application of operational amplifiers, comparators, phase-locked loops, timers, regulators, other integrated circuits in electronic systems. Students learn to apply these skills towards the design of amplifiers, active filters, oscillators, differentiators, integrators and other miscellaneous integrated circuit based systems. Prerequisite: EET 2101C. Laboratory fee. (2 hr. Lecture; 4 hr. lab)

EET3716C

Advanced System Analysis 4 credits
This is an upper division level course for students majoring in electronics engineering technology designed to prepare students to perform electrical circuit systems analysis using Laplace transform and partial fraction expansion. Students will learn theorems, Fourier series, frequency response and bode plots, and their application towards practical systems. Prerequisite: EET 1025C and MAC 2312. (2 hr. lecture, 4 hr. lab)

EET4165C

Senior Design 1 3 credits
This project-based course is designed to synthesize students' knowledge of the analysis, design, manufacturing, and testing of electronic systems. Students will design experiments, explore professional ethics, practice professional oral and written communications, conduct project feasibility studies, and perform project scheduling. Students learn about human factors, intellectual property, and liability issues. Department approval required. Laboratory fee. (1 hr. lecture; 4 hr. lab)

EET4166C

Senior Design 2 3 credits
This is a capstone course for students completing the course of study for the baccalaureate in Electronics Engineering Technology in which students demonstrate their knowledge and skills applicable to the degree program's core competencies and outcomes.

The course is a project-based experience in which students apply all of the skills they have acquired to analyze, design, simulate, synthesize, and test a complete electronics/electrical system. Department approval required. Prerequisite: EET 4165C. Laboratory fee. (1 hr. lecture; 4 hr. lab)

EET4730C
Feedback Control Systems 4 credits

This upper division course for students majoring in electronics and computer engineering technology, is designed to introduce students to the analysis of circuit networks and control systems. Students learn about stability and compensation considerations, using root locus, the Nichols chart, and Bode plots; simulation techniques; and how to apply these principles to build and test control systems. Prerequisite: EET 3716C. (2 hr. lecture, 4 hr. lab)

EET4732C
Signals & Systems 4 credits

This course is intended for upper division students majoring in Electronics Engineering Technology. Students will learn the theory and the mathematical techniques used in analyzing continuous-time linear systems. Students will learn continuous-time signal and systems analysis, the input-output relationships of linear time-invariant (LTI) systems, transient and steady state analysis, frequency domain analysis and Fourier analysis. Students will analyze and characterize LTI systems using Laplace transforms. Prerequisite: MAC 2312. (2 hr. lecture, 4 hr. lab)

ETI1000
Industrial Plant Tools and Equipment 1 credit

Students will learn the knowledge and skills necessary to properly select, inspect, use, and care for the tools, test equipment, and lifting/handling equipment commonly used in the performance of assigned tasks in an industrial plant setting. A.S. degree credit only. Special fee. (2 hr. lab)

ETI1701
Industrial Safety 3 credits

This course provides the student with the knowledge and skills to recognize hazardous situations in industrial plants and the precautions to be observed and practiced to perform work activities safely. Among the topics covered are industrial safety hazards, electrical safety, working with chemicals, gases, and solvents, protective equipment, and safe working conditions. (3 hr. lecture)

ETI1805C
Introduction to Lifting and Rigging 3 credits

This course provides knowledge and skills required by students preparing for careers in industrial maintenance of heavy equipment. Students learn how to determine rigging requirements for lifts, select equipment, calculate loads and safely operate different types of lift equipment. Prerequisites: ETI 1701, ETP 1230. Special fee. (2 hr. lecture; 2 hr. lab)

ETI2315C
Fluid/Pneumatic Instrumentation 3 credits

This course is designed for student's specializing in industrial equipment maintenance. Students will learn to apply the basic principles and operation of hydraulic and pneumatic instrumentation and testing equipment to repair equipment. Laboratory experiments are performed with extensive hands-on application. Prerequisite: MAC 1105. Special fee. (2 hr. lecture; 2 hr. lab)

ETI2408C
Welding Processes 3 credits

This course is designed for students who require basic welding process skills to prepare themselves for entry-level maintenance technician positions. The student learns principles of welding safety, fundamental practices of shielded arc welding, arc welding with consumable and non-consumable electrodes, brazing, soldering, and plasma cutting. Prerequisite: ETI 2425C. Laboratory fee. (2 hr. lecture; 2 hr. lab)

ETI2425C
Metallurgical Properties and Dynamics 3 credits

This course provides students who are preparing for occupations in industrial maintenance with a foundation in the principles of the metallurgy of steel. Students learn about the thermal, physical and chemical properties of steel. Prerequisite: PHY 1025. Special fee. (2 hr. lecture; 2 hr. lab)

ETI2451C
Mechanical Maintenance for Power Plants 3 credits

This course is designed for students who are preparing for mechanical and industrial maintenance operations. Students learn how to read and interpret drawings and blueprints, the application of lubrication principles, how to perform torque procedures, and the correct procedures for maintaining sealants, O-rings, and gaskets in power plant environments. Prerequisite: ETI 2231C. Laboratory fee. (2 hr. lecture; 2 hr. lab)

ETI3671
Technical Economic Analysis 3 credits

This course is designed to cover the formulation and application of analytical techniques to reach cost effective solutions to engineering problems. Students will learn time based analysis of selection, replacement, and lease-or-buy decisions including multiple alternatives, uncertainty, and sensitivity analysis, using a problem-solving approach. Prerequisite: MAC 1105. (3 hr. lecture)

ETI4480C
Applied Robotics 4 credits

This is an upper division level course designed as an introduction to robotics programming and includes robotic applications for multifunction part manipulation and motion with stepper and servo-motors. Students will learn topics related to robotic design including robotic vision, motion planning,

sensing and sensors, actuators, navigation systems, mobility, forward and inverse kinematics, and path planning. Prerequisite: CET 2123C. Special Fee. (2 hr. lecture, 4 hr. lab)

ETP1200
Power Plant Science 3 credits

This course is designed to familiarize students who are preparing for careers in Electrical Power Technology with the fundamentals of power plant sciences. Students will learn about basic electrical science, properties of reactor plant materials, basic atomic and nuclear physics, heat transfer and fluid flow, reactor safety design, and plant chemistry. Prerequisites: MAC 1105, PHY 1025. (3 hr. lecture)

ETP1220
Power Plant Fundamentals 2 credits

This course is designed to familiarize students preparing for careers in Electrical Power Technology with the fundamental knowledge of power plants and their operations. Students will learn how power plants operate, as well as general administrative procedures for completing routine tasks. (1 hr. lecture; 2 hr. lab)

ETP1230
Power Plant Systems 2 credits

This course provides an introduction to the major systems and components that make up a modern power plant. (2 hr. lecture)

ETP2232C
Power Plant Machines and Components 2 4 credits

This course continues the study of industrial machines begun in ETI2416C for students who are preparing for careers in industrial and/or power plant mechanical maintenance. Students learn the principles, concepts, and applications of various mechanical systems encountered in industrial applications, how to identify basic systems and components encountered in power plants, how to troubleshoot equipment problems, and basic procedures involved in maintaining and replacing component parts. Prerequisite: ETP 2231C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ETP3240
Power Systems 3 credits

This is an upper division level course for students majoring in electronics engineering technology covering specific issues of electrical power systems. Students learn power factor, three phase circuits, and transformers. Prerequisite: EET 1025C. (3hr. lecture)

ETS2520C
Process Measurement Fundamentals 3 credits

This course is designed for students who will be supporting industrial equipment processes. Students will learn how to perform the typical measurements made in industrial measurement and control loops. Topics include the basic physics involved in the mea-

surements, as well as the common types of sensors used in industry with emphasis on pressure, temperature, flow, level, and analytical measurement theory. Prerequisites: EET1025C, PHY 1025. Laboratory fee. (2 hr. lecture; 2 hr. lab)

ETS2530C

Process Control Technology 3 credits
This course is designed for students studying systems and associated electronic circuit's encountered in the field of electric machinery and industrial controls. Students learn to analyze systems and devices and perform calculations to determine parameters to accurately predict operation. Students examine the concepts and principles of open and closed loop systems, transducers, transformers, Transmission and distribution systems. Prerequisite: EET1025C. Special fee. (2 hr. lecture; 2 hr. lab)

ETS2542C

Programmable Logic Controllers 1 3 credits
This first course in programmable logic controller (PLC), is designed for students preparing for careers in electronics, manufacturing, electrical or industrial technology. Students will learn the basic operational concepts common to PLCs, focusing on PL C principles, programming, numbering systems, data manipulation, and math and sequencer instructions. Prerequisite: CET 1110C; Pre/Co-requisite: EET 1141C. Special Fee. (2 hr. lecture; 2 hr. lab)

ETS2544C

Programmable Logic Controllers 2 3 credits
This course is a continuation of EST 2542C for students who are familiar with basic PLC operations and concepts. Students learn the skills required to troubleshoot and maintain logic controllers in a simulated industrial environment. Topics covered include program control instructions, date manipulation instruction, math instructions, acquisition, computer controlled machines and processes. Prerequisite: ETS 2542C. Special fee. (2 hr. lecture; 2 hr. lab)

ETS3543C

Programmable Logic Controllers 4 credits
This upper division course is intended for students majoring in Electronics Engineering Technology. Students will learn the principles of PLC's including hardware, programming, and troubleshooting. Students will develop advanced working programs, and troubleshoot hardware and software communication problems. Prerequisite: CET 1110C. Special Fee. (2 hr. lecture; 4 hr. lab)

Engineering Technology Mechanical

ETM1700

Air Conditioning Fundamentals 3 credits
The basic science of air conditioning technology, the fundamentals of air conditioning for environmental control, the function and operation of the equipment and the air conditioning design process. (3 hr. lecture)

ETM2730C

Air Distribution 3 credits
Intensive study and practical application of air distribution technology. Duct design, fans, low velocity, high velocity, and variable volume systems are included. Laboratory work includes duct design projects. Prerequisite: ETM 1700. Laboratory fee. (2 hr. lecture; 2 hr. lab)

ETM2740C

Air Conditioning Controls & Motors 3 credits
Air conditioning and refrigeration control devices and theory, operation and application are covered. Electric motor technology with practical application to air conditioning is also included. Prerequisite: ETM 1720C. Laboratory fee. (2 hr. lecture; 2 hr. lab)

ETM2750C

Air Conditioning Systems Design 3 credits
Design of residential and commercial environmental control systems utilizing unitary equipment. Prerequisite: ETM 1710C. Laboratory fee. (2 hr. lecture; 2 hr. lab)

ETM2930

Air Conditioning Seminar 3 credits
A seminar for advanced students and those with experience in air conditioning engineering covering new concepts, equipment and advances in the technology of air conditioning. Prerequisite: Permission of the department chairperson. (3 hr. lecture)

Engineering Technology-General

ETG2502

Statics 3 credits
THE application of dead and live loads to rigid bodies at rest, including the force and moment of laws of equilibrium, determination of the direction and intensity of reactions, moments and stress in the design of engineering and architectural structures. Prerequisite: MAC 1105. (3 hr. lecture)

ETI1040

Introduction to Bioscience Manufacturing 3 credits
This course introduces students to the field of bioscience manufacturing. Topics will include basic principles of the industry, large-

scale process development and the future of the bioscience industry. Current Good Manufacturing Practices (cGMPs), and the nature and delivery system of products will also be discussed. (3 hr. lecture)

ETI1040L

Introduction to Bioscience Manufacturing Lab 2 credits
In this laboratory course students will learn the basic principles of the industry, large-scale process development and the future of bioscience. Students also learn about current Good Manufacturing Practices (GMPs), and the nature and delivery system of products. Corequisite: ETI 1040. A.S. degree credit only. (4 hr. lab)

ETI1172

Introduction to Quality Assurance 3 credits
This course describes the role and aspects of quality systems and Regulatory affairs in research laboratories, regulated companies, and firms that comply with voluntary standards. Topics include stages in development and submission of drugs and medical devices, patents legislation, and quality systems such as auditing, standard procedures, good manufacturing and laboratory practices. (3 hr. lecture)

ETI1410

Design Engineering Equivalency (IB) 3 credits
No description is available.

ETI1622

Concepts of Lean and Six Sigma 3 credits
This course is designed for students who are preparing for careers in the manufacturing industry. Students will learn the basic concepts, frameworks, and techniques used in six sigma, including total quality philosophies, the calculation of six sigma and other vital statistics, tools of lean six sigma, and knowledge of various methodologies. (3 hr. lecture)

ETI1644

Advanced Manufacturing Supply Chain 3 credits
This course is designed to provide students who are preparing to be manufacturing support technologists with the fundamental concepts of advanced manufacturing supply chain management (SCM) principles. Students will learn how to use manufacturing planning and control systems to coordinate material, labor, capacity and other resources to optimize manufacturing operations. Students also learn the key features of automated systems that can be used to manage the supply chain process. (3 hr. lecture)

ETI2404

Advanced Manufacturing Technology 3 credits
This is a course for students intending to work in manufacturing environments. Students will learn the basic concepts about advanced manufacturing operations and pro-

cesses, including sourcing materials, production planning and process monitoring, and control to distribution activities. Students also review the facility and regulatory requirements needed to support manufacturing operations. Activities may include facility tours and site visits. A.S. degree credit only. (3 hr. lecture)

ETM1315C
Applied Pneumatics and Hydraulics 3 credits

This course prepares students to perform mechanical maintenance on industrial equipment and devices. Students learn the theory and application of fluid mechanics, how to calibrate metering devices, and conduct elementary hydraulic tests. Pre/corequisite: MAC 1105 Laboratory fee. (2 hr. lecture; 2 hr. lab)

ETM2310
Fluid Mechanics 3 credits

This course is for students preparing for nuclear power plant systems operations. Students will learn the basics of fluid theory, pump theory and operations, and how to perform calculations using the International System of Measurements (SI) and United States (US) measurement systems. Prerequisite: ETP 1200, MAC 1150. (3 hr. lecture)

ETP2201
Reactor Theory for Nuclear Operations 2 credits

This course introduces fundamental nuclear reactor theory and operations principles for students who are preparing for careers in nuclear operations. Students will learn principles related to neutron theory, reactor operational physics, nuclear control rods, and factors impacting reactor operations. Prerequisites: ETP1230, PHY1025, and approval by the program chair. (1 hr. lecture; 2 hr. lab)

ETP2202
Fundamentals of Reactor Energy Principles 3 credits

This course is for students preparing for nuclear power plant systems operations. Students will learn concepts related to energy principles and their applications in the power plant environment, including basic energy concepts, thermodynamics and thermal processes in the nuclear power plant, heat transfer, heat exchangers, and steam. Prerequisite: ETP1200, PHY1025. (3 hr. lecture)

ETP2231C
Power Plant Machines & Components 1 4 credits

This course is designed for students who are preparing for careers in industrial and/or power plant mechanical maintenance. Students learn the principles, concepts, and applications of various mechanical systems encountered in industrial applications, how to identify basic systems and components encountered in power plants, how to troubleshoot equipment problems, and basic procedures involved in maintaining and replacing component parts. Prerequisite: ETP 1230 Special fee. (2 hr. lecture; 4 hr.)

ETP2233
Power Plant Components for Operations 1 3 credits

This course is designed for students who are preparing for careers in industrial and/or power plant operations. Students will learn to identify basic systems and components encountered in power plants and the principles, concepts and applications associated with various power plant mechanical components. Prerequisite: ETP 1230. Laboratory fee. (3 hr. lecture)

ETP2234
Power Plant Components for Operations 2 3 credits

A continuation of ETP2233 Power Plant Components for Operations 1, this course is designed for students who are preparing for careers in industrial and/or power plant operations. Students will learn to develop a deeper knowledge of electro-mechanical systems in the power plant. This course will assist in preparing students for the General Fundamentals Examination (GFES). Prerequisite: ETP2233. Laboratory fee. (2 hr. lecture; 2 hr. lab)

English Language & Literature

AML2010
American Literature 1 3 credits

American Literature from Colonial times to the Civil War. Prerequisites: ENC 1101, 1102. (3 hr. lecture)

AML2020
American Literature 2 3 credits

American literature from the Civil War to the present. Prerequisites: ENC 1101, 1102. (3 hr. lecture)

CRW2001
Creative Writing 1 3 credits

Imaginative writing in selected genres. (3 hr. lecture)

CRW2002
Creative Writing 2 3 credits

Imaginative writing in selected genres. (3 hr. lecture)

ENC1101
English Composition 1 3 credits

This is a required general education core course in college-level writing. The students will learn to compose essays and other works using various methods of development. This course fulfills the Gordon Rule writing requirement and must be completed with a grade C or better. Pre-requisite: Student must meet the Developmental Education reading and writing requirements in State Rule 6A-10.0315 (by course, placement score, or eligible exemption).

ENC1102
English Composition 2 3 credits

This is the second required general education core course in college-level writing. Students will learn the conventions of standard edited American English. Students will compose informative and persuasive essays, write responses to a variety of literary genres, and/or non-fiction, and produce a documented paper based on research. This course fulfills the Gordon Rule requirement. Prerequisite: ENC1101. Special fee. (3 hr. lecture)

ENC1112
Essential Elements of English Grammar 1-3 credits

This course is designed for students whose writing and/or CLAST English language skills test scores demonstrate a need for continued instructional support. It covers many of the same topics assessed by the CLAST objective English language skills component. Course content is individualized based on specific student needs. This course is repeatable. Prerequisites: Placement by Scholastic Assessment Test (SAT) verbal subtest score; American College Testing (ACT) English subtest score; Computerized Placement test (CPT) English subtest score or ENC0021 with a grade of "S". (1-3 hr. lecture)

ENC1113
Writing Skills Review 1-3 credits

This course is designed for students whose writing and/or English language skills test scores demonstrate a need for continued instructional support and features self-assessment grammar diagnostics. Students will learn the principles of composition via the writing process: planning, drafting, revising, finishing and editing. Note: This one-to-three-credit course is repeatable. Prerequisites: Placement by Scholastic Assessment Test (SAT) verbal score; American College Testing (ACT) English subtest score; Computerized Placement test (CPT) English subtest score; or ENC0021 with a grade of "S".

ENC2300
Advanced Composition and Communication 3 credits

This writing-based course addresses techniques of critical thinking, persuasion, and argumentation. Students will refine their composition skills and develop their oral communication skills by examining and discussing a range of issues. Prerequisites: ENC1101, 1102 or equivalent with a grade of "C" or better. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

ENG1949
Co-op Work Experience 1: 3 credits

ENG This course is designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All

students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

ENL2012

English Literature 1 3 credits
A survey of major British writers from Chaucer through the 18th century. Required of English majors. Prerequisites: ENC 1101, 1102 or equivalent. (3 hr. lecture)

ENL2022

English Literature 2 3 credits
A survey of major British writers from the 18th century through the contemporary period. Required of English majors. Prerequisites: ENC 1101, 1102. (3 hr. lecture)

LIT2000

Introduction to Literature 3 credits
Students will learn about various works of literature from different genres (including but not limited to: short story, play, poetry, novel, and essay). This course fulfills the Gordon Rule writing requirement and must be completed with a C or better. Prerequisite: ENC 1101. (3 hr. lecture.)

LIT2090

Contemporary Literature 3 credits
A survey of contemporary prose and poetry. Prerequisites: ENC 1101, 1102 or equivalent. (3 hr. lecture)

LIT2110

A Survey of World Literature 1 3 credits
The masterpieces of world literature. Prerequisites: ENC 1101, 1102 or equivalent. (3 hr. lecture)

LIT2120

A Survey of World Literature 2 3 credits
LIT 2120 explores masterpieces of world literature from the mid-renaissance to the present. Works studied exemplify the universality of human experience. Fulfills Gordon Rule writing requirement. Prerequisites: ENC 1101, 1102 or equivalent. (3 hr. lecture)

LIT2131

Mythology in Literature: The Arthurian Tradition 3 credits
The course will trace the progress of the legends surrounding King Arthur from medieval to contemporary poetry and prose, with primary focus on literary texts and supplementary investigation of Arthurian themes in art, film, and music. (3 hr. lecture)

LIT2174

Literature of the Holocaust and Genocide 3 credits
This course explores the literary responses to the Holocaust and Genocide using a variety of texts including written, film, and propaganda/graphic arts. Students will learn the various literary techniques used to interpret these key world and historical events. Prerequisite: ENC 1101. (3 hr. lecture)

LIT2330

Survey of Children's Literature 3 credits
This course will familiarize interested stu-

dents with major works in children's literature and with the principal genres and sub-genres including, but not limited to, picture books (Mother Goose, easy-to-read books, picture storybooks); traditional fantasy (folktales, myths); modern fantasy (curious characters, science fiction); realistic fiction; poetry; and nonfiction. It will also analyze the role that literature has played and/or should play in the teaching of reading in primary school. (3 hr. lecture)

LIT2480

Issues in Literature & Culture 3 credits
Students will learn about literature as a socio-cultural response by writers to the world in which they live; they will connect literary texts to cultural issues through completion of oral and written assignments, critical analysis and practical investigation. Fulfills Gordon Rule writing requirement. Prerequisite: ENC 1102. (3 hr. lecture)

English Language and Literature - College Preparatory

ENC0015

Developmental Writing I 4 credits
Developmental Writing I is a college preparatory writing course. Students will learn to address effective sentence and paragraph development. Lab time required. Laboratory fee. Prerequisite: Placement by Scholastic Assessment Test (SAT) verbal subtest score; American College Test (ACT) English subtest score; Computer Placement Test (CPT) or Post-secondary Education Readiness Test (PERT). Student must have completed the college's entrance exam and placed in the appropriate course level in order to register. (2 hr. lecture; 4 hr. lab)

ENC0025

Developmental Writing II 4 credits
Developmental Writing II is an intermediate college preparatory writing course. Students will learn to address effective sentence, paragraph, and essay development using standard edited American English. Lab time required. Laboratory fee. Prerequisite: Computer Placement (CPT) score; Scholastic Assessment Test (SAT); American College Test (ACT); or Post-secondary Education Readiness Test (PERT). Student must have completed the college's entrance exam and placed in the appropriate course level in order to register. (2 hr. lecture; 4 hr. lab)

ENC0027

Introduction to College Writing through Reading 3 credits
This course introduces students to college level composition and reading. Students will use the writing process to compose effective sentences, paragraphs, and essays using standard edited American English in response to various reading materials. Students will demonstrate proficiency in literal and critical

comprehension by using a variety of reading strategies. (3 hr. lecture)

ENC0056

Developmental Writing Module 2 credits
This course is designed to develop written language skills for students whose entry placement scores do not meet requirements for degree credit courses (course not applicable for graduation requirements). This course may be taken in place of ENC 0025 for students who completed ENC 0025 in a prior term but did not earn a passing grade. Students will learn to focus on their individual grammar, usage, and writing needs to prepare for successful entry into college credit English courses. Prerequisite: Students must score 97-98 on the PERT or receive departmental permission. (2 hr. lecture)

Entrepreneurship

ENT2201

Introduction to Lean Start-Up 3 credits
The student will learn how successful startups find a repeatable, scalable business model that creates value for themselves and customers. In this experientially driven course, student teams develop, validate and refine a business model by creating hypothesis, designing products/services, testing the hypotheses, and reflecting on what has been learned. Prerequisite: GEB2112 (3 hr. lecture)

ENT2212

Entrepreneurial Leadership 3 credits
The student will learn key skills and traits of successful entrepreneurs. Students will explore the notion of values-based business formation, personal strength and weakness identification, leadership for team building, project and personal time management, and story-telling. (3 hr. lecture)

ENT2502

Starting and Growing a Social Venture 3 credits
The course explores the start-up, growth, and management of social entrepreneurship. Social ventures share attributes but also differ from for-profits in intent and practice. The student will learn the elements of integration, innovation; development and management of a business within and existing corporate culture. Ideation, venture creation, resource acquisition, and growth management are also addressed. Prerequisite: GEB2112. (3 hr. lecture)

ENT2612

Creativity, Innovation and Human Centered Design 3 credits
This course will lead students through major phases of the creative problem solving process and methods of human centered - design thinking. Students will learn the basic skills for creative problem solving, innovation, and user-centered design. Students will identify

tify and evaluate problems and opportunities; they will sketch, create, develop, test, and select the best prototyping options for a new product or service. (3 hr. lecture)

Environmental Studies

EVR1001 Introduction to Environmental Sciences 3 credits

Students will learn a conceptual approach to understanding the interrelationships of humans and natural processes at work in the environment. Application to local issues as well as broader global problems and prospects will be made, with emphasis on sustainable development. Special fee. (3 hr. lecture)

EVR1001L Introduction to Environmental Science Laboratory 1 credit

This course is the laboratory component for EVR1001 - Introduction to Environmental Science. Students will learn how the human and physical/biological worlds affect global climate change, including human/non-human interactions with minerals and mining, landscape ecology, petroleum depletion, and alternative fuels with the understanding of the earth's environment. Pre/Corequisite: EVR1001 (2 hr. lab)

ESL For Academic Purposes

EAP0100
Speech/Listening 1 3 credits
Students develop the ability to understand frequently used words in oral contexts and understand and respond appropriately to simple phrases and questions. Corequisite: EAP 0100L. (3 hr. lecture)

EAP0100L
Speech/Listening 1 Laboratory 1 credit
This lab will give practice in oral production and aural comprehension of spoken American English. This practice will be related, but not limited to the material taught in EAP 0100. (2 hr. lab)

EAP0120
Reading Level 1 3 credits
Students develop the ability to comprehend limited written materials. (3 hr. lecture)

EAP0140
Writing Level 1 3 credits
Students develop the ability to write appropriate phrases and short sentences on personal topics. Corequisite: EAP 0140L. (3 hr. lecture)

EAP0140L
Writing Level 1 Laboratory 1-3 credits
This lab will provide support and additional practices as well as focus on multi-skills as students develop their abilities in meeting the competencies of EAP 0140. (2-6 hr. lab)

EAP0160
Grammar Level 1 3 credits
Students develop the ability to understand and use basic, high frequency grammatical structures. (3hr. lecture)

EAP0200
Speech/Listening 2 3 credits
Students continue to develop the ability to understand frequently used words in oral contexts and understand and appropriately respond to simple phrases and questions. Prerequisite: EAP 0100; Corequisite: EAP 0200L. (3 hr. lecture)

EAP0200L
Speech/Listening 2 Laboratory 1 credit
Continue to give practice in oral production and aural comprehension of spoken American English. This practice will be related to, but not limited to the material taught in EAP0200. Prerequisite EAP 0100L. (2 hr. lab)

EAP0220
Reading Level 2 3 credits
Students develop the ability to comprehend limited written materials. (3 hr. lecture)

EAP0240
Writing Level 2 3 credits
Students continue to develop writing skills in the context of guided discourse on personal topics with an emphasis on logical thought and mechanics. Prerequisite: EAP 0140; Corequisite: EAP 0240L. (3hr. lecture)

EAP0240L
Writing Level 2 Laboratory 1-3 credits
This lab will provide additional practices as well as focus on multi-skills as students develop their abilities in meeting the competencies of EAP 0140. Prerequisite: EAP 0140L; Corequisite: EAP 0240. (2-6 hr. lab)

EAP0260
Grammar Level 2 3 credits
Students continue to develop control of basic grammatical structures and statement/question patterns. Prerequisite EAP 0160. (3 hr. lecture)

EAP0300
Speech/Listening 3 3 credits
Students develop speaking and listening skills necessary for participating in classroom discussions with an emphasis on clarification through rewording and asking questions. Prerequisite: EAP 0200; Corequisite: EAP 0300L. (3 hr. lecture)

EAP0300L
Speech/Listening 3 Laboratory 1 credit
Students practice speaking and listening skills necessary for participating in classroom discussions with an emphasis on clarification through rewording and asking questions. Prerequisite; EAP 0200L; Corequisite: EAP 0300 (2 hr. lab)

EAP0320
Reading Level 3 3 credits
Students develop the ability to read text on familiar and basic academic topics with an emphasis on vocabulary expansion and application of critical reading skills. Prerequisite: EAP 0220. (3 hr. lecture)

EAP0340
Writing Level 3 3 credits
Students develop the ability to write basic, structured academic paragraphs on familiar topics and execute other academic writing tasks. Prerequisite: EAP 0240; Corequisite: EAP 0340L. (3 hr. lecture)

EAP0340L
Writing Level 3 Laboratory 1-3 credits
Students develop the ability to write basic, structured academic paragraphs on familiar topics and execute other academic writing tasks. Prerequisite: EAP 0240L; Corequisite: EAP 0340. (2-6 hr. lab)

EAP0360
Grammar Level 3 3 credits
Students develop the ability to use intermediate-level grammatical structure appropriate to classroom discussion and the writing of academic paragraphs with an emphasis on increased accuracy. Prerequisite: EAP 0260. (3 hr. lecture)

EAP0385
Intermediate 1 - Integrated Writing & Grammar 6 credits
Students will learn how to write paragraphs using intermediate grammar and rhetorical structures. (6 hr. lecture)

EAP0386
Intermediate 1 - Integrated Reading, Speech & Listening 6 credits
Students will learn to develop proficiency in reading level-appropriate text by listening to short oral discourse and discussing academic materials. Emphasis is on vocabulary expansion and application of strategies that assist in comprehension and communication. Prerequisites: EAP 0200, 0220, or equivalent proficiency. (6 hr. lecture)

EAP0400
Speech/Listening 4 3 credits
Students continue to develop speaking and listening skills necessary for participating in classroom discussions with an introduction to oral presentation and critical listening skills. (3 hr. lecture)

EAP0400L**Speech/Listening 4
Laboratory****1 credit**

Students continue to practice speaking and listening skills necessary for participating in classroom discussions with an introduction to oral presentation and critical listening skills. Prerequisite: EAP 0300L; Corequisite EAP 0400. (2 hr. lab)

EAP0420**Reading Level 4****3 credits**

Students develop academic reading abilities including text on contemporary and literary topics with an emphasis on extensive reading and the enhancement of critical reading skills. Prerequisite: EAP 0320. (3 hr. lecture)

EAP0440**Writing Level 4****3 credits**

Students develop the ability to write more sophisticated, structured academic paragraphs in various rhetorical modes and execute other academic writing tasks. (3 hr. lecture)

EAP0440L**Writing Level 4****Laboratory 1-3 credits**

Students continue to practice developing to write more sophisticated, structured academic paragraphs in various rhetorical modes and execute other academic writing tasks. Prerequisite: EAP 0340L; Corequisite: EAP 0440. (2-6 hr. lab)

EAP0460**Grammar Level 4****3 credits**

Students develop the ability to use intermediate-level grammatical structure appropriate to classroom discussion and the writing of more sophisticated academic paragraphs with an emphasis on increased accuracy. Prerequisite: EAP 0360. (3 hr. lecture)

EAP0485**Intermediate 2 - Integrated
Writing & Grammar****6 credits**

Students will learn to refine paragraphs using intermediate grammar and rhetorical structures. Prerequisites: EAP 0340, 0360, 0385, or equivalent proficiency. Co-requisite: one (1) approved college-level course recommended. (6 hr. lecture)

EAP0486**Intermediate 2 - Integrated****Reading, Speech & Listening****6 credits**

Students will learn to develop speaking, listening, and academic reading skills through discussions, presentations, and analysis with an emphasis on oral fluency, critical reading, and vocabulary expansion. Prerequisites: EAP 0300 or 0386, and 0320, or equivalent proficiency. Co-requisite: one (1) approved college level course. (6 hr. lecture)

EAP0493**Accelerated Intermediate
Speech and Grammar****6 credits**

In this accelerated alternative course for EAP 0300, 0360, 0400, and 0460, students will learn intermediate-level grammar and vocabulary, and will enhance their oral communi-

cation proficiencies via brief lectures, oral presentations, and classroom discussions, improving spoken fluency, accuracy, and interpersonal skills in English. Prerequisites: EAP 0220 and 0240 or appropriate COMPASS score; Corequisite: EAP 0494. (6 hr. lecture)

EAP0494**Accelerated Intermediate
Reading and Writing****6 credits**

In this accelerated alternative course for EAP courses 0320, 0340, 0420, and 0440, students will learn English while reading intermediate-level academic texts, expand their vocabulary, and enhance their writing proficiency with structured academic tasks. Prerequisite: EAP 0220 and 0240 or appropriate COMPASS score; corequisite: EAP 0493. (6 hr. lecture)

EAP1500**Speech/Listening Level 5****3 credits**

Students develop communication, organization, and pronunciation skills necessary for effective academic presentation and discussion with an introduction to lecture note taking. (3 hr. lecture)

EAP1500L**Speech/Listening Level 5****Laboratory****1 credit**

Students develop communication, organization, and pronunciation skills necessary for effective academic presentation and discussion with an introduction to lecture note taking. (2 hr. lab)

EAP1501**Accent Reduction 1****3 credits**

Students develop the ability to write basic structured academic essays with an emphasis on accuracy and cohesiveness and execute other academic writing tasks. (1-3 hr. lecture)

EAP1501L**Accent Reduction 1****Laboratory****1 credit**

Students improve their pronunciation of American English including stress, rhythm, and intonation. The phonetic structure of consonant sounds is systematically analyzed, and students are given practice in correctly pronouncing these sounds and patterns in context. (2 hr. lab)

EAP1502**Accent Reduction 2****3 credits**

Students improve their pronunciation of American English including stress, rhythm, and intonation. The phonetic structure of vowel sounds is systematically analyzed, and students are given practice in correctly pronouncing these sounds and patterns in context. (3 hr. lecture)

EAP1502L**Accent Reduction 2****Laboratory****1 credit**

Students improve their pronunciation of American English including stress, rhythm, and intonation. The phonetic structure of vowel sounds is systematically analyzed, and students are given

practice in correctly pronouncing these sounds and patterns in context. (2 hr. lab)

EAP1520**Reading Level 5****3 credits**

Students develop the ability to comprehend lengthier texts on diverse academic topics by applying appropriate reading strategies. (3 hr. lecture)

EAP1540**Writing Level 5****3 credits**

Students develop the ability to write basic structured academic essays with an emphasis on accuracy and cohesiveness and execute other academic writing tasks. (3 hr. lecture)

EAP1540L**Writing Level 5****Laboratory****1-3 credits**

Students develop the ability to write basic structured academic essays with an emphasis on accuracy and cohesiveness and execute other academic writing tasks. (2-6 hr. lab)

EAP1560**Grammar Level 5****3 credits**

Students develop the ability to comprehend and interpret authentic college-level text in content areas by applying appropriate reading strategies. (3 hr. lecture)

EAP1581**Advanced 1 Combined Skills:
Content-based English****6 credits**

This course is intended for Advanced I EAP students and prepares the non-native speaker of English for college level study. Students will learn by focusing on speaking, listening, grammar/vocabulary, writing, and reading comprehension skills as they relate to selected Education courses. Prerequisites: EAP 0400, 0420, 0440, and 0460. Corequisite: EEC 1000, or EEC 1200, or EEC 1311, or EEC 2202. Recommended preparation: Appropriate passing score on the COMPASS Test. (6 hr. lecture)

EAP1585**Advanced 1 - Integrated****Writing & Grammar****6 credits**

Students will learn to write essays by developing advanced grammar and rhetorical structures. Prerequisites: EAP0440 or 0485, and 0460, or equivalent proficiency. Co-requisites: one (1) approved college level course (6 hr. lecture)

EAP1586**Advanced 1 - Integrated****Reading, Speech & Listening****6 credits**

Students will learn to comprehend academic and other authentic reading materials and effectively participate in college-level oral/aural tasks by applying appropriate learning strategies. Prerequisites: EAP 0420 or 0486, and 0400, or equivalent proficiency. Co-requisite: one (1) approved college level course. (6 hr. lecture)

EAP1600
Speech/Listening Level 6 **3 credits**
 Students further develop communication skills necessary for full participation in mainstream college classrooms including comprehension of extensive discourse. (3 hr. lecture)

EAP1600L
Speech/Listening Level 6
Laboratory **1 credit**
 Students further develop communication skills necessary for full participation in mainstream college classrooms including comprehension of extensive discourse. (2 hr. lab)

EAP1620
Reading Level 6 **3 credits**
 Students develop the ability to comprehend and interpret authentic college-level text in content areas by applying appropriate reading strategies. (3 hr. lecture)

EAP1640
Writing Level 6 **3 credits**
 Students develop the ability to write a variety of college-level essays with sophistication, fluency, and accuracy and execute other academic writing tasks. (3 hr. lecture)

EAP1640L
Writing Level 6
Laboratory **1-3 credits**
 Students further develop the ability to write a variety of college-level essays with sophistication, fluency and accuracy, and execute other academic writing tasks. (2-6 hr. lab)

EAP1660
Grammar Level 6 **3 credits**
 Students develop the ability to use complex grammatical structure necessary for effective participation in mainstream college classes. (3 hr. lecture)

EAP1683
Combined Accelerated Advanced Reading/Writing level 6 **6 credits**
 This is an accelerated alternative course for EAP courses 1520, 1540, 1620, and 1640. Students will learn to complete college-level reading and writing assignments. Prerequisite: EAP 0420, 0440 or appropriate placement score on COMPASS exam (87-92 on reading subtest) and writing sample; Corequisite EAP 1689 Combined Accelerated Advanced Speech, Listening, and Grammar. (6 hr. lecture)

EAP1685
Advanced 2 - Integrated Writing & Grammar **6 credits**
 Students will learn to refine essays by developing advanced grammar & rhetorical structures. Prerequisites: EAP1540 and 1560, or 1585, or equivalent proficiency. Co-requisites: one (1) approved college level course (6 hr. lecture)

EAP1686
Advanced 2 - Integrated Reading, Speech & Listening **6 credits**

Students will learn to comprehend academic and other authentic reading materials and effectively participate in college-level oral/aural tasks by applying appropriate learning strategies. Prerequisites: EAP1586 or 1520, and 1500. Co-requisite: one (1) approved college level course. (6 hr. lecture)

EAP1689
Combined Accelerated Advanced Speech, Listening and Grammar Level 6 **6 credits**
 This is an accelerated alternative course for EAP courses 1500, 1560, 1600, and 1660. Students will learn oral communication and lexico-grammatical skills necessary for college-level courses. EAP 0420 and 0440 or appropriate placement score on COMPASS exam (81-88 on grammar subtest and 83-91 on listening subtest) and writing sample; Corequisite: EAP 1683 Combined Accelerated Advanced Reading and Writing. (6 hr. lecture)

Fashion

CTE1050
Introduction to Fashion Design and Related Industries **3 credits**
 In this course students will learn the basic design process, history, characteristics and global interrelationships of the fashion industry segments. The course explores how fashion, textile and apparel producers, retailers and related industries use merchandising and market their products within the industry and ultimately, to the consumer. (3 hr. lecture)

CTE1401
Textiles **3 credits**
 This is a survey course designed for students majoring in fashion-related curriculum or with a general interest in textile materials. Students will learn basic elements of the transformation from fiber of textiles into finished goods. The course provides insights into textile manufactures with a primary focus on general textile applications relative to end-use consumer products. Students will learn the terminology needed for effective communication throughout the fashion supply chain, gain insight and appreciation for the relative value of textile products and the appropriateness of specific textile uses. (3 hr. lecture)

CTE1401L
Introductory Textile Science Lab **1 credit**
 The laboratory CTE 1401L course complements the Introductory Science CTE 1401 course. Students will learn the methods for basic identification of textile materials and rudimentary analysis techniques. The laboratory is also designed to support and parallel the concepts discussed in the lectures. (2 hr. lab)

CTE1721C
Fashion Design I **3 credits**

This introductory course on flat patterns explores the two-dimensional method of creating basic slopers in order to execute designs. Students will learn the two methods of making a basic set of slopers. Prerequisite: CTE1401, CTE1401L (1 hr. lecture; 2 hr. lab)

CTE1743C
Patternmaking Level 1 **3 credits**
 This course will focus on the development of basic blocks, dart manipulation, bodice, skirt and sleeve styling methods in accordance with approved garment trade practices. Students will learn to draft and manipulate the various garment components and develop patterns and samples. (1 hr. lecture; 4 hr. lab)

CTE1760C
Creative Design **3 credits**
 This Draping course introduces students to the 3-dimensional (3-D) design process and to working with muslin for the creation of new designs and of draping directly on the dress form. Students will learn patternmaking and construction as an integral part of this discipline. They will learn about the technical skills used and integrated into 3-D design, acquire additional creative and technical skills, explore design through fabric, drape, and construction techniques, and expand their ideas into different areas of design. Prerequisite: CTE1401, CTE1401L (1 hr. lecture; 2 hr. lab)

CTE1841C
Apparel Evaluation & Production **3 credits**
 This is an introductory course in the apparel development process. Students will learn to facilitate the communication and coordination of pre-product development tasks achieved through linking design, costing, and manufacturing technology in the production setup for each design. Students will learn how outsourcing affects the product development process in editing garment designs and the line development calendar. Prerequisite: CTE1401, CTE1401L (1 hr. lecture; 2 hr. lab)

CTE1930
Fashion Seminar **3 credits**
 Industry executives lead this seminar course. Students learn about industry characteristics, interrelationships, industry segments, consumer behavior, primary and secondary retailing, design perspectives and important names and faces in the fashion business. Students explore merchandising, fiber to finished product, strategic approaches to the industry with the help of experts and through visits to company locations and other interactive events that that bring life to the fashion industry. (3 hr. lecture)

CTE1942
Fashion Industry Internship **4 credits**
 This internship course provides eligible students with placement in premier fashion settings and with the professional and practical experiences needed to further their education in a variety of fashion-based positions. Students control the internship selection pro-

cess and work with an internship coordinator in the revisions of their resumes and schedule of interviews within the network of fashion companies. Fashion internships are available in the areas of design, merchandising, buying, show-room, and fashion public relations.

CTE2111C
Digital Fashion Portfolio 3 credits
 In this course students will learn to integrate computer aided design tools in the creative process of developing a digital fashion collection portfolio. Visual presentation and specific applications will be used. (1 hr. lecture; 2 hr. lab)

CTE2120
Portfolio Collection Development 3 credits
 In this course students will learn the basics for the development of a presentation portfolio collection. Students will research fabrics to use in the design of collection concepts for specific market areas. Various formats will be explored using digital and analog media. Retail market research and the internet may be applied as a basis for a design presentation. Prerequisite: CTE1401, CTE1401L (3 hr. lecture)

CTE2301
Product Development 3 credits
 In this course students will learn the concepts and methods by which retailers create special, store-branded merchandise for targeted customer segments. The process of product development, from research to production to distribution, is studied. Prerequisite: CTE1401L, CTE1401 (3 hr. lecture)

CTE2310C
Basic Clothing Construction Methods 3 credits
 Students will learn the basic elements of sewing utilized and incorporated into all designs in the garment industry. These garment structures form the fundamentals of sewing and are integrated into the construction methods used by each company in the applications to a specific design. Prerequisite: CTE1721C (1 hr. lecture, 2 hr. lab)

CTE2388
Principles of Contemporary Retailing 3 credits
 In this course students will learn the operational segments of the fashion industry and their functions. The course focus is on the contributions employees add to sales productivity and customer satisfaction in retail establishments and on the exploration of new technologies and their impact on consumers' shopping experiences. Prerequisite: CTE1050 (3 hr. lecture)

CTE2610
Fashion Forecasting & Research 3 credits
 In this course students will learn to explore and apply forecast research methods in preparation for developing, planning, purchasing, or merchandising apparel lines and collec-

tions. Using the case study method, trend research is evaluated through the use of scholarly texts, articles, databases, and relevant websites to identify opportunities for growth and profitability in a fashion business. Prerequisite: CTE1050, MAR1011 (3 hr. lecture)

CTE2722C
Fashion Design 2 3 credits
 This course focuses on the use and development of basic slopers. Students will learn to proceed from basic applications and principles of patternmaking to the advanced process of design development. Combining the bodice and sleeve slopers to develop a kimono/dolman sloper is one example of the application of basic slopers to the comprehensive understanding of principles of pattern and design development. Prerequisite: CTE1721C (1 hr. lecture, 2 hr. lab)

CTE2732
Fashion Illustration Technology 3 credits
 This course introduces the basics of fashion illustration technology targeted specifically for the fashion industry. Using various computer software and tools, including but not limited to Photoshop, Fashion CAD, C-Design, Adobe Illustrator, and Digital Fashion Pro, students will learn the techniques to conceptualize, create, and manage fashion designs and collections, and create industry-standard presentations. (3 hr. lecture)

CTE2800
Textile, Apparel & Retail Analysis 3 credits
 In this course students will learn about textile marketing of sustainable apparel and the textile value chains from product concept to the consumer. A variety of topics on global value chains, market analysis, product development, manufacturing, market and sourcing are explored. The global impact of trade and sourcing constraints are examined. Through readings, case studies and in-class industry presentations, students will explore a comprehensive array of contemporary issues, both social and regulatory, that help in understanding the complex value and supply chain. Prerequisite: CTE2388 (3 hr. lecture)

CTE2802
Fashion Merchandising Strategies 3 credits
 In this course students will gain comprehensive knowledge of the merchandising environment, including the functions and objectives of the merchandising team, the principles and techniques of today's buyers, planners, product developers, and account executives. Prerequisite: CGS1060C (3 hr. lecture)

CTE2836
Global Merchandising 3 credits
 In this course students will learn the merchandising practices used around the world in fashion apparel companies, both in retail and wholesale. American merchandising theory is used as a base of comparison in the con-

sideration of various religions, cultures, legal systems, and other global systems. Corequisite: CTE2802 (3 hr. lecture)

Film, Radio, TV Technology

DIG3255C
Advanced Sound Design 3 credits
 In this upper division course for BAS students in Film, Television & Digital Production students will learn advanced audio production, emphasizing audio recording, mixing, editing, overdubbing, and aesthetics. Prerequisite: RTV1240C; (2 hr. lecture/2 hr. lab)

DIG3347C
Advanced Cinematography 3 credits
 In this upper division course for BAS students in Film, Television & Digital Production students will learn the technical and aesthetic principles of advanced cinematography techniques. Prerequisite: RTV2246C, FIL2515C; (2 hr. lecture; 2 hr. lab)

DIG3940
Upper Division Internship 3 credits
 In this upper division internship for BAS students in Film, Television & Digital Production students will learn to apply their knowledge and skills at an established film or television entertainment company (144 hr. Internship).

DIG4345C
Digital FX & Compositing 3 credits
 In this upper division course for BAS students in Film, Television & Digital Production students will learn the theory and practice of video compositing and motion graphics. (2 hr. lecture, 2 hr. lab)

DIG4505C
DVD Authoring, Web Design, & Electronic Distribution 3 credits
 Students will learn how to author interactive DVDs, create a basic website and distribute audio and video content via the internet. Corequisite: FIL4586C. (2 hr. lecture; 2 hr. lab)

FIL1030
History of Film 3 credits
 In this introductory course students will learn about the history of motion pictures, with an emphasis on American and European films. (3 hr. lecture)

FIL1055
American Independent film 3 credits
 In this introductory course, students will learn about the American independent film movement with an emphasis on American directors and producers. (3 hr. lecture)

FIL1060
Survey of Documentary Film 3 credits
 In this introductory course students will learn the history of nonfiction films, with an emphasis on American and European filmmakers. (3 hr. lecture)

FIL1100**Screenwriting 1: Introduction to Story Structure 3 credits**

A workshop-style introductory class covering narrative script writing for film and television. Students will learn to develop a short-format screenplay incorporating three-act story structure, script elements, and standard industry formatting. (3 hr. lecture)

FIL1420C**Film Production 1: Introduction to the Filmmaking Process 4 credits**

An introductory overview of the art and technology of narrative motion picture production. Students will learn basic production techniques, from pre-production through production to final screening. Corequisite: FIL2552C; (2 hr. lecture 4 hr. lab)

FIL1431C**Film Production 2: Cinematography and Sound 4 credits**

An introductory course in which students will learn cinematography and sync-sound motion picture production. Prerequisite: FIL1420C; Corequisite: FIL2553C; (2 hr. lecture; 4 hr. lab)

FIL2131**Screenwriting 2: Character Development & Advanced Story Structure 3 credits**

In this workshop-style intermediate level course students will learn about character development and various story structures for narrative motion picture screenplays. Prerequisite: FIL1100 (3 hr. lecture)

FIL2407**Film/Pre-Production 2 credits**

This class prepares students for the film production process by introducing them to the technical and organizational aspects of filmmaking that need to be completed before the first day of production. Students will learn all aspects of pre-production planning and preparation including analyzing and interpreting scripts, storyboards, fax-sheets and set designs, casting, wardrobe and make-up considerations and they will learn to prepare a location and studio set-up. (1 hr. lecture; 2 hr. lab)

FIL2413**Screenwriting 3 3 credits**

An advanced course in which the fundamentals of story structure and character development introduced in Screenwriting 1 and Screenwriting 2 are refined. The student will learn how to write an outline for a feature-length motion picture. Prerequisite: FIL2131; (3 hr. lecture)

FIL2480C**Film Production 3: Directing 4 credits**

An intermediate practicum in motion picture direction through the analysis of various directors' and their cinematic styles. Students will learn the role of the director by interpreting dramatic material, effectively guiding acting performances, and communicating a story

visually. Prerequisite: FIL1431C, RTV1240C, FIL2553C; (2 hr. lecture; 4 hr. lab)

FIL2515C**Film Production 4: Producing the Short Film 4 credits**

An advanced course in film production. Students will learn to apply the fundamentals of film production as introduced in Film Production 1, 2, & 3 to the production of a portfolio-quality narrative short film. Prerequisite: FIL2480C; (2 hr. lecture 4 hr. lab)

FIL2552C**Editing Level 1: Introduction to Editing 3 credits**

An introductory course in which students will learn the practice of editing digital media. (2 hr. lecture, 2 hr. lab)

FIL2553C**Editing Level 2: Intermediate Editing and Visual Effects 3 credits**

An intermediate course in which students will learn video editing with an emphasis on sound design and visual effects. Prerequisite: FIL2552C; (2 hr. lecture, 2 hr. lab)

FIL2560C**Editing Level 3: Advanced Editing: Color Correction and Finishing 3 credits**

An advanced course in which students will learn the practice of color correcting and finishing fiction and non-fiction projects. Prerequisite: FIL2553C; (2 hr. lecture; 2 hr. lab)

FIL2572C**Advanced Video Post Production 3 credits**

Students will learn advanced theory and practice of non-linear editing. The course will concentration effects, color correction and editorial working practices. Prerequisite: FIL 2552C, 2553C with a grade of "C" or better. Laboratory fee. (2 hr. lecture; 2 hr. lab)

FIL2611**Film Business Marketing Distribution Exhibition 3 credits**

Examination of the functional areas within marketing as well as the various distribution means (both current and projected) that are governing the sale of independent feature films or films financed outside of the studio system. Students learn to distribute their own selected films in this course. Prerequisite: FIL 1431. (3 hr. lecture)

FIL2945**Film Internship 3 credits**

Students will learn to apply the various skills gained throughout the program in a semester long immersion at an established film entertainment company. Prerequisite: FIL2480C ; (15 hr. lecture)

FIL2949**Co-op Work Experience 2: FIL 3 credits**

This course is designed to continue training in student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisites: Co-Op Department approval and completion of

1949 Co-Op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-Operative Education Office to obtain registration approval. Prerequisite: FIL 2515C. (3 hr. lecture)

FIL3602**Production Management 3 credits**

In this upper division course for BAS student's in Film, Television & Digital Production students will learn the theory and practice of managing film and television production with an emphasis on pre-production processes and software. Prerequisite: FIL2611, MMC2000 (3 hr. lecture)

FIL3651**Business Proposals for Film & Television 3 credits**

In this upper division course for BAS student's in Film, Television & Digital Production students will learn the theory and practice of business plans/grant proposals in media production funding. Prerequisite: FIL2611, MMC2000. (3 hr. lecture)

FIL4164**Advanced Writing for Film and Television 3 credits**

In this upper division course in Film, Television & Digital Production students will learn the process of completing a long form motion picture or television script. Prerequisite: RTV2300, FIL2131. (3 hr. lecture)

FIL4585C**Production Workshop 1 4 credits**

In this production course, students will learn and apply industry-standard pre-production and production techniques to produce a fiction or non-fiction film. Students will go through a selection process to determine their crew positions on the production. Prerequisite: DIG3347C, fil3605 (2 hr. lecture; 2 hr. lab).

FIL4586C**Production Workshop 2 4 credits**

In this upper division workshop for BAS Students in Film, Television & Digital Production students will learn to apply industry-standard post-production techniques to complete Production Workshop 1 projects. Prerequisite: FIL4585C; (2 hr. lecture; 2hr. lab)

RTV1000**Fundamentals of Broadcasting 3 credits**

In this introductory course for television and radio broadcasting, students will learn about the foundations of the American broadcast system. (3 hr. lecture)

RTV1100**Writing for Electronics Media 3 credits**

This course should enable you to write comfortably for the media in a variety of formats. You will be introduced to analysis and preparation of scripts that emphasizes common principles of wording for mass media of communication and formats peculiar to each

medium. You should learn basic broadcast principles of copy preparation, first for radio and then for the added requirements of television news. Particular attention will be given to commercials and public service announcements. There will be opportunities to study and write documentaries and other long-form programs. At the end of the course, you should understand what goes into a script and have the ability to write a workable script in the medium of your choice. (3 hr. lecture)

RTV1240C
Sound Design 3 credits
In this introductory Sound Design course students will learn an overview of sound recording and audio post-production. (4 hr. lecture)

RTV1241C
Television Production 1 4 credits
An introductory overview of the practices and procedures used in a television studio. Students will learn basic operation of studio and control room equipment and work towards the completion of broadcast standard projects. (2 hr. lecture; 4 hr. lab)

RTV1242C
Television Production 2 4 credits
An intermediate course in television studio production. Students will learn to implement the fundamentals as introduced in Television Production 1 to the production of scripted programs. Prerequisite: RTV1241C (2 hr. lecture 4 hr. lab)

RTV2205C
Television Workshop 3 credits
Production of TV shows from the script to the taping and the fully edited master. Includes post production if required. This course combines learning outcomes from all previous production courses through professional level productions. Prerequisite: TV 2246C. Laboratory fee. May be repeated for credit. (1 hr. lecture; 4 hr. lab)

RTV2230C
Radio and Television Announcing 3 credits
In this introductory class the student will learn about the processes used by On-Air Talent in television and radio production. (2 hr. lecture; 2 hr. Lab)

RTV2243C
Directing 3 credits
An introductory overview of television directing. Students will learn the responsibilities of the television director in coordinating production elements and television control room techniques. Prerequisite: RTV1242C; (2 hr. lecture 2 hr. lab)

RTV2245C
Electronic Field Production 1 4 credits
An introductory course in which students will learn single-camera field production and electronic news gathering. Prerequisite: RTV1242C; (2 hr. lecture; 4 hr. lab)

RTV2246C
Electronic Field Production 2 4 credits
In this intermediate workshop style class students will learn about documentary production. Prerequisite: RTV2245C; (2 hr. lecture; 4 hr. lab)

RTV2252
TV/Video Pre-Production 2 credits
Students will learn all aspects of pre-production planning and preparation including analyzing and interpreting scripts, storyboards, fax sheets, and set designs, casting wardrobe and make up considerations and they will learn to prepare a location and studio set-up. (1 hr. lecture; 2 hr. lab)

RTV2300
Broadcast Writing 3 credits
In this intermediate workshop style class students will learn broadcast writing emphasizing news, documentary, commercials, and long-form programming. (1 hr. lecture; 2 hr. lab)

RTV2940
Television Internship 3 credits
In this lower division internship designed for AS students in Television Production, students will learn to apply skills and knowledge learned in the program at an established television entertainment company Prerequisite: RTV1242C; (144 hr. Internship).

RTV2941
Fall Television Practicum 3 credits
This course is an advanced internship with limited enrollment requiring departmental approval. Students will learn advanced camera and lighting techniques, while assisting in the production of shows for Cable-TAP television. Miami-Dade County's official community access channel. AS degree credit only. Prerequisite: RTV 1242C. (6 hr. lab)

RTV2942
Spring Television Practicum 3 credits
This course is an advanced internship with limited enrollment requiring departmental approval. Students will learn advanced camera and lighting techniques, while assisting in the production of shows for Cable-TAP television. Miami-Dade County's official community access channel. AS degree credit only. Prerequisite: RTV 1242C. (6 hr. lab)

RTV2943
Summer Television Practicum 3 credits
This course is an advanced internship with limited enrollment requiring departmental approval. Students will learn advanced directing and floor management techniques, while assisting in the production of shows for Cable-TAP television, Miami-Dade County's official community access channel. Prerequisite: RTV 1242C. AS degree credit only. (6 hr. lab)

RTV3256C
Advanced Post Production 3 credits
An advanced course in which students will learn complex digital media post production techniques. Prerequisite: FIL2553C. (2 hr. lecture; 2 hr. lab)

RTV3277C
Television Studio Production Workshop 3 credits
In this upper division workshop class for BAS students in Film, Television & Digital Production students will learn advanced television studio production techniques for pre-scripted programs. Prerequisite: RTV2246C, FIL2515C. (2 hr. lecture; 2 hr. lab)

RTV3408
Ethics & Research for Non-Fiction Scripts 3 credits
In this upper division course students will learn research methods applicable to documentary production. Prerequisite: FIL2131, RTV2300. (3 hr. lecture)

RTV3810C
Broadcast Design & On-Air Promotions 3 credits
In this upper division course in BAS in Film, Television & Digital Production students will learn about on-air promotions with specific emphasis on layout, color, and composition. (2 hr. lecture; 2 hr. lab)

VIC1000
Visual Communications 3 credits
An introductory course in which students will learn the visual aspects of film, video, photography and graphic arts, specifically dealing with design elements and principles. (2 hr. lecture 2 hr. lab)

VIC1205C
Video Compositing and Motion Graphics 1 3 credits
This course is an introduction to visual effects for film and television. The student will learn basic level techniques of still and motion graphic design in visual effect compositing for film and video using Photoshop and After Effects. Prerequisite: FIL 2552C. Laboratory fee. (2 hr. lecture; 2 hr. lab)

Finance

FIN2000
Principles of Finance 3 credits
The creation, allocation, and utilization of money, and the effect of monetary policy upon individuals, business, national and international economics. This course provides a basis for further study of monetary theory, banking, finance and securities. (3 hr. lecture)

FIN2010
Investments in Stocks and Bonds 3 credits
The basic principles of the stock market as they affect the individual investor in stocks and bonds. Investment in these securities is studied from the standpoint of the short-term and long-term investors. (3 hr. lecture)

FIN2051
International Financial Management 3 credits

The student will learn basic concepts and principles of international finance, with consideration of the financial environment, transactions, and flows. Exchange rates, risks, and government policies affecting business are analyzed as well as management policies and decisions. Special fee. (3 hr. Lecture)

FIN2100**Personal Finance 1-3 credits**

A study of economic and personal goals including personal budgeting, credit budgeting, borrowing money, banking facilities, the nature of investments, life insurance, casualty insurance, home ownership, stocks and bonds, and retirement plans. (1-3 hr. Lecture)

FIN4303**Financial Markets and Institutions 3 credits**

Students will learn the importance of financial markets and the role financial intermediaries' play. Emphasis will be upon the objectives and policies of financial intermediaries within the constraints of the law and regulatory authorities. Prerequisites: grade of "C" or higher in FIN 3400, ECO 2013, and ACG 2071 or equivalents. Special fee. (3 hr. Lecture)

Fire Science

FFP1505**Fire Prevention 3 credits**

Florida State Fire Marshals regulations as they relate to fire prevention. Surveys of other authoritative sources, codes and ordinances such as the National Fire Code, miscellaneous model codes, underwriter's laboratory, and the fire prevention intent of various codes. (3 hr. lecture)

FFP1710**Supervision-Leadership for Fire Officers 3 credits**

Analysis of the broad concepts of supervision and leadership to analyze the kinds of effective leadership-followership needed in the fire services, and how roles and attitudes must change in the high stress conditions to which fire fighters are routinely exposed. One of four courses recommended by the Florida Fire Standards Council for Pre-Officer Training. (3 hr. lecture)

FFP2120**Building Construction for Fire Science 3 credits**

A study of buildings fire codes; life safety and OSHA fire protection codes; a study of basic building construction files and the behavior of building materials during a fire; a survey of research and standards development. (3 hr. lecture)

FFP2301**Fire Hydraulics 3 credits**

The basic theories of hydraulic as applied to the fire services. The mathematics and formulas necessary to solve fire stream calculations

and any such variables. Prerequisites: MTB 1321 or equivalent ability to square numbers and perform square roots is required. (3 hr. lecture)

FFP2305**Fire Apparatus and Equipment 3 credits**

Various mechanical, hydraulic, pneumatic and electrical systems found on heavy duty, high performance fire apparatus. Why and how major parts work, their relationship, and the emergency procedures followed to make equipment apparatus are studied. Prerequisite: FFP 2301. (3 hr. lecture)

FFP2401**Hazardous Materials 1 3 credits**

An introduction to flammable hazardous materials and the basic chemical and physical properties of matter as found in solid, liquid or gaseous forms. Hazardous environmental conditions and the interaction of materials are discussed. (3 hr. lecture)

FFP2402**Hazardous Materials 2 3 credits**

A further study of hazardous materials with emphasis on unstable chemicals; explosive substances and their handling; exotic fuels (solids and liquid propellants); pesticides, corrosive toxic and radioactive substances. Standard operating procedures for fire departments will be discussed. Prerequisite: FFP 2401. (3 hr. lecture)

FFP2510**Fire and Building Codes 3 credits**

The national, state and local municipal fire codes with emphasis on local laws and ordinances related to life-safety features designed into structures of all types. Emphasis is on the fire prevention requirements of the South Florida Building Code. Prerequisite: FFP 1710. (3 hr. lecture)

FFP2521**Blueprint Readings and Plans Review 3 credits**

A study of building construction plans review and examination with an emphasis on building integrity, Life Safety and code compliance. Prerequisite: FFP 2810. (3 hr. lecture)

FFP2540**Fire Detection and Suppression Systems 3 credits**

Various electronic fire detection devices and systems; the kinds and operation of various mechanical and automatic suppression systems, and the chemical reactions that various suppressants make when in contact with hazardous materials. (3 hr. lecture)

FFP2590**Fire Inspector Preparation 1-9 credits**

Life/fire safety and building codes used by all fire department inspectors in Greater Miami-Dade County as well as inspection process, procedures and reporting requirements for each occupancy classification. Successful completion of the course leads to specialized certification as a Fire Inspector. Prerequisite:

Permission of department chairperson. (1-9 hr. lecture)

FFP2604**Arson Detection and Investigation 3 credits**

An introduction to arson laws and types of incendiary fires. Students study methods of determining fire cause, recognizing and preserving evidence, the phenomenon of pyrolysis; normal patterns of structural fires; interviewing witnesses, court procedures and giving court testimony. Prerequisite: FFP 2301. (3 hr. lecture)

FFP2700**Fire Department Management 3 credits**

The municipal supervision-management policies, practices and procedures necessary to keep the firefighting team ready to implement fire prevention/suppression activities. One of four courses recommended by the Florida Fire Standards Council for Pre-Officer Training. Prerequisite: FFP 1710. (3 hr. lecture)

FFP2740**Fire Service Instructor 3 credits**

The instructors' responsibilities in transmitting good study habits, class communication; human relations; learning and teaching concepts; job analysis, identifying teaching objectives; teaching methods and techniques; instructional aides and criteria and performance based evaluations. One of the four elements of instruction required by the Florida Fire Fighter Standards Council for Pre-Officer Eligibility. Prerequisite: ENC 1101. (3 hr. lecture)

FFP2741**Fire Service Instructor (Course Design) 3 credits**

Fire Service Instructor (Course Design) emphasizes techniques that will assist the Fire Service Instructor develop skills in curriculum development including the importance of an active training program. Students will learn the principles of effective curriculum design for adult and student centered learning. They will understand how to design courses and units related to learning, teaching, performance, and behavioral objectives. The State Fire Marshal, Bureau of Fire Standards and Training require this course for instructor II and III certification. This certification enables the instructor to teach higher-level courses (i.e.: Fire Officer I and II, Fire Inspector.). (3 hr. lecture)

FFP2810**Fire Fighting Tactics and Strategy 3 credits**

The principles of efficient utilization of manpower, equipment, and apparatus with emphasis on pre-fire planning, decision making and problem-solving related to fire-ground tactics. One of four courses recommended by the Florida Fire Standards Council for Pre-Officer Training. Prerequisite: Sophomore standing in program or employed Fireman. (3 hr. Lecture)

Food Service

FSS1100

Foodservice purchasing 3 credits

This is an introductory course in which students will learn the principals of menu planning for various types of facilities and service as well as menu layout, selection, development and pricing structures. Students will learn the principals and practices concerned with the purchase and receipt of food, supplies and equipment for various food service operations. Prerequisites: FSS 1200, 1202L. A.S. degree credit only. (3 hr. lecture)

FSS1200

Culinary Terminology and Procedures 3 credits

This is an introductory course in industry vocabulary, terminology, knowledge, skills, and practices. The students will learn standard kitchen phrases, how to identify and describe equipment, recipe reading, costing, conversion formulas, product identification, measurements and basic cooking procedures. Co-requisites: FSS1202L (3 hr. lecture)

FSS1202L

Food Production 1 3 credits

This course is an introductory kitchen lab experience in which students will be provided hands-on orientation to tools, equipment, recipe production, measurements, knife cut techniques and basic cooking procedures. Students will practice classic cooking methods, product identification and the functions of the production kitchen in a "green" team environment. Corequisite: FSS 1200. A.S. degree credit only. (6 hr. lab)

FSS1204L

Food Production 2 3 credits

This is a lab course in which students will reinforce the skills that they learned in Production 1. Students will learn cooking methods, knife skills, and applied principles of cooking techniques. The course will emphasize portion control, work plans, and organization and production schedules. This course reviews stock and sauce making, explores modern cooking methods, the use of applicable equipment, and regional and nutritional cooking. Pre-requisites: FSS1200, and FSS1202L (6 hr. lab)

FSS1246C

Basic Baking 3 credits

This is an introductory course in which students will learn the fundamentals of baking science, terminology, equipment, ingredients, weights, measures formula conversion and storage. Students will learn the functions of various baking ingredients and execute baking recipes and competencies including doughs, breads, cookies, pies, puff pastries, sweet & savory pastry fillings, quick breads, cakes and basic decorating techniques. Prerequisite FSS 1200, 1202L. A.S. degree credit only. (1 hr. lecture; 2 hr. lab)

FSS2205L

Food Production 3 3 credits

This capstone course will reinforce the skills learned in the prerequisite classes. Students will learn how to brew beer, pair wine and food, and review the distillation process for spirits through hands on experiences as well as practices in dining room management and tableside cooking. Knife skills, stock and sauce making, moist heat cooking methods, dry heat cooking methods and combination cooking methods will be reviewed on an advanced level. The student will review butchery, seafood and modern cooking methods. Pre-requisites: FSS1200, and FSS1202L, and FSS1204L, and FSS2242C, and FSS1246C, and FSS2248C (6 hr. lab)

FSS2242C

International Cuisines 3 credits

This is an advanced course in which students will reinforce their knowledge of equipment, vocabulary and theories learned in prerequisite classes. Students will learn to use global ingredients, explore international cooking techniques and methods and be exposed to equipment specific to a world region. Students will have the opportunity to develop international menus and prepare dishes from many different countries. Prerequisites: FSS1200, 1202L, 1204L (1 hr. lecture 4 hr. lab)

FSS2248C

Garde Manger 3 credits

This is an intermediate course in the preparation of foods from the cold kitchen. Students will learn to prepare sausages, cheese, cured foods, terrines, hors oeuvres and cold soups and sandwiches. Students will also be exposed to carving and buffet layout. Production methods and safe food handling techniques are re-emphasized. Pre-requisites: FSS1200, and FSS1202L, and FSS1204L (1 hr. lecture; 4 hr. lab)

FSS2381L

Culinary Management Practicum 4 credits

This required practicum is designed to provide hands on culinary training through industry work experience. Students will be located in an approved site to reinforce their skills while being exposed to various stations in a food services operation. Students will learn to actively participate in various aspects of the operation including cooking, cost controls, and sanitation programs. Prerequisites: FSS2205L (192 hr. practicum)

FSS2950L

Culinary Competition 3 credits

This advanced course will strengthen the student's ability to utilize various culinary methods learned in prerequisite courses. The student will learn about the American Culinary Federation certification tests, guidelines and competitions. In addition, students will utilize their skills by participating in on site and recorded demonstrations. The class will reinforce

and develop timing, teamwork and menu development. Prerequisites: FSS1200, 1202L, 1204L, 1242C, 1248C. (6 hr. lab)

Foreign Languages (In Translation)

FOT2802

Introduction to Translation 3 credits

Develops the ability to do accurate written translations in general. Includes the application of contrastive structures and grammar rules of source and target languages; translation of idiomatic expressions and an introduction to legal and technical vocabulary; the use of bilingual dictionaries and glossaries. The demands of translation as a profession and its code of ethics are stressed. (3 hr. lecture)

FOT2821 Introduction to Interpretation 3 credits

The acquisition and development of the abilities to convert an oral message from the source language into another consecutive oral message in the target language. (3 hr. lecture)

FOT2822

Court Interpreting Skills 3 credits

Continuation of FOT 2821 including deepening and broadening the type of exercise of FOT 2821 and gradual introduction to simultaneous interpretation. Oral translation with notes and conversations, ratio or tape passages. Extensive practice in the process of hearing, understanding, remembering and speaking for simultaneous oral interpretation. Participation in an internship or practical training program. (3 hr. lecture)

FOT2823

Consecutive Interpretation 3 credits

This course builds on the foundation established in Introduction to Interpretation (FOT2810) and acquaints the students with the practice and application of consecutive interpretation (English/Spanish). Development of active listening, concentration and retention skills as well as the ability to perceive essential meaning for subsequent recall is emphasized. This course also explores basic note taking techniques and provides practice in monolateral and bilateral consecutive interpretation. Prerequisite: FOT 2821. (3 hr. lecture)

FOT2824

Simultaneous Interpretation Strategies 3 credits

This course builds on the foundation established in previous interpretation courses while introducing the students to simultaneous interpretation (English/Spanish) by providing preparatory exercises such as shadowing, lagging, paraphrasing etc. Through a variety of recorded materials, students practice the simultaneous interpretation mode so as to acquire smooth delivery techniques

while forming good professional habits. Prerequisites: FOT 2821, 2823. (3 hr. lecture)

FOT2825
Computer Assisted Translation 1 3 credits

Examines the types of translation software currently used in the translation/interpretation profession as well as the commercial use and business application of these. Description and application of tools such as translation memory, electronic dictionaries, desktop-publishing systems, and website translation technologies are covered. Prerequisite: CGS 1060. (3 hr. lecture)

FOT2826
Legal Translation 3 credits

Continuation of FOT 2802. Written translations of multi-page documents and/or articles containing legal, technical and other specialized vocabulary from the source language into the target language. Firsthand translation experience by participating in a "translator's bureau," or an "internship" or practical training program. (3 hr. lecture)

FOT2827
Medical Translation 3 credits

This course further develops translation strategies while familiarizing the student with the characteristics of medical and health-related discourse in both English and Spanish. Included is the acquisition of medical and hospital/clinic terminology and the analysis of related linguistic structures so students can engage in translating texts from English into foreign language and vice versa. Prerequisites: FOT 2802, 2803. (3 hr. lecture)

FOT2828
Medical Interpretation 3 credits

This course develops the techniques, practices and knowledge needed to function as interpreters in a medical environment. Interpreting models such as sight, consecutive and simultaneous - as they apply to the medical setting - are revisited. Medical vocabulary/terminology in English and foreign language as well as code of ethics will also be introduced. Prerequisites: FOT 2821, 2823, and FOT 2824(recommended). (3 hr. lecture)

FOT2829
Financial and Business Translation 3 credits

This course further develops translation strategies while familiarizing the students with the characteristics of financial and business discourse in both English and Spanish. Included is the learning of special terminology and related linguistic structures so students can engage in the translation of texts containing financial/business or economic discourse from English into Spanish and vice versa. As in legal translation, students engage in terminology research and glossary development through the use of specialized bilingual financial and business dictionaries and other pertinent sources. Prerequisites: FOT 2802, 2803. (3 hr. lecture)

FOT2991
Introduction to Interpretation Theory 3 credits

Students will learn to explore basic linguistic concepts including phonology, morphology, syntax, pragmatics and semantics. This course will also focus on how a language is organized and functions, and will establish a connection between Linguistics and Translation Theory. It also addresses current trends in Traductology as a basis for understanding Interpretation as a process, and its implications in interpreters' performance. (3 hr. lecture)

FOT2992
Introduction to Medical Interpreting Skills 3 credits

Course Description: Students will learn the techniques, practices and knowledge needed to function as interpreters in a medical environment. Interpreting modes such as sight, consecutive and simultaneous - as they apply to the medical setting - are revisited. Though this is a language neutral skills course, simulations will be conducted in the working languages of the participants whenever possible. (3 hr. lecture)

FOT2993
Cross-Cultural Communication for Interpreters 3 credits

Course Description: This course provides the participants with the opportunity to identify cross-cultural issues and their impact on interpretation encounters. Students will analyze concepts such as communication, culture, cultural identity, non-verbal communication, and cultural context related to interpretation. (3 hr. lecture)

FOT2994
Ethics for Medical Interpretation 3 credits

Course Description: Students will learn the roles, responsibilities, and boundaries of the interpreter in medical interviews and procedures involving provider and patient. Special consideration is given to privacy concerns and the ethical guidelines of interpreting in a medical setting. Prerequisite: FOT2992. (3 hr. lecture)

French Language and Literature

FRE1120
Elementary French 1 4 credits

An integrated (multi-media) approach to acquire proficiency in the basic skills (of the language)-listening/understanding, speaking, reading, writing, and across-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice in class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

FRE1121
Elementary French 2 4 credits

A continuation of FRE 1120. A proficiency-oriented course emphasizing the mastery of the basic skills of the language. Prerequisite: FRE 1120. (4 hr. Lecture)

FRE2220
Intermediate French 1 4 credits

Students will learn to understand, speak, read, write, and gain cultural awareness of French through a systematic review (using an integrated, multimedia approach) of reading grammar, and writing skills with emphasis on oral and written communication. Prerequisite: FRE 1121 or equivalent. (4 hr. lecture)

FRE2221
Intermediate French 2 4 credits

This is a continuation of Intermediate French 1. Students will learn to understand, speak, read, and write French. Students will also learn to develop cross-cultural awareness through a systematic review of reading and writing skills with emphasis on oral as well as written expression. Prerequisite: FRE2220 or equivalent. (4 hr. lecture)

FRE2240
French Oral Expression 1 3 credits

Developing skills in conversation. Oral structures. Vocabulary expansion. Phonetic correction. Level 1. Offered through Overseas Study Program. (3 hr. lecture)

FRE2241
French Oral Expression 2 3 credits

Developing skills in conversation. Oral structures. Vocabulary expansion. Phonetic correction. Level 2. Offered through Overseas Study Program. (3 hr. lecture)

FRW2100
Selected Readings in French Literature 1 3 credits

A study of outstanding works authors, genres, or literary currents in France. (3 hr. lecture)

FRW2111
Selected Readings in French Literature 2 3 credits

A study of outstanding works, authors, genres, or literary currents of French expression in francophone nations or areas. (3 hr. lecture)

Funeral Services Education

FSE1000
Introduction to Funeral Services 3 credits

The principles of funeral service and its history. A study of the ethical obligations and fundamental requirements, involving skill, aptitudes, and qualifications of funeral directors. A.S. degree credit only. (3 hr. lecture)

FSE1080**Funeral Law 3 credits**

Federal, state and municipal statutes, rules, regulations and ordinances pertaining to funeral service; torts, contract and administrative laws, and financial disclosures pertinent to funeral operations and management. A.S. degree credit only. (3 hr. lecture)

FSE1105**Funeral Service Chemistry 3 credits**

A survey of the basic principles of chemistry as they relate to funeral service. Especially stressed are the chemical principles and precautions involved in sanitation, disinfection, public health and embalming practice. A.S. degree credit only. (3 hr. lecture)

FSE2060**Funeral Directing 3 credits**

Study of various religious, fraternal, military, traditional, nontraditional and humanistic variations of funeral ceremonies, including cultural, ethnic and geographic customs. A.S. degree credit only. (3 hr. lecture)

FSE2061**Thanatology 3 credits**

Psychological and sociological dynamics of death, dying, and bereavement. Dynamics of counseling demonstrated through role-playing video critique and analysis. Prerequisite: FSE 1000. A.S. degree credit only. (3 hr. lecture)

FSE2100**Embalming 1 3 credits**

Orientation to basic embalming skills, case analysis, chemical composition, post-mortem changes, instrumentation and disinfection. Corequisite: FSE 2100L. A.S. degree credit only. (3 hr. lecture)

FSE2100L**Embalming 1 Laboratory 2 credits**

This laboratory course complements the lecture co-requisite FSE2100. With hands-on experience in the preparation room, students will learn the foundational techniques associated with disinfection and preservation of human remains. Co-requisite: FSE2100. Recommended Preparation: BSC1084 is recommended prior to enrolling in FSE2100L. Special fee. (4 hr. lab)

FSE2106**Funeral Service Microbiology 3 credits**

This course is a survey of the basic principles of microbiology as it relates to Funeral Science. It emphasizes the importance of sanitation, disinfection, public health in the embalming practice. (3hr. lecture)

FSE2120**Restorative Art 3 credits**

Anatomical study of human features; familiarization with instruments, human proportions, special materials and techniques. Corequisite: FSE 2120L. A.S. degree credit only. (3 hr. lecture)

FSE2120L**Restorative Arts Lab 1 credit**

Laboratory for FSE 2120. Practice and techniques in reconstructive modeling. Corequisite: FSE 2120. Laboratory fee. A.S. degree credit only. (2 hr. lab)

FSE2140**Embalming 2 3 credits**

Emphasis on embalming considerations and procedures for pathogenesis and advanced decomposition, use of specialized chemicals, treatment of post-mortem cases and advanced techniques. Corequisite: FSE2140L. A.S. degree credit only. (3 hr. lecture)

FSE2140L**Embalming 2 Laboratory 2 credits**

This course is a continuation of FSE2100 and complements the lecture co-requisite FSE2140. Students will learn advanced procedures to enhance their foundational knowledge of embalming technique as learned in the prerequisite classes FSE2100/FSE2100L. Learning the fundamentals of general embalming technique as outlined by the American Board of Funeral Service Education Standards will enable students to work in a preparation room as embalming apprentices to licensed embalmers. Prerequisites: FSE 2100, FSE 2100L. Co-requisite: FSE2140. Special fee. (4 hr. lab)

FSE2160**Pathology 4 credits**

General, systemic and forensic pathology with emphasis on analysis of pre- and post-mortem histology, cytology and etiology; causative factors relating to death and determination of cause of death. Prerequisite: BSC 1084. A.S. degree credit only. (4 hr. lecture)

FSE2200**Funeral Service Accounting 3 credits**

An introduction to basic principles of accounting theory. This subject covers financial statements and their analysis, journalizing, receivables, payables, deferrals, and accruals. Inventory costing models depreciation models and payroll accounting are included. Applications to funeral home operations are made throughout the subject material. A.S. degree credit only. (3 hr. lecture)

FSE2201**Funeral Home Operations 3 credits**

Theoretical and practical training in all areas of funeral home operations; laboratory experience in merchandising and funeral arrangements. Corequisite: FSE 2200. A.S. degree credit only. (3 hr. lecture/lab)

FSE2202**Funeral Service Business Management 3 credits**

The role and function of an effective manager is explored. Emphasis is placed on the management functions of planning, organizing, motivating, directing, and controlling. How to purchase a small business is also covered. A.S. degree credit only. (3 hr. lecture)

FSE2203**Funeral Home Application 4 credits**

This is a preparation course for funeral directing. Students will learn taking first calls, buying and selling of merchandise, funeral arranging, conducting funerals, job interviewing, computer software, and resume writing. Prerequisites: FSE 2060, 2061, 2200, 2202. A.S. degree credit only. (4 hr. lecture)

FSE2931**Funeral Service Professional****Review 1****1 credit**

This course is for the Funeral Science student who is graduating and taking the National Board Examination at the end of the semester that this course is being offered. The course is a review of the science section of the Funeral Science courses in order to help prepare the student for the National Board Examination. Prerequisite: Permission of the department is required. (2 hr. lab)

FSE2932**Funeral Science Professional****Review 2****1 credit**

This course is for the funeral Science student who is graduating and taking the National Board Examination at the end of the semester that this course is being offered. The course is a review of the Arts section of the Funeral Science courses in order to help prepare the student for the National Board Examination. Prerequisite: Permission of the department is required. (2 hr. lab)

General Business

GEB1000**Business Career Strategies 3 credits**

This course is designed to enable students to thrive in a competitive business environment. Students will learn business etiquette, alternative career pathways, personal financial management, and budgets. Additionally, students will learn interviewing, networking, and career development skills. (3 hr. lecture)

GEB1011**Principles of Business 3 credits**

The student will learn the major disciplines of business including general business, business ethnics, forms of business ownership, economics, management and leadership, human relations marketing, information systems, accounting, financial management, money and banking, and business law. Special fee. (3 hr. lecture)

GEB1949**General Business Internship 1 3 credits**

This internship provides students with an opportunity to gain business experience while receiving academic credit. Students will learn to make connections between their internship experiences, academic coursework, and career goals. Students are required to complete 144 hours of internship in an organizational setting. (144 hr. Internship)

GEB2100**Introduction to Business****Analytics** 3 credits

This course is for students majoring in business, marketing, business intelligence, computer science and other majors and introduces how information and technology are used in organizations to create market advantage. Students will learn about the operational units of an organization and the information requirements to support the organization. (3 hr. lecture)

GEB2112**Introduction to Entrepreneurship**

3 credits

Students will learn that start-ups are not smaller versions of big businesses. They are unique. This foundation course in business entrepreneurship covers the attributes of successful entrepreneurs, opportunity identification, opportunity analysis and development, as well as an overview of the key activities and functions which start-ups must address. (3 hr. lecture)

GEB2350**Introduction to International Business**

3 credits

Provides an overview of the cultural environment of international business and the institution which affects business today. International economic, political, and trade issues are analyzed in the context of socio-economic goals and policies of the nations involved. (3 hr. lecture)

GEB2949**General Business****Internship 2** 3 credits

This internship is a continuation of GEB 1949 and provides students with an opportunity to gain business experience while receiving academic credit. Students will learn to make connections between their internship experiences, academic coursework, and career goals. Students are required to complete 144 hours of internship in an organizational setting. Prerequisite: GEB1949. (144 hr. Internship)

GEB3358**International Negotiations and Transactions**

3 credits

This course presents business negotiations in selected regions of the world. Students will learn the skills of negotiation by analyzing international business cases and developing solutions to situations. Topics include overseas market research using both domestic and international sources and the application of theoretical and practical business knowledge to foreign situations and trade negotiations. The importance of culture, language, and values in international negotiations is emphasized. Prerequisites: MAN 2021 and TRA 1154. (3 hr. lecture)

GEB4363**Import Export Management** 3 credits

Students will learn the functions and range of traffic management services performed by freight forwarders, including changes in

governmental restrictions, rules, and regulations applicable to different countries, ports, and trade routes. Students will also learn the documentation needed to facilitate and coordinate the movement of goods in international trade and supply chain management systems. Prerequisites: MAN 2021 and TRA 2010. (3 hr. lecture)

GEB3522**Applied Business Analytics** 3 credits

This upper division course is for students majoring in Data Analytics. Students will learn how to design and develop business analytic solutions to real-world problems using case studies. Students will gain experience working in small teams in deadline-driven environments and will present their results in class. Prerequisite: GEB2100. (3 hr. lecture)

Geography

GEO2420**Introduction to Cultural Geography**

3 credits

This course is an introduction to cultural geography and is structured around the five basic themes in geography: location, place, human-environment interaction, movement and regions. The student will be exposed to the differences between places, the dynamic aspects of culture and the physical environment. Lastly, the course will heighten the student's awareness of the visible expressions of culture and landscape. (3 hr. lecture)

Geology

ESC1000**General Education Earth Science**

3 credits

Selected concepts and principles of earth science taken from the areas of astronomy, geology, meteorology and oceanography. (3 hr. lecture)

GLY1010**Physical Geology** 3 credits

The fundamental concepts of geological process and structures. Plate tectonics is integral to this course which is intended for both majors and non-majors. Majors are strongly advised to take GLY 1010L. (3 hr. lecture)

GLY1010L**Physical Geology Laboratory** 1 credit

Laboratory for GLY 1010. Studies of common minerals and rocks and topographic and geologic maps along with aerial photography. Corequisite: GLY 1010. Laboratory fee. (2 hr. lab)

GLY1100**Historical Geology** 3 credits

This is a historical based course in geology. The student will learn about the history of the earth, the evolution of life, radiometric dating,

and the history of modern geologic ideas on earth development. (3 hr. lecture)

GLY1100L**Historical Geology****Laboratory**

1 credit

A laboratory course designed to accompany GLY1100 in the study of the History of the Earth. The student will learn the fundamentals of fossil identification, evolution, calculation of radiometric dates, interpretation of the stratigraphic record, and the role of plate tectonics in the evolution of life. (2 hr. lab)

GLY4701C**Geomorphology**

4 credits

This course is a study of planetary surfaces and processes that create landforms. The students will focus on survey of geomorphic forms and the processes that originated them, application of remote sensing and GIS/GPS technology to study geomorphological processes, analytical skills including field experience, and practical applications, especially to geological hazards. (3 hr. lecture; 1 hr. lab)

German Language

GER1120**Elementary German 1** 4 credits

An integrated (multi-media) approach to acquire proficiency in the basic skills (of the language)-listening/understanding, speaking, reading, writing, and cross-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

GER1121**Elementary German 2** 4 credits

A continuation of GER 1120. A proficiency-oriented course emphasizing the mastery of the basic skills of the language. Prerequisite: GER 1120. (4 hr. Lecture)

GER2220**Intermediate German 1** 4 credits

Students will understand, speak, read, write, and gain cultural awareness of German through a systematic review (using an integrated, multimedia approach) of reading, grammar, and writing skills with emphasis on oral and written communication. Prerequisite: GER 1121 or equivalent. (4 hr. lecture)

GER2221**Intermediate German 2** 4 credits

This is a continuation of Intermediate German 1. Students will learn to understand, speak, read, and write German. Students will also learn to develop cross-cultural awareness through a systematic review of reading and writing skills with emphasis on oral as well as written expression. Prerequisite: GER2220 or equivalent. (4 hr. lecture)

Graphic Arts

CGS2833

Intranet/Extranet Creation 4 credits

This advanced course teaches students a more comprehensive process of preparing and implementing CGI scripts into Web pages. Learn basic web scripting through decoding forms, sending e-mail, and reading and writing files. Design a scripted Web page, write the scripts, upload and run them. Debug scripts. By the end of the course, students are able to write their own guest books and surveys. Prerequisites: Graphic Interface Design 2. Special fee. (2 hr. lecture; 4 hr. lab)

GRA1111C

Graphic Design 1 4 credits

An introduction to basic theory and skill techniques of visual communications. Students learn to delineate natural and man-made objects (the structure of our environment) in proper visual relationship using pencil and paper. By solving basic visual communication problems involving perspective, proportion, and representative drawing, students develop the basic skills necessary for success in graphic communication. Prerequisites: Acceptable secondary school proficiency in arithmetic, reading and writing, as well as drawing ability (by portfolio) are desirable. Special fee. (2 hr. lecture; 4 hr. Lab)

GRA1113C

Graphic Design 2 4 credits

Studio projects, in which the student creates graphic communication designs (ads, brochures, TV graphics, illustrations, etc.) using contemporary mediums, techniques and tools. Prerequisite: GRA 1111C. Special fee. (2 hr. lecture; 4 hr. lab)

GRA1206C

Principles of Typography 4 credits

Printer's measurements and arithmetic, distinguishing typesetting from typography, type classification and identification, copy fitting, mark-up and vocabulary. Laboratory classes consist of computer typesetting machine operation, various typesetting projects and problems. Prerequisite: GRA 1330. Laboratory fee. (2 hr. lecture; 4 hr. lab)

GRA1280C

Introduction to Digital Imaging 4 credits

Photographic theory and practice, including camera operation, developing, enlarging, printing, copying, scaling, the reproduction of line copy and the stripping-in processes used in lithography. Prerequisite: GRA 1330. Laboratory fee. (2 hr. lecture; 4 hr. lab)

GRA1403

Graphic Arts Estimating 1 3 credits

This course will introduce the Graphic Arts and Graphic Design (Commercial Art) student to the analysis of the economic principles involved in advertising production; kinds, sizes, uses, weights and finishes of paper, construction and use of plates; acquisition of materials

and methods of binding. Students will learn the preplanning necessary in the reproduction of printing. Prerequisite: GRA 1422. (2 hr. lecture; 2 hr. lab)

GRA1750

Introduction to Graphic Internet Technology 3 credits

Introduce Internet architecture, addressing domain names, e-mail, Web browsers, and Internet safety and security. Surf the World Wide Web with four standard web browsers, send and receive e-mail, download files with File Transfer Protocol, search for information using a number of different search engines, set up a Web page, and use HTML programming—including formatting, graphics, lists, forms, tables and backgrounds. Introduce the basic concepts of client/server computing. Examine components, technologies, and system standards involved in client/server computing. This course will also introduce students to the practices and procedures for planning Web sites. Students will learn to appreciate the aspects of a well-designed web site. Special fee. (2 hr. lecture; 2 hr. lab)

GRA1751

Graphic Interface Design 1 4 credits

Basics of Web Page Design and Internet Architecture. Introduces students to the design process and how it functions. Students will learn how to create for the World Wide Web with standard web creation applications add several elements from other graphic creation programs and combine those elements in an attractive and functional manner. This course will also expand students' concepts of the practices and procedures for planning Web sites. Prerequisites: GRA 1750, 2577C. Special fee. (2 hr. lecture; 4 hr. lab)

GRA1752

Graphic Imaging 1 4 credits

Introduce students to the hardware and software necessary to produce static and animated images. Students are introduced to the use of digital cameras and scanners to produce images suitable for viewing on all computer platforms. Students are also introduced to creative and production aspects of digital imaging for image databases, GIF images, and vector based dynamic graphics. Required for students in the Graphic Internet Technology degree. Recommended for publishing, web design or advertising industry personnel who wish an introduction to Internet Imaging. Prerequisites: GRA 1750, 2577C. Special fee. (2 hr. lecture; 4 hr. lab)

GRA1753

Graphic Imaging 2 4 credits

Create and prepare dynamic graphics, SWF interactive movies, and Quick Time player video for the internet. Produce vector and pixel based professional web graphics to standards for distribution on or use on the Internet. Students are introduced to vector and pixel based applications used to produce animated images and movies for a controlled length of time. Students learn pre-planning, storyboarding, and production of dynamic

graphics with time based application. Use creative approaches to solve client requirements with interactivity. This is a required course for students in the Graphic Internet Technology degree. Recommended for publishing, web design or advertising industry personnel who wish to produce vector and pixel based professional web graphics. Prerequisite: GRA 1752. Special fee. (2 hr. lecture; 4 hr. lab)

GRA1754

Graphic Interface Design 2 4 credits

Introduce a comprehensive process of Web Page Design and Internet Architecture. Continue to teach students the design process and how it functions. Students will learn how to create complex commercial sites for the World Wide Web with a standard Web creation application and an image editing application and combine those elements in an attractive and functional manner. This course will also expand students' concepts of the practices and procedures for planning elaborate Web sites. Prerequisites: GRA 1751, GRA 1752. Special fee. (2 hr. lecture; 4 hr. lab)

GRA1949

Co-op Work Experience 1:

GRA 3 credits

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

GRA2117C

Computer Assisted

Graphic Design 4 credits

One of the most exciting aspects of electronic publishing is the ability to create and manipulate full color graphic illustrations. Students will receive training on Adobe Illustrator and Aldus Freehand, two encapsulated PostScript illustration programs which are standard in the industry. Class lectures will be supported with extensive handouts and audiovisual presentations. Lab classes consist of pfa series of full color projects designed to highlight the features of each program. Prerequisite: GRA 2203C. Special fee. (4 hr. lecture)

GRA2121C

Professional Desktop

Publishing Media 4 credits

Professional Desktop Publishing Media is an advanced course in electronic publishing for professionals in the printing and publishing industry who need to update or renew occupational skills and for advanced graphic design students. Instructions include micro-computer based applications that allow users to design, layout, illustrate, and typeset publications, advertisements, overhead transparencies and commercial electronic artwork. Students will work with a standard page lay-

out program and will learn electronic graphic design techniques and publishing requirements for full color high resolution output. Prerequisite: GRA 1330. Laboratory fee. (2 hr. lecture; 4 hr. lab)

GRA2151C **Digital Graphic Painting** 4 credits

Students, working from photographs, represent the natural world on the newest artistic media: the personal computer. Fractal Design's Painter software enables students to use a wide variety of digital tools and surfaces to create electronic illustrations. The software includes tools that simulate the techniques of impressionist, pointillist, and photo-realist artists, as well as those of Van Gogh and Seurat. The course will benefit creative and be changing every day because of advancement in technology as well as improving the employability of Graphic Arts Technology and Graphic design Technology majors. Lab classes consist of projects designed to highlight the features of software programs. Prerequisite: GRA 2156C. (2 hr. lecture; 4 hr. lab)

GRA2156C **Electronic Photoshop** 4 credits

This course is designed for the experienced electronic publisher, graphic designer or graphic arts person who wishes to integrate black and white and color photography into their page layout or paint programs. It is also suggested for Graphic Art, Graphic Design, and Photography majors at MDC. Students will learn the basics of desk top scanning, retouching, color correcting, pre-proofing, correcting again, and output to laser printers, color printers, and image-setters. Corequisite: GRA 1280C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

GRA2162C **3D Computer Animation 1** 4 credits

Students will learn fundamentals of building computer based 3D models for Film, TV, and Video Gaming applications. Students will also learn technical and conceptual skills that will enable them to creatively express and develop their personal ideas and feelings. The students will also acquire a fundamental understanding of 3D modeling. Prerequisite: ART 2600C or GRA 2156C or VIC 1205C. (2 hr. lecture; 4 hr. lab)

GRA2168C **3D Computer Animation 2** 4 credits

Students will learn fundamental skills of animation and animating 3D computer generated models for Film, TV, and Video Gaming applications, using the MAYA animation software. Students will also learn to implement basic dynamic effects along with modeling, texturing and lighting. Prerequisite: GRA 2162C. Laboratory fee. (2 hr. lecture; 2 hr. lab)

GRA2190C **Communications Design 1** 3-4 credits

Problems in advertising design involving layout, lettering, current studio media, and

reproduction processes. Prerequisites: ART 1202C or 1300C. (1-2hr. lecture; 4 hr. lab)

GRA2191C **Communications Design 2** 3-4 credits

Advanced problems in commercial art concentrating on layout, mechanical art for reproduction and illustration technique. Prerequisite: GRA 2190C. (1-2 hr. lecture; 4 hr. lab)

GRA2203C **Advanced Electronic Publishing** 4 credits

QuarkXPress is a high-end electronic program whose features include extremely tight typographic and photographic controls. These features make QuarkXPress a program well suited for catalogs and magazine layouts. Students in this class will learn to operate QuarkXPress efficiently. Class lectures are supported with extensive handouts and audio visual presentations. Lab classes consist of a series of catalog and publication jobs which are designed to highlight the features of this program. Prerequisite: GRA 1330. Special fee. (2 hr. lecture; 4 hr. lab)

GRA2207C **Advanced Electronic Photoshop** 4 credits

This advanced course will introduce the Graphic Arts students to integrate black and white color photography into their page layout or paint program. Students will learn the requirements of desktop drum and flatbed scanning, retouching, color correcting, pre-proofing, correcting again and output to laser printers, color printers, and image-setters. Prerequisites: GRA 2156C. Special fee. (2 hr. lecture; 4 hr. lab)

GRA2305C **Color Reproduction Technology 2** 3 credits

Color separations with emphasis on methods commonly practiced. Includes calculating and predicting correction-factors, quality controls, and proofing methods. Students will be introduced to electronic color scanning and the current state of the science. Laboratory fee. (2 hr. lecture; 2 hr. lab)

GRA2310C **Offset Presswork 1** 4 credits

The principles of offset presswork, including the operation of duplicating machines (Multi-lith, A.B. Dick, Chief 15, MGD and Davidson), setting up and operating the presses, troubleshooting, simple maintenance and safety precautions. Prerequisite: GRA 1210C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

GRA2312C **Offset Presswork 2** 4 credits

Operation of the offset press (Harris LXD): a study of each unit of the machine gauges and instruments used in conjunction with the offset press, setting up and operating the press troubleshooting, safety and simple maintenance. Prerequisite: GRA 2310C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

GRA2545C **Advanced Graphic Design 1** 4 credits

Practical problems in graphic communications with emphasis on producing layouts and comprehensives in black and white and color to contemporary industry standards. Prerequisite: GRA 1113C. Special fee. (2 hr. lecture; 4 hr. lab)

GRA2546C **Graphic Design 4** 4 credits

Work necessary for the production of a typical graphic brochure including copy illustrations, thumbnails, roughs, comprehensive, mechanical camera, and stripping. Prerequisite: GRA 2545C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

GRA2727 **Streaming Media Creation** 4 credits

Create, edit, and stream digital media from a server for distribution on the Internet. Provides a logical organization for understanding the benefits and limitations of streaming media. Enable students to use digital media cameras, digital media editing programs to produce creative presentations or portfolios for streaming distribution on the Internet. Students will learn the basic concepts of streaming media such as: how to prepare media for various bandwidths, how and when to use transitions, how to prepare titles, how to prepare superimposing, how to prepare audio and how to edit. Required for Graphic Internet Technology degree. Recommended for publishing, web design or advertising industry personnel who wish to produce streaming media. Prerequisite: GRA 1753. Special fee. (2 hr. lecture; 4 hr. lab)

GRA2755 **Graphic Interface Design 3** 4 credits

This advanced course teaches students a more comprehensive process of preparing and implementing CGI scripts into web pages. This is an advanced design and development course, which teaches the creation of Active Server Pages using an application that quickly deploys database-driven e-commerce applications. Using a drag-and-drop interface and sophisticated wizards, the student builds web-based applications that access and update data in real-time while working across all major browsers. Create safe, fully customizable online stores that are scalable and simple to maintain. Develop stores quickly using built-in tax and shipping calculations, sophisticated merchandising options for including discount and fee calculations, and automatic order confirmations. Prerequisite: GRA 1754. Special fee. (2 hr. lecture; 4 hr. lab)

GRA2811C **Applied Illustration 1** 3-4 credits

Exploration of fundamentals of composition, design and rendering in illustration. Development of skills in illustration techniques including pen and ink, opaque water color and combined mediums. Study of the creative processes applied to producing illustrations for the professional market. Prerequisites: ART 1201C, 1330C. (1-2 hr. lecture; 4 hr. lab)

GRA2949**Co-op Work Experience 2:**

GRA 3 credits
This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval and completion of 1949 Co-Op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-Operative Education Office to obtain registration approval. (3 hr. lecture)

GRA2991C**Selected Studies**

4 credits

This course is an introduction to the fundamentals of computer based 3D modeling for Film, TV, and Video Gaming applications. Pre-Requisite: ART 2600C; GRA 2577C; VIC 1202. (4 Hr. Lecture)

Haitian Language

HAI2340**Haitian-Creole for****Native Speakers 1**

3 credits

Writing spelling and punctuation, sentence-structure and vocabulary expansion as they are relevant to the training of native speakers of Haitian Creole. Conducted entirely in Haitian-Creole. Prerequisite: Fluency in Haitian-Creole as determined by the Haitian-Creole placement exam. (3 hr. lecture)

HAI2341**Haitian-Creole for****Native Speakers 2**

3 credits

A continuation of HAI 2340. Emphasizes fluency in Haitian-Creole grammar and writing. Recommended for translation/interpretation students or native speakers wishing to improve their knowledge of written Haitian-Creole. Conducted entirely in Haitian Creole. Prerequisite: Fluency in Haitian-Creole as determined by the Haitian-Creole placement exam or HAI 2340. (3 hr. lecture)

HAT2802**Contrastive Analysis:****Haitian/Creole**

3 credits

This course compares/contrasts linguistic features and characteristics of both the English and Haitian/Creole languages. Aspects of comparison/contrast include historical backgrounds, phonological systems, morphological systems, syntax, and semantics. Prerequisite: Adequate fluency in Haitian-Creole (determined by department Haitian-Creole exam) and English (determined by CPT) (3 hr. lecture)

HCW2020**Selected Readings in****Haitian-Creole Literature 3**

3 credits

This course will emphasize reading and analyzing Haitian-Creole literature in a historical context. A variety of literature will be read

and discussed in order to gain an understanding of Haitian-Creole and Haitian culture, the history of Haiti, and ways which the literature portrays the country of Haiti and its inhabitants. Prerequisite: Fluency in Haitian-Creole as determined by the Haitian-Creole placement exam. (3 hr. lecture)

Health Information Management

HIM1000**Introduction to Health****Information Technology**

2 credits

This course examines the role and functions of a health information technician. Students will learn about the structure, organization, and maintenance of the medical record. Students will also learn about the organization and function of various types of health care facilities, the responsibilities of national, state and local health agencies, and the organization and mission of the American Health Information Management Association. (2 hr. lecture)

HIM1110**Health Information Technology****and Data Collection**

2 credits

This course is designed to provide the skills necessary to function in a health information management department. Students will learn health record data collection and informatics. Students will also learn about the various components and approaches of the electronic health record. Prerequisite: HIM 1000, 2472; corequisite: HIM 1110L. (2 hr. lecture)

HIM1110L**Health Information Management****Data Collection lab**

3 credits

This course is designed to apply basic requirements imposed by regulatory agencies to health record data. Students will learn how clinical data repositories store health information. Concepts relating to confidentiality, ethics, and release of information will be applied. Prerequisite: HIM 1000, 2472; corequisite HIM 1110. A.S. degree credit only. (6 hr. lab)

HIM1300**Health Care Facility and****Delivery Systems**

2 credits

This course will examine healthcare complexities, function of various types of health facilities, accreditation standards, Medicare law, and the American health delivery system. Students will learn the components of Medicare, Medicaid, Health Insurance Organizations (HMO's), and the federal laws that govern them. A.S. degree credit only. (2 hr. lecture)

HIM1800**Professional Practice****Experience 1**

2 credits

This course will provide the student with a supervised professional practice experience in a healthcare setting, utilizing electronic health records and reports to manage health

information data. Students will learn an in-depth knowledge of applying the minimum basic requirements for handling records imposed by regulatory agencies. Prerequisite: HIM 1000; corequisite: HIM 1110, 1000L. A.S. degree credit only. (6 hr. lab/clinic)

HIM2012**Legal Aspects of Health Care**

2 credits

This course provides basic knowledge of the United States of America court system and the interconnection between the health care system and the federal government. The student will learn concepts relating to Health Insurance Portability Accountability Act (HIPAA), ethics, release of health information, record retention, and the legalities of electronic health records. Prerequisite: ENC 1101. A.S. degree credit only. (2 hr. lecture)

HIM2211C**Health Information****Technologies**

2 credits

This course is designed to examine computer technology used to collect and store health information. The student will learn a variety of applications used to maintain and secure health care data. Prerequisites: HIM 1110, 1110L, and 1800. A.S. degree credit only. (1 hr. lecture; 2 hr. lab)

HIM2214C**Health Statistics**

2 credits

This course will focus on the definitions for analysis, interpretation, and display of healthcare data. The student will learn the acceptable terminology and basic definitions for reporting health statistics. Emphasis is placed on the use of the formulas necessary for computing standard rates, percentages, and averages from patient data. Prerequisites: HIM 1110, 1110L; corequisite: HIM 2512C. (1 hr. lecture; 2 hr. lab)

HIM2222**ICD Coding Systems**

2 credits

This course is designed to teach the current edition of International Classification of Diseases and Procedures codes. Students will learn code convention and format, usage of anatomy, physiology, and clinical disease processes. Pharmacology, present on admission indicators, correct code assignment and sequencing will be discussed. Prerequisites: BSC 2085, 2085L and HIM 2472; corequisite: HIM 2222L. A.S. degree credit only. (2 hr. lecture)

HIM2222L**ICD Coding Systems****Laboratory**

3 credits

This course is designed to apply diagnoses and operations into numerical designations (codes) utilizing the International Classification of Diseases and Procedures. Students will learn correct sequencing, analysis of clinical disease processes, diagnosis and procedural terminology, and application of pharmacology in current coding systems. Encoding software is utilized. Prerequisites: BSC 2085, 2085L, and HIM 2472; corequisite: HIM 2222. A.S. degree credit only. Laboratory fee. (6 hr. lab)

HIM2234**Advanced Coding & Reimbursement Systems** 2 credits

This course is designed to apply the fundamentals of the Prospective Payment Systems as it applies to coding and reimbursement. The student will learn documentation criteria, validation reports of coded data, health record for compliance, and optimum reimbursement under current payment methodologies. Prerequisite: HIM 2222, 2222L; corequisite: HIM2234L. A.S. degree credit only. (2 hr. lecture)

HIM2234L**Advanced Coding & Reimbursement Systems Laboratory** 1 credit

This course is designed to apply and compute Prospective Payment Systems categories. Students will learn to apply health record documentation to identify and validate correct code and payment assignments. Focus is on computation of MS-DRGs, APCs and Case-Mix Index using encoder, grouper, and electronic billing software for reimbursement. Prerequisites: HIM 2222, 2222L; corequisite: HIM 2234. A.S. degree credit only. (2 hr. lab)

HIM2253C**Current Procedural Terminology/ CPT-4** 2 credits

This course provides an in-depth knowledge of coding and reporting using Current Procedural Terminology classification. Students will learn to read and interpret ambulatory health record documentation to classify and assign services and procure codes and use of encoder and grouper software. HCPCS, APCs, and RBRVS will be discussed. Prerequisites: BSC 2085, 2085L and HIM 2472. A.S. degree credit only. (1 hr. lecture; 2 hr. lab)

HIM2400C**Diversified Non-Hospital Health Records** 2 credits

This course emphasizes the importance of quality record-keeping practices, data flow, and management of health information systems in a non-acute care setting. The student will learn the documentation requirements based on Federal and State statutes, accreditation standards, Medicare Conditions of Participation, payment systems, funding, Health Insurance Portability Accountability Act, and the evolution of the electronic health record. A.S. degree credit only. (1 hr. lecture; 2 hr. lab)

HIM2433**Pathophysiology and Pharmacology** 3 credits

This course provides an in-depth knowledge of disease, its etiology, medical complications, and pathophysiologic nature. Students will learn laboratory and other diagnostic tests used to confirm or rule out those diagnoses addressed. Current pharmacological treatments are explored with review and interpretation of health record data. Prerequisites: BSC 2085, 2085L, HIM 2472. A.S. degree credit only. (3 hr. lecture)

HIM2472**Medical Terminology** 3 credits

Analysis of medical terms through learning basic roots, prefixes and suffixes permitting the student to have a working knowledge of the language of medicine. Prerequisite: Permission of department chairperson. A.S. degree credit only. (3 hr. lecture)

HIM2500**Data Management & Quality Assessment** 2 credits

The basic principles of quality assessment: quality improvement and utilization review. The accreditation process, risk management, managed care models, and the methodologies and relationships of these key areas within a health care facility are emphasized. Prerequisites: HIM 1110, 1110L; Corequisite: HIM 2500L. (2 hr. lecture)

HIM2500L**Data Management & Quality Assessment Laboratory** 1 credit

The application of the basic principles of quality assessment: quality improvement and utilization review. The student will learn to generate models for the evaluation of different types of medical care. Activities will center on the accreditation process, managed care, and risk management. The methodologies and relationships of these key areas within a health care facility are emphasized. Prerequisites: HIM 1110, 1110L; corequisite: HIM 2500. (2 hr. lab)

HIM2512C**Supervision & Organization for Health Information Management** 2 credits

This course will review the basic principles of management and organizational life in a health information management department and the interrelationships within the health care organization. Emphasis will be placed on the supervisory role of the health information professional, including basic motivation and communication principles essential to the practice of health information management. The student will identify and use specific motivational and communication techniques in health information supervision. Prerequisites: HIM 1110, 1110L; corequisites: HIM2500, 2500L, 2810. (1 hr. lecture; 2 hr. lab)

HIM2652C**Electronic Health Record** 3 credits

This course reviews the current trends and preparation implementing the electronic health record and reviews documentation requirements for a variety of healthcare settings. Students will learn best practices, problem-solve associated issues, and directly participate in the transitions of electronic health records. Prerequisite: HIM 2211C. (1 hr. lecture; 2 hr. lab)

HIM2810**Professional Practice Experience 2** 2 credits

This course is a supervised professional practice experience in a health care setting uti-

lizing health records and reports to perform medical coding functions. Students will learn to assign Medicare Severity-Diagnosis Related Groups/Ambulatory Payment Classifications using the organization's information systems, encoder and grouper software. Sequencing of International Classification of Disease (ICD) and Current Procedural Terminology (CPT) coding systems will be discussed. Prerequisite: HIM 2222; corequisite: HIM 2234, 2234L. A.S. degree credit only. (6 hr. lab/clinic)

HIM2820**Seminar and Professional Practice Experience 3** 2 credits

This course is designed to provide students with structured learning experiences necessary for them to enter the health information management field. Students will learn preparation skills for the national examination by analyzing major examination topics offered in curriculum. A professional practice experience will be a component of this course. Prerequisite: HIM 2810; corequisites: HIM 2500, 2500L. A.S. degree credit only. (6 hr. lab/clinic)

HIM9995**Health Information Technology** 26 credits

This course is a placeholder awarding equivalent college credit for non-collegiate training based on Technical Manual of Procedure Number 1100: 816125. This course requires special permission and students must contact the department chairperson for registration/approval. (26 Block Credits)

Health Science

HSC2400**Basic Emergency Care** 3 credits

Designed to provide opportunities to develop, practice, and display skills concerning emergency care and the prevention of accidents. This course meets the American Heart Association Healthcare Provider Cardiopulmonary Resuscitation/automated External Defibrillation and the American Red Cross for Standard First Aid Certification requirement. Special fee. (3 hr. lecture)

HSC2401**Instructor's Training First Aid & CPR** 3 credits

Designed to improve the performance skills, techniques, and knowledge as well as develop competent teaching skills in First Aid and cardiopulmonary resuscitation. This course meets the American Red Cross Instructor Certification Requirements for Standard First Aid and Personal Safety and Basic Lifesaving Cardiopulmonary Resuscitation. Special fee. Prerequisite: HSC 2400 or certification in American Red Cross Standard First Aid and Personal Safety and Basic Life Saving Cardiopulmonary Resuscitation. Maybe repeated for credit. (2 hr. lecture; 2hr. lab)

HSC3057**Introduction to Research
Methods in Health Care 3 credits**

This course will provide an overview of research methods used in healthcare. Students will learn the use of effective inquiry through research strategies that address healthcare issues with logical and observational rigor. Students will learn the rudiments relative to the evaluation of research literature, research design and the application of research methods to the clinical setting. (3 hr. lecture)

HSC3131**Client Education in
Health Care 3 credits**

This course focuses on the delivery of client specific health education. The student will learn to develop the attitudes, knowledge, and skills required for successful education of patients. The student will learn to assess curriculum, training objectives, and educational experiences, and serve in the best interest of educating the patient. (3 hr. Lecture)

HSC3181**Alternative Medicine Strategies 3 credits**

This course will introduce students to new approaches to health and healing. The student will learn the various medicines practiced around the world, collectively referred to as complementary and alternative medicines (CAM). Students will learn epidemiology, usage, and terminology specific to these practices (3 hr. lecture)

HSC3243**Teaching Skills for
Health Care 3 credits**

This course emphasizes significant problems instructors have related to content and design of curricula or courses. Students will learn the theoretical underpinnings of teaching and learning in health science disciplines from a variety of perspectives - educational, psychological, developmental, and social. (3 hr. lecture)

HSC3701**Leadership and Management
in Healthcare 3 credits**

This is a leadership and management course that will examine leadership as a process with a tri-fold focus: the leader, the followers, and the situation. The student will learn leadership theories and build leadership skills. (3 hr. lecture)

HSC4942**Community Service Learning
Practicum 3 credits**

This course is designed to engage students in meaningful healthcare related community service learning activities. Students will learn to explore new collaborations in service-learning, cultural diversity and community healthcare development. These experiences will help to and prepare them for lives as civically-engaged local, national, and global citizens. (3 hr. lecture)

History

AFH2000**African History and Culture 3 credits**

Historical survey of the development of African society, its culture and institutions, with emphasis on the 13th century to the present. (3 hr. lecture)

AMH2010**History of the US to 1877 3 credits**

Students will learn of the history of the United States to 1877 by examining the founding, growth, and development of America from the colonial era through Reconstruction. (3 hr. lecture)

AMH2020**History of the US since 1877 3 credits**

This course focuses on the social, economic, cultural, and political developments in the United States since 1877. The student will gain knowledge of changes and continuities in the history of the United States since the late nineteenth century. (3 hr. lecture)

AMH2035**Recent American History
Since 1945 3 credits**

The internal development of the United States and the role of the U.S. in world affairs since World War II. (3 hr. lecture)

AMH2070**Florida History 3 credits**

Florida from the Spanish period to the present with emphasis on the modern development of natural resources, urbanization, industry, culture and tourism. (3 hr. lecture)

AMH2079**History of South Florida 3 credits**

A study of the history of South Florida (Lake Okeechobee south to Key West) including geological foundations exploration, settlement and contemporary cultural trends. (3 hr. lecture)

AMH2091**Afro-American History 3 credits**

A survey, including the African background, of the Afro-American in the United States history, with emphasis on their economic, political and cultural development. (3 hr. lecture)

EUH2032**History of the Holocaust 3 credits**

This is a foundation course in Holocaust Studies. Students will learn the historical origins, execution and consequences of the Holocaust. This course also examines the Holocaust's place in context of genocides past and present. (3 hr. lecture)

EUH2068**History of Russia from 1917 3 credits**

Survey of Russian History since 1917. Emphasis is given to the nature and causes of the 1917 revolution and the impact of communist ideology on the development of the U.S.S.R. and on its relations with the rest of the world. (3 hr. lecture)

LAH2021**Colonial Latin America 3 credits**

Emphasis is initially given to the geography of Latin America and to the Indian civilizations of that region. The focus then shifts to the Iberian states as colonizing powers and finally to the social and economic institutions of the colonial period, including the Wars of Independence to 1825. (3 hr. lecture)

LAH2023**History of the Caribbean 3 credits**

This course introduces students to the economic social, political, and cultural history of the Caribbean and its peoples. Students will learn of the changes and continuities that have affected Caribbean development. (3 hr. lecture)

LAH2025**History of Cuba 3 credits**

Historical analysis of the development of Cuban society, its culture and institutions. (3 hr. lecture)

WOH2003**History of Genocide 3 credits**

This course is designed to explore the history, causes, and consequences of genocide through identification of the patterns of intentional mass killings. Students will learn via case studies the characteristics of past and current incidents characterized as genocide. (3 hr. lecture)

WOH2012**History of World Civilization
to 1789 3 credits**

This course covers the history of World Civilizations from the prehistoric period to the 18th century. Students will learn the major political, social, economic, and cultural structures of civilizations and their development through 1789. (3 hr. lecture)

WOH2022**History of World Civilization
from 1789 3 credits**

The student will examine the historical development of world civilizations since 1789. Students will learn of historical processes and developments in social, cultural, political, and economic contexts since the 18th century. (3 hr. lecture)

Hospitality Management

HFT1000**Introduction to Hospitality 3 credits**

In this introductory course the student will learn a basic understanding of the lodging, travel, meeting planning, club management, food and beverage, gaming and cruise industry by tracing the industry's growth and development, reviewing the organization of hospitality operations, and by focusing on industry opportunities and future trends. Career opportunities, interview and resume writing skills are discussed. (3 hr. lecture)

HFT1210

Human Resources 3 credits
Provides information relating to the recruitment and selection of new staff, the handling of difficult employees, motivating employees and conducting performance evaluations. (3 hr. lecture)

HFT1212

Safety and Sanitation 3 credits
Students will learn industry standards on sanitation as it relates to food preparation and kitchen operations. Students will recognize proper sanitation techniques and explain how to implement sanitation programs in food service operations. (3 hr. lecture)

HFT1220

Supervisory Development 3 credits
This introductory course will assist students in learning basic supervisory skills. The students will learn how to conduct proper employee evaluations, as well as how to apply discipline. Effective communication techniques, use of delegation and diversity in the workforce are discussed. Issues concerning employee relations and current topics in management are addressed. (3 hr. lecture)

HFT1300

Executive Housekeeping 3 credits
In this introductory course the student will learn the fundamentals of housekeeping management. This course describes the management functions, tools and practices required in today's lodging and institutional housekeeping departments. Special attention to environmental, and safety implementations. Design and architectural elements and their relation to housekeeping will be discussed. (3 hr. lecture)

HFT1841

Dining Room Service 3 credits
Provides students with the opportunity to acquire knowledge of advanced service techniques, including guest satisfaction, food, wine and beverage serving, types of menus, table service techniques, tableside cooking, napkin folding, table setting, safety, sanitation, emergency procedures, restaurant technology, and service styles. Students will gain experience in cash and non-cash handling, forecasting sales, and merchandising techniques. Corequisite: HFT 1000. (3 hr. lecture)

HFT1852

Menu and Facilities Planning 3 credits
This course is a study of the factors involved in planning effective menus for a variety of food service operations. Students will learn to develop a firm working knowledge of menu-writing techniques and participate in actual menu design and facilities layout of a food service establishment. Pre-requisites: HFT1000 (3 hr. lecture)

HFT2223

Training Skills and Development 3 credits
In this intermediary course the student will learn effective training processes. The course considers the assessment and analysis of train-

ing needs, the systematic design of instruction, the evaluation of training programs, and management of the training programs, and functions. The student will have the necessary skills in order to develop and conduct training sessions. (3 hr. lecture)

HFT2241

Leadership and Quality Assurance Management 3 credits
Provides an analysis of management issues related to the "personal touch" in customer service and quality assurance in the hospitality industry. Emphasis is placed on the importance of contemporary management and business practices to keep up with the demands of an ever-changing industry. (3 hr. lecture)

HFT2261

Restaurant Management 3 credits
Familiarizes students with the general principles of food production management, work scheduling, and preparation supervision. Emphasis is placed on purchasing and financing, planning and equipping a kitchen, pricing and menu design, and marketing and promoting restaurants. Prerequisite: HFT 1000. (3 hr. lecture)

HFT2410

Front Office Procedures and Lodging Operations 4 credits
In this intermediary course the student will learn about various positions in the rooms division. Focus in hotel front office procedures involved in reservations, registering and checking out guests. Guest services, revenue management, accounting procedures and the operation of a PMS (Property Management System) are discussed. Special attention to hotel operations including security, housekeeping and engineering. (3 hr. lecture; 2 hr. lab)

HFT2421

Managerial Accounting for Hospitality 3 credits
Presents managerial accounting concepts and explains how they apply to specific operations within the hospitality industry. (3 hr. lecture)

HFT2449

E-Business for the Hospitality Industry 3 credits
Prepares student to manage information systems within their organizations. Emphasis is on selecting the right computer systems technology and maximizing available technology in order to promote and sell services. Introduces the use of automation in the broad hospitality sector and exams technological applications ranging from distribution systems (GDS, CRS and Web based), Property Management Systems, and EPOS systems to developments in telecommunications, and assesses their effect on the tourism sector. While a broad interpretation of both technology and tourism will be used, particular emphasis will be placed on the hospitality sector (i.e. Hotels and catering) and on distribution technology. A combination of lecture, case studies,

seminars, visiting lecture and lab sessions are used. Prerequisite: HFT 1000. (3 hr. lecture)

HFT2500

Marketing of Hospitality Services 3 credits
In this intermediary course the students will learn basic knowledge and practical experience which will enable them to develop strategic marketing plans for any hospitality business. Special focus on the marketing mix as it applies to hospitality. Marketing trends and case studies are discussed. (3 hr. lecture)

HFT2501

Hospitality Sales 3 credits
In this intermediary course the student will learn sales presentation skills and the importance of sales in an organization. Topics discussed are the organization of the sales department including the responsibilities of all involved in the sales process. Emphasis on sales presentations, looking for leads, negotiating skills, building rapport, and closing the sale. Role playing and other activities will be used to enhance learning. (3 hr. lecture)

HFT2750

Event and Meeting Management 3 credits
In this intermediary course the student will learn the complete set of skills necessary to adequately perform as an event planner, hotel banquet manager and convention and meeting planner. Actual events will be used to reinforce the general rules of table service, booking functions, staffing banquets/conventions, and responsibilities of a host venue as they apply to buffets and banquets. Prepares students in trade show administration, meeting management, and legal issues associated with banquets and conventions. (3 hr. lecture)

HFT2772

Introduction to Cruise Line Industry 3 credits
Provides students with an introduction to the cruise line industry, its evolution and relationship to other segments of tourism and hospitality, sales and marketing methods, management, and strategic planning are major topics. Corequisite: HFT 1000. (3 hr. lecture)

HFT2773

Cruise Line Sales and Marketing 3 credits
Provides an introduction to the sales and marketing functions of the cruise industry. Students will gain an understanding of how cruises lines position themselves in the competitive business environment and the sales and marketing techniques used to attract customers and group business. Students will gain an understanding of yield management and the issues surrounding travel agents during the sales process. Prerequisites: HFT 2772. (3 hr. lecture)

HFT2774

Shipboard Operations 3 credits
Provides an understanding of shipboard operations on cruise ship and their relationship to the shore side headquarter office. Students

will gain knowledge of the history of cruise ships and the activities and facilities that make cruise line operations complementary both to the industry and the guest. This course will focus on the ship as a hotel for passengers with the wining and dining aspects of service, as well as, casino practices on board. Prerequisite: HFT 2775. (3 hr. lecture)

HFT2775
Shore side Operations 3 credits
Provides a basic understanding of the shore side office operations and sales procedures of cruise line and how they relate to the general operations of the cruise ship itself. Students will acquire knowledge of pier, airport, ground services and hotel operations and create elements for cruise lines sales. Prerequisite: HFT 2772. (3 hr. lecture)

HFT2800
Food and Beverage Management 3 credits
Provides a basic understanding of the principles of food production and service management, menu planning, serving, purchasing, labor, food/bar service and costs, storage, beverage management, sales promotions, entertainment, and liability laws. (3 hr. lecture)

Human Services

HUS1001
Introduction to Human Services 3 credits
An introduction to an overview of the field of Human Services, including the role of the human services worker as it relates to various agencies, counseling, interviewing and managing. (3 hr. lecture)

HUS1302
Basic Counseling Skills 3 credits
Development of the skills of observation, recording, reporting, interviewing and counseling. These skills are presented in the context of general counseling theory. (3 hr. lecture)

HUS1318
Domestic Abuse and Family Violence 3 credits
This course is designed to educate human services workers for the evaluation, counseling and outreach skills necessary for working with victims of domestic violence. The dynamics of partner violence, child abuse, and elder abuse will all be explored. (3 hr. lecture)

HUS1421
Assessment and Treatment Planning in Addictions 3 credits
This course is designed to familiarize students with the core functions of Assessment and Treatment Planning for the chemically dependent client. Emphasis on treatment planning will be accomplished drawing from the Florida Certification Board for addiction professionals and the Department of Children's

and Family Services guidelines. Prerequisites: HUS 2493, PSB 2442. (3 hr. lecture)

HUS1423
Group Counseling in Substance Abuse 3 credits
This course stresses development of effective group counseling leadership skills including organizing, implementing, and evaluating group counseling programs. The course includes actual group experiences. Prerequisite: PSB 2442. (3 hr. lecture)

HUS1428
Addiction Treatment Delivery Systems 3 credits
This course is designed to survey the modalities of addiction treatment. The course will study federal and state systems as well as private-not-for-profit and private-for-profit programs. All of these will be described using examples drawn from local agencies, the diverse populations they serve, and the politics and economics of the systems. This course will also present a critical exploration of the history and theory defining problems of addiction treatment and the characteristics and career issues of an addiction treatment services worker. (3 hr. lecture)

HUS1440
Family Issues in Chemical Dependency 3 credits
This course is designed to analyze the effects of chemical abuse on the family system. Emphasis will be placed on family roles and dynamics; characteristics of children (including adult children) of chemical abusers; theories of co-dependence; and adaptations made individually and socially by family members. Critical issues and strategies in family treatment will be explored. (3 hr. lecture)

HUS1475
Addiction Counseling and the law 3 credits
This course is designed to introduce addiction counseling students to the vocabulary, agencies and processes required to work with clients involved in both the criminal and civil justice systems. This course focuses on the relationship between the law and Human Services institutions, patterns of law-making and law-breaking, the legal structures and processes, and law as an instrument of public policy, social control and social change. The roles and functions of police, courts and correctional services will be surveyed. Common civil issues that affect clients in recovery will be explored. In addition this course will enable students to explain the legal basis for alcohol and other drug services in Florida. State statutes pertaining to alcohol and drugs and their administrative rules will be reviewed. Confidentiality requirements, compliance standards, and professional ethics will be presented. Prerequisite: PSB 2442. (3 hr. lecture)

HUS1480
HIV/AIDS and the Substance Abuser 3 credits
This course is designed to educate prospective addiction counselors for the evaluation,

counseling and outreach skills necessary for working with HIV disease and AIDS. The course will explore not only how this disease affects one personally, but also how this pandemic has affected many psychosocial aspects of society. (3 hr. lecture)

HUS2303
Counseling Techniques 3 credits
Specific counseling techniques are introduced within the various counseling theories. Work involves both group and individual techniques. (3 hr. lecture)

HUS2493
Addiction Counseling Competencies 3 credits
This course is designed to enable students to master the TAP 21 competencies clinical evaluation, treatment planning, referral, service coordination, counseling, client, family, and community education, documentation and professional and ethical responsibilities. Additionally, the course will teach the student the process of identifying problems, establishing goals and deciding on a client treatment plan. Students will learn how to respond to an individual's needs during acute emotional and physical distress. Prerequisite: PSB 2442 (3 hr. lecture)

HUS2500
Issues & Ethics in Human Services 3 credits
This course is designed to familiarize students with the ethical problems that emerge from counseling the chemically dependent client. Emphasis will be placed on the following: the history and theory of ethics in health care; professionals' and patients' rights and responsibilities; the relationship between ethics and law; confidentiality and truth-telling in clinical relationships; technology; diagnostic testing and treatment; treatment of terminal illness; distribution of scarce medical resources and access to health care and systems payment. Prerequisite: PSB 2442. (3 hr. lecture)

HUS2820
Field Experience in Human Service 3 credits
Volunteer work as counseling paraprofessionals in a community agency under supervision. Students meet regularly with the Field Coordinator. Prerequisites: HUS 1001, 1302, 2303. (144 hrs. Field Experience)

HUS2902
Directed Independent Study In Addiction Treatment 3 credits
This course is designed to allow students to pursue projects under faculty advisement and supervision. Projects may be directed research, or development of skills and competencies. The proposed project must demonstrate competency in one of the core competencies of addiction counseling learned in HUS2493 and must be approved by the supervising instructor. Prerequisites: HUS 2493, PSB 2442. (3 hr. lecture)

HUS2941
Human Services Addiction

Counseling Practicum 6 credits

This course is designed to provide the student with an arena to practice the application of Human Services addiction counseling theories and techniques in a licensed addiction treatment facility. Prerequisites: HUS 1302, 1421, 1423, 2493, 2500 and PSB 2442. (6 hr. lecture)

Humanities

HUM1020
Humanities 3 credits

An integral approach to the humanities: creative ideas, works, and accomplishments of various cultures from the areas of art, architecture, drama, music, literature and philosophy are presented. (3 hr. lecture)

HUM2513
Arts and Humanities 3 credits

Selected examples of Art including painting, sculpture, architecture, literature and the performing arts to illustrate the variety of art in relation to man's perception of self, nature and God. Intended primarily for use in overseas academic programs. May be repeated for credit. (6 hr. lab)

Interdisciplinary Honors

IDH1001
Honors Leadership Seminar 1 1-3 credits

Rigorous, in-depth exploration of selected honors topics. The topic and content are arranged by the instructor, department chairperson and campus honors coordinators. These seminars will consist of small groups that meet on a regular basis and be offered in any subject area. (1-3 hr. lecture)

IDH1002
Honors Leadership Seminar 2 1-3 credits

Rigorous, in-depth exploration of selected honors topics. The topic and content are arranged by the instructor, department chairperson and campus honors coordinators. These seminars will consist of small groups that meet on a regular basis and be offered in any subject area. (1-3 hr. lecture)

IDH2003
Honors Leadership Seminar 3 1-3 credits

Hours taken by students to complete a capstone (thesis) project under the supervision of an advisor and a committee, which will produce a piece of work that students may take with them to upper division institution to demonstrate their ability to apply the principles learned and the quality of their work. (1-3 hr. lecture)

IDH2004
Honors Leadership Seminar 4 1-3 credits

Rigorous, in-depth exploration of selected honors topics. The topic and content are arranged by the instructor, department chairperson and campus honors coordinators. These seminars will consist of small groups that meet on a regular basis and be offered in any subject area. (1-3 hr. lecture)

Interdisciplinary Sciences

ISC4534C
Research in the Sciences 3 credits

The student will develop a rich understanding of the processes of science through the development of a hands-on original scientific investigation in life, physical, and/or earth/space sciences. The student will generate hypothesis, develop an experimental design, collect data, and present an analysis of their findings. Special fee. (3 hr. lecture)

Interdisciplinary Sciences

IDS1044
Leadership Seminar 3 credits

The student will develop critical thinking, team-building, leadership, and civic literacy in order to build leadership capacity and professional potential. Students will learn strategies and skills that are transferable to academic, personal, and professional endeavors. Service-learning may be included. Students will submit an end-of-term portfolio. (3 hr. lecture)

IDS1107
Tools for success 1 credit

This course is for students majoring in science, technology, engineering and mathematics fields (STEM). Students will learn writing, research, presentation, and technological skills necessary for success in STEM-related disciplines. Course topics include learning styles, collaborative skills, power study techniques and will use related technologies related to STEM. (1 hr. lecture)

IDS1153
Earth Literacy and Sustainability 1 3 credits

This interdisciplinary course is designed to help students explore Earth Literacy and environmental sustainability. Students will learn principles of Earth Literacy and ecological sustainability, identify current issues in Earth ethics, and demonstrate an understanding of individual responsibility in contributing to a sustainable world through lectures, presentations, projects, guest presenters, and field experiences. (3 hr. lecture)

IDS2123
Leadership in Science, Technology, Engineering and Mathematics 1 credit

In this course students will research their career interests and interview professionals in

Science, Technology, Engineering and Mathematics (STEM). Students will learn to identify, compare, and evaluate upper division degree programs and prepare applications for admission to these programs. Students will write successful application essays and develop interview skills for transfer. (1 hr. lecture)

IDS2124
Skills for Transfer Success 1 credit

This course is for students in science, technology, engineering and mathematics (STEM) for matriculation to the upper division. Students will learn to research, write, coordinate and present grants and scholarships in conjunction with the college application process. Students will document all of their efforts in an electronic portfolio. (1 hr. lecture)

IDS2930
The Economic Effects of Scientific Discovery 1 credit

Students will develop an understanding of the relationship between scientific discovery and/or development and its impact on a country's economic growth. Students will participate in a series of seminar sessions on campus, and will be assigned selected readings which reflect the course purpose. In a cooperative learning mode, students from Business will gain an understanding of scientific developments, while students from Natural Science will realize the economic value of scientific research. The capstone of the course is a trip to London and Paris to experience firsthand this relationship. (1 hr. lecture)

Interior Design

IND1020
Interior Design 1 4 credits

Student's projects develop the ability to plan simple interior floor plans and elevations. Corequisite: ARC 1115. Laboratory fee. (2 hr. lecture; 4 hr. lab)

IND1100
History of Interiors 1 3 credits

Acquaints the student with period styles in room decoration from Egyptian through the Renaissance. (3 hr. lecture)

IND1130
History of Interiors 2 3 credits

Historical development of interior design from the Renaissance through the 20th century. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

IND1200
Interior Design 2 4 credits

Problems in room planning, correlation of color schemes and furnishings. Prerequisite: IND 1020. Laboratory fee. (2 hr. lecture; 4 hr. lab)

IND1300
Interior Design Presentations 1 2 credits

An introductory course in the use of various

media for presentation of plans, schemes, and interior perspective renderings. Prerequisite: IND 1020; corequisite: IND 1200. Laboratory fee. (1 hr. lecture; 2 hr. lab)

IND2201
Design Principles for Kitchen & Bath 3 credits

A specialized design course for kitchen and baths. Students will learn the basic elements and principles of creating spaces for clients, blending architectural styles, colors and themes with function and purpose. Prerequisite: ARC2461, IND1200, IND1300. Laboratory fee (3 hr. lecture)

IND2210
Interior Design 3 4 credits

Projects provide practice in planning traditional and contemporary interiors including working drawings and specifications. Prerequisite: IND 1200; corequisite: IND 2330. Laboratory fee. (2 hr. lecture; 4 hr. lab)

IND2220
Interior Design 4 4 credits

Advanced problems involving interior arrangements in residential and commercial areas. Prerequisite: IND 2210. Laboratory fee. (2 hr. lecture; 4 hr. lab)

IND2330
Interior Design Presentations 2 3 credits

Emphasis is on perfecting water color, casein and reproducible drawing techniques through the presentation of interior plans, elevations and perspectives. Projects also provide experience in assembling collages. Prerequisite: IND 1300; corequisite: IND 2210. Laboratory fee. (1 hr. lecture; 4 hr. lab)

IND2421
Introduction to Furniture Design 3 credits

Hands-on course dealing with the theoretical and practical considerations for designing and building furniture and cabinetry. Students will learn basic principles of designing furniture through researching history, theory, materials, methods and design considerations associated with the construction of furniture. Prerequisite: IND1200, ARC1302. Laboratory fee. (3 hr. lecture)

IND2430
Lighting Design 3 credits

A survey of utilitarian interior lighting and exterior architectural lighting including fundamentals and basic physics laws, practical applications to interior and exterior spaces and lighting design considering different levels of space utilization and fixture efficiency. Prerequisite: IND 1200. Special fee. (3 hr. lecture)

IND2500
Professional Practices 3 credits

Duties and responsibilities relative to employment and business practices. Prerequisite: Sophomore standing level or equivalent. (3 hr. lecture)

IND2608
Sustainable Design 3 credits

Introduction to basic theories and practices of ecological design in interiors. Students will learn to take responsibility for their work by understanding the impact their designs have on our environment, and ways to mitigate this impact by gaining a practical understanding of the field of sustainable design. Prerequisite: ARC1126, IND1200, IND1300; Corequisite: ARC2461. Laboratory fee (3 hr. lecture)

Italian Language

ITA1000
Elementary Italian Conversation 3 credits

A course emphasizing conversational Italian. Extensive use is made of oral exercises and audio tapes. This course cannot be substituted for ITA 1120 or 1121. (3 hr. lecture)

ITA1120
Elementary Italian 1 4 credits

An integrated (multi-media) approach to acquire proficiency in the basic skills (of the language)-listening/understanding, speaking, reading, writing, and cross-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice in class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

ITA1121
Elementary Italian 2 4 credits

A continuation of 1120. A proficiency-oriented course emphasizing the mastery of the basic skills of the language. Prerequisite: ITA 1120. (4 hr. lecture)

ITA2220
Intermediate Italian 1 4 credits

Students will understand, speak, read, write, and gain cultural awareness of Italian through a systematic review (using an integrated, multimedia approach) of reading, grammar, and writing skills with emphasis on oral and written communication. Prerequisite: ITA 1121 or equivalent. (4 hr. lecture)

ITA2221
Intermediate Italian 2 4 credits

This is a continuation of Intermediate Italian 1. Students will learn to understand, speak, read, and write Italian. Students will also learn to develop cross-cultural awareness through a systematic review of reading and writing skills with emphasis on oral as well as written expression. Prerequisite: ITA 2220 or equivalent. (4 hr. lecture)

ITA2240
Intermediate Italian Conversation 1 3 credits

Training in the acquisition and application of

language skills. Practical use of the language to develop fluency and correctness in speaking. Pre/corequisite: ITA 2221 or equivalent. (3 hr. lecture)

ITA2241
Intermediate Italian Conversation 2 3 credits

Practice in listening and speaking using topical materials. Development of oral proficiency skills. Prerequisites: ITA 2221 or 2240. (3 hr. lecture)

Japanese Language

JPN1120
Elementary Japanese 1 4 credits

An integrated (multi-media) approach to acquire proficiency in the basic skills (of the language)-listening/understanding, speaking, reading, writing, and cross-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice in class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

JPN1121
Elementary Japanese 2 4 credits

A continuation of JPN 1120. A proficiency-oriented course emphasizing the mastery of the basic skills of the language. Prerequisite: JPN 1120. (4 hr. lecture)

JPN2220
Intermediate Japanese 1 4 credits

Students will understand, speak, read, write, and gain cultural awareness of Japanese through a systematic review (using an integrated, multimedia approach) of reading, grammar, and writing skills with emphasis on oral and written communication. Prerequisite: JPN 1121 or equivalent. (4 hr. lecture)

JPN2221
Intermediate Japanese 2 4 credits

This is a continuation of Intermediate Japanese 1. Students will learn to understand, speak, read, and write Japanese. Students will also learn to develop cross-cultural awareness through a systematic review of reading and writing skills with emphasis on oral as well as written expression. Prerequisite: JPN 2220 or equivalent. (4 hr. lecture)

Journalism

JOU1100
Basic Reporting 3 credits

Journalistic writing emphasizing the elements of reporting with an emphasis on the modern news story, analysis of the elements of news, style structure of news stories, news sources, and the mechanics of newspaper production. (3 hr. lecture)

JOU1946

Journalism Internship 1-3 credits
Qualified students will receive practical experience working with local or college communications media under the supervision of professional media specialists and the journalism faculty. Prerequisite: JOU 1100 and permission of department faculty. May be repeated for credit. Not automatically transferable. (2-6 hr. lab)

JOU1949

Co-op Work Experience 1:
JOU 3 credits
This course is designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

JOU2200

Editing and Makeup 3 credits
The application of copy desk techniques, including evaluating and editing copy, correcting faulty news stories, handling wire copy, writing headlines, and designing page layouts. Prerequisite: JOU 1100. (3 hr. lecture)

Library Science

LIS1001

Library Research 1-3 credits
Provides students with a practical working knowledge of the Library so that resources may be used efficiently for research purposes. Emphasis is placed on developing effective and efficient methods of using the card catalog, the online catalog and databases, periodical indexes, CD-ROMS, general reference books and other library research technology. (1-3 hr. lecture/lab)

LIS2004

Strategies for Online Research 1 credit
LIS 2004, Strategies for Online Research, focuses on critical thinking skills for online research. Students will learn how to access, evaluate, and use information efficiently and ethically. (1 hr. lecture)

Linguistics

LIN2200

Phonetics 3 credits
An introduction to the elementary area of the sound systems of types of spoken English. Practice in recognition and transcription using IPA alphabet. (3 hr. lecture)

LIN2606

Introduction to Sociolinguistics 3 credits

This course introduces students to the study of how social and cultural factors affect human communication. Topics such as language attitudes and policies, dialects vs. standards, class variation, and race and gender will be discussed. (3 hr. lecture)

Management

FIN3400

Finance for Non-Financial Managers 3 credits
The students will learn to apply their financial skills and decision-making abilities to address financial issues in a business environment. They will learn how financial markets influence their decisions and the role of financial intermediaries in these markets. Emphasis will be placed on financial and capital budgeting, working capital management, short and long term financing, valuation of the firm, and overall capital structure. The course will require the student to apply the time value of money through the use of present and future value scenarios. Pre-requisites: ACG2071, and QMB2100, or STA2023, FIN2000 (3 hr. lecture)

FIN3403

Financial Management 3 credits
Students will learn the sources and uses of funds as they relate to financial decision making in the corporate form of enterprise. Emphasis is placed on working capital management, capital budgeting techniques, short and long term financing, and capital structure and the value of the firm. This course emphasizes the use of formulas and spreadsheets through Excel. Prerequisites: ACG 2071, 2071L, CGS 1060, QMB 2100 and 2100L. (3 hr. lecture)

ISM4011

Management Information Systems 4 credits
The student will use information technology software to assist in making decisions of a business nature. The course will examine the use of computer systems and information technology and their applications to make more effective business decisions. The course will include the latest terminology, techniques and applications of information systems in a business organization. Prerequisites: CGS1060, Senior status or permission by department chair. (4 hr. lecture)

MAN1023

Management for Nonprofit Organization 3 credits
This is a foundation course in the management of non-profit organizations. This course provides an overview of the range and variety of institutions and activities of the non-profit sector and the critical role they play. The student will learn what non-profits have in common and the basic rationale for this type of organization through clarifying the basic scope, structure, and role of the organizations of the non-profit sector. An emphasis will be placed upon the need for non-profit organizations

to operate similarly to for-profit businesses be efficiently managing financial resources, developing new revenue sources, adapting to change and effectively evaluating their community impact. (3hr. lecture)

MAN1949

Management Internship 1 3 credits
Students will learn to develop practical knowledge and skills in the application of theory to actual problems in a non-classroom setting in a student's field of study. (144 hr. Internship)

MAN2021

Principles of Management 3 credits
The student will learn to analyze the major functions of management. Emphasis is placed on learning how to manage organizations for excellence in both performance and employee satisfaction. Major topics include but are not limited to business ethics and social responsibility, strategic and operational planning, decision making, organization structure and behavior, managing groups and teams, communication and information technology. Special fee. (3 hr. lecture)

MAN2300

Human Resources Management 3 credits
Reviews how the personnel/human resources department contributes to overall planning and profitability of an organization. Major topics include typical personnel functions: recruitment and selection, training, performance appraisal, job analysis, and compensation and benefits administration. Class discussions will focus on changing value systems in the work force and the resulting challenges for managers. (3 hr. lecture)

MAN2604

Managing in a Multi-Cultural Environment 3 credits
This course will introduce opportunities and problems encountered by managers operating in a diverse environment either within or outside their home country's borders. Discussions will cover the environment of multinational management as well as planning, organizing, staffing, leading and controlling in both domestic and multinational companies. Current events and cultural issues that significantly affect international business will also be examined. (3 hr. lecture)

MAN2920

Management Internship 2 3 credits
Students will learn to enhance the practical experience gained in MAN 1949 to put into practice the knowledge and skills in the application of theory to actual problems in a non-classroom setting. Prerequisite: MAN1949. (144 hr. Internship)

MAN2930

Creative Leadership 3 credits
Students will experience and analyze the dynamics of group behavior in establishing a creative work climate where managers and employees can perform more effectively. Topics to be examined include team build-

ing, the importance of trust in professional relations, giving and receiving feedback, the functions of sub-groups, roles and status, appointed power, elected power, informal power, and formal power. The class is conducted entirely in a discussion group setting. (3 hr. lecture)

**MAN3025
Organization Management 3 credits**

The student will learn the major functions of supervision and management including the functions of planning, staffing, directing and controlling. Emphasis is placed on learning how to communicate more effectively with employees and how to increase leadership effectiveness. Major topics include goal setting and attainment, organizational structure, decision-making, strategic planning, managing stress, and ethical behavior and ethical role modeling. Cases that present the student with opportunities to make supervisory and management decisions, along with timely feedback on their effectiveness, will be used. Pre-requisites: MAN2021 (3 hr. lecture)

**MAN3065
Business Ethics 3 credits**

In this course the student will learn how personal values and ethics influence the decision-making capacity of the manager within an organization. The student will learn about ethical theories and the roles they play in the social and corporate behavior of an organization. Issues such as diversity in the workplace, intuition, technology, and the global environment of business, will be included in case examples. The student will acquire an understanding of how an organization can institutionalize its ethical system. Prerequisite: MAN2021 (3 hr. Lecture)

**MAN3240
Organizational Behavior 3 credits**

The student will learn about social behavioral sciences that can be applied to supervision and management. Major topics include motivation, conflict, corrective actions and rewards, job related stress, organizational dynamics, the evolving global environment, and the responsibility to stakeholders and the planetary environment. The student organizational behavior and how to integrate behavioral concepts will be reviewed in an effective managerial decision-making process. Pre-requisites: MAN2021 (3 hr. lecture)

**MAN3301
Human Resource Management 3 credits**

The student will learn the functions of Human Resource Management including human resource planning, strategic development of human resources, recruitment techniques, selection and hiring processes, compensation systems, development of policy and procedures for effective and ethical human resource management, performance review and evaluation systems, working effectively with organized labor, retention of employees, and current issues in human resource management. The course will also include an exploration of human resources within the global business environment of a boundless

organization. Pre-requisites: MAN2021 (3 hr. lecture)

**MAN3504
Production Operations and Logistics Management 3 credits**

This course examines the integration of production operations and logistics management and how they enable an organization to compete successfully in business. Students will learn the relationships that exist between operations and the supply chain, including operations and supply chain strategies, business processes, project management, product design and development, and inventory management. This course uses case study methodology. Prerequisites: MAN 2021 and TRA 1154. (3 hr. lecture)

**MAN3506
Operations Management 3 credits**

The course emphasizes the application of operational decision-making techniques to improve process, productivity, and the effective utilization of resources within organizations. Students will learn to recognize the trade-offs associated with operations management decisions and their effect on resource allocation. Topics include production processes, operations strategies, quantitative techniques, quality, performance, capacity planning, efficiency, forecasting, resource management, statistical process control, project management, and supply chains. Prerequisites: MAN 2021, QMB 2100, 2100L, and TRA 3132. (3 hr. lecture)

**MAN3554
Safety and Risk Management 1 credit**

This course will focus on safety and risk management with emphasis on how it applies to supply chain management. Students will learn the processes used to characterize and manage risk, as well as maintain a safe operating environment with the protection of personnel, assets, and services. Hazard characteristics of products, appropriate modes of transport, carrier selection and qualifications, packaging and container specifications, driver training requirements, financial issues, security precautions, warehousing risk, OSHA, hazardous materials handling, and customer assessment will be addressed in this course. (1 hr. lecture)

**MAN3583
Project Management 3 credits**

Students will learn project management concepts and theory, including attributes for a project lifecycle, global project management, benefits of project management, project management environments, planning and managing risk, project planning controls, and terminating a project. Prerequisite: MAN 2021. (3 hr. lecture)

**MAN3786
Sustainable Enterprise Planning 3 credits**

Students will learn the assessment tools, design and construction considerations, and operating planning requirements for sustainable enterprises. Students will also learn the

ecological and economic benefits of sustainability practices, including construction, operations, supply chain decisions, recycling, reusing, and reconditioning to preserve the environment by increasing revenues. Best practices, case studies, evolving trends and experimental efforts are also covered. Prerequisite: MAN 2021. (3 hr. lecture)

**MAN4120
Leadership Challenges and Supervision 3 credits**

The student will learn to analyze leadership theories and will acquire an awareness of the dynamics of supervisory and managerial decision-making. Emphasis will be placed on team building, crisis management, social and environmental responsibility, developing and communicating a vision, developing a full set of managerial and leadership skills. Pre-requisites: MAN3894 (3 hr. lecture)

**MAN4162
Customer Relations for Managers 3 credits**

Students will learn Customer Relations for Managers skills by exploring the dynamics of building solid and lasting relationships with customers. Topics will include doing business in a global environment, cultural diversity, the diversity of customs and global etiquette, negotiation tactics, global promotional tactics, and acceptable professional and corporate behaviors in a global business environment. Pre-requisites: MAN3894 (3 hr. lecture)

**MAN4350
Professional Development 1 credit**

Students will learn to implement basic business etiquette, work habits, and career planning strategies required for successful transition into the business profession. Focus is on setting professional goals, preparing for a job search, networking, finding job leads, applying for jobs, interviewing for jobs, following up, and evaluating job offers. Prerequisite: MAN 2021. (1 hr. lecture)

**MAN4520
Quality Management 3 credits**

This course provides an understanding of various theories of quality management (QM). Students will learn how organizations can develop excellence through the adoption of continuous improvement and process management. The course analyzes and uses various process management techniques, continuous improvement tools, and strategies to improve quality. The conceptual and analytical skills acquired in this course enable students to provide leadership in shaping a culture for quality within an organization and determining the effectiveness of quality initiatives such as Total QM, Six Sigma, Process Capability, Process Control, and Customer Relationships. Prerequisite: MAN 2021. (3 hr. lecture)

**MAN4523
Production Information Systems 3 credits**

This course presents the fundamental aspects of computer technology required by the systems that provide data to, and derive information from, production in manufacturing. Students will learn the techniques to organize, store, manipulate data, report, derive and analyze production information, basics networking used in production, as well as various forms of information systems. Prerequisites: CGS 1060 and MAN 2021. (3 hr. lecture)

MAN4593**Supply Chain Management Theory & Methodology** 2 credits

This course presents a range of advanced topics in integrated logistics and supply chain management. Students will learn new theoretical and methodological developments in the field of supply chain. Specific topics vary depending upon current industry developments and will incorporate the use of speakers in the classroom. Prerequisites: MAN 2021, 3583, 4523. (2 hr. lecture)

MAN4597**Global Supply Chain Management** 3 credits

This course presents an overview of the management of sourcing, operations, and distribution processes along a supply chain in domestic and international markets. Students will learn how firms gain a competitive advantage through supply chain activities. Topics include: supply chain network design, purchasing, forecasting, inventory management, globalization and outsourcing, logistics, and information technology. Prerequisites: MAN 2021 and 3506. (3 hr. lecture)

MAN4720**Strategic Management Decision Making** 4 credits

The student will learn the designing, planning, and implementation of strategic decision-making in a business organization by identifying problems and designing possible solutions, formulating plans, goals, and feedback mechanisms. Needs assessments and internal and external audits will be utilized to understand problems that are presented in cases that require effective strategic solutions. Emphasis will be placed on developing an effective strategic plan its effective implementation, and its long-term results. Pre-requisites: MAN3894 (4 hr. Lecture)

MAN4894**Applied Case Studies in Management** 3 credits

This course emphasizes the identification of strategic management issues, evaluation of strategic goals, internal and external environment of the organization, as well as differentiating, categorizing and assessing strategic choices. Students will learn to apply strategic management process through strategy formulation, implementation and evaluation utilizing the case study methodology. Prerequisite: MAN2021 and MAN4720. (3 hr. lecture)

MAN4900**Capstone Project in Supervision and Management** 4 credits

Students will learn to apply their knowledge and skills to a major supervision and management project. The project will require the effective integration of all the knowledge and skills students have learned throughout the student's supervision and management studies. Pre-requisites: ISM4011, and MAN4120, and MAN4162, and MAN4720, Recommended Preparation: Must be taken during the last semester before graduation and permission of department chair, and all MAN 4000s, ISM4011, except MAN4941 (4 hr. lecture)

MAN4940**Field Study and Research** 2 credits

Students will learn to apply information and skills studied in core and concentration program courses through various special projects, field research, or internships designed for cogitative learning in a student-centered manner which requires the command, analysis, and synthesis of knowledge and skills. Prerequisites: MAN 2021, 3583, and TRA 1154. (2 hr. lecture)

MAN4941**Management Internship** 3 credits

The student will learn Supervision and Management skills by becoming an employee at either a not-for-profit or profit seeking organization. The student will be required to work the minimum hours required by the state to earn credit for the internship. The student will work with the supervising faculty member and the employer to establish a set of learning goals that will be achieved during the semester. Pre/Co-requisites: MAN4900

MNA1322**Training Methods** 3 credits

Provides practical experience in the four most effective training methods used in organizations today: demonstration performance, lecture, teaching interview and guided discussion. Emphasis is placed on analyzing the methods through student practice-teaching presentations. A.S. degree credit only. (3 hr. lecture)

MNA1345**Effective Supervision** 3 credits

Students will learn to implement supervisory and management practices. Emphasis is placed on learning to communicate more effectively with employees, motivating employees, increasing one's leadership effectiveness, delegating, counseling problem employees, conducting performance reviews, maintaining a discrimination and harassment-free workplace, and managing time. Special fee. (3 hr. lecture)

MNA2120**Human Relations in Business** 3 credits

Students will learn to implement human relations and communication skills necessary for superior performance and career advancement in the business profession. Emphasis is placed on learning and practicing effective in-

terpersonal communication skills, giving criticism tactfully, expressing feelings constructively, being more sensitive to body language messages, and active listening. Other major topics emphasized are building self-esteem, learning how values and attitudes influence job performance and work relationships, assertion skills, group dynamics and team building, managing conflict, dealing with difficult people, and the challenges and opportunities of getting along in a culturally diverse workplace. Special fee. (3 hr. lecture)

SBM1000**Small Business Management** 3 credits

Students will learn that growing a business involves shifting from the search for and validation of a business model to executing and scaling the business model. The skill sets are different and more formal management is often required. The course reviews the context and complexity of scaling a business and executing a business model. (3 hr. lecture)

TRA1154**Introduction to Supply Chain Management** 3 credits

This course is an introduction to the concepts, principles and techniques in the field of supply chain management (SCM) with particular emphasis on the economic significance of distribution to business and the U.S. economy. Students will learn the interrelationship between logistics and other areas of business, noting how the SCM pipeline can significantly impact customer loyalty by adding value. (3 hr. lecture)

Marketing

MAR1011**Principles of Marketing** 3 credits

This introductory course emphasizes key concepts and issues underlying the modern practice of marketing. The course provides the student with a clear understanding of marketing's role in the 21st Century and introduces the student to both traditional and contemporary ways of marketing. The student will learn how marketers deliver value by satisfying customer needs and wants, determine which target markets to serve, and decide which goods and services are needed to serve these markets. (3 hr. lecture)

MAR1053**Marketing for Nonprofit Organizations** 3 credits

This course provides an overview of the ways in which a non-profit organization can become market or customer driven. The management process directed at satisfying customer needs and wants through an exchange process is marketing in the non-profit organization. The student will examine this marketing orientation that enables a non-profit organization to achieve its objectives more effectively and produce organizational benefits. (3 hr. lecture)

MAR1211**Inventory and Warehouse Management****3 credits**

Inventory and Warehouse Management is concerned with inventory control and cost concepts such as economic order quantity, reorder point, materials planning and just-in-time inventory systems. This course will discuss significant topics including strategic warehousing and distribution center decisions, storage facilities location and design, packing and containerization and performance measurements as they relate to the international environment. (3 hr. lecture)

MAR1720**Marketing in a Digital World****3 credits**

This course provides an introduction to new marketing concepts and the broad spectrum of digital marketing. Students will learn to utilize digital tools, social networks and media, strategies, and tactics to create awareness and to promote products and services to consumers and businesses. (3 hr. lecture)

MAR2141**Export/Import Marketing****3 credits**

Introduction to international marketing, with special emphasis on export/import procedures and documentation. The basic principles and concepts of the distribution of goods in international markets; provides an overview of the international marketing process, and the problem facing international marketers in a multinational setting. Emphasis is placed upon export/import transactions. (3 hr. lecture)

MAR2150**International Marketing****3 credits**

Students will learn the four P's of product, price, place (distribution), and promotion as they relate to a global marketing strategy. The concepts are introduced within the international trade framework, as well as the cultural, social, economic, regulatory, and political environments affecting global marketing efforts. (3 hr. lecture)

MAR2154**International Trade****3 credits**

This is an exploratory course in the dimensions of international trade theory and policy. The background mechanics of world trade, the effect of world resource distribution on international trade and an appreciation of the interdependencies among cultures is discussed. (3 hr. lecture)

MAR2520**Hispanic Marketing Communications****3 credits**

Students will learn how firms can formulate strategies to attract the U.S. Hispanic market and its various sub-segments. Emphasis is on strategy formulation and integrated marketing communications, including the use of case studies. (3 hr. lecture)

MAR3803**Marketing Strategy****3 credits**

Students will learn how managers imple-

ment the marketing elements within a strategic planning framework. Emphasis is on decision-making, and the development and execution of marketing strategies related to product and brand development, channels of distribution, pricing, and promotional efforts under varying marketplace conditions. This course incorporates the use of case studies. Prerequisite: MAN2021. (3 hr. lecture)

MAR4203**Supply Chain Marketing****3 credits**

Students will learn the management of traditional and emerging marketing channels, with emphasis on legal, economic, and ethical considerations in wholesale and retail inventory control, raw goods, finished product transportation and relationship management. Prerequisites: MAN 2021, 3506, and TRA 1154. (3 hr. lecture)

MKA1021**Fundamentals of Selling****3 credits**

The nature and requirements of selling, including a consideration of buyer motivations and selling theories in relation to various buyer-seller situations. (3 hr. lecture)

MKA1041**Principles of Retailing****3 credits**

Major types of retail institutions and their organizational structure; activities of the merchandising, operating and controlling divisions; buying and merchandising functions; methods of financial, inventory, and credit control; and the selection and training of personnel. (3 hr. lecture)

MKA1161**Introduction to Customer Service****3 credits**

A survey course which examines the attitudinal, behavioral and procedural basics which are common across all customer service sectors. An extensive vocabulary of customer service terms will be developed and students will understand their practical application in today's business environment. (3 hr. lecture)

MKA1511**Principles of Advertising and Copywriting****3 credits**

Techniques and behavioral factors used in advertising and copywriting which best motivate the consumer. Principles are applied in clear, concise written expression of various appeals used in selling goods and services. (3 hr. lecture)

MKA1531**Advertising Layout and Production****3 credits**

Principles of effective advertising layout and production techniques. Laboratory sessions emphasize use of color, art work, choice of type and methods and techniques of producing ads for various media. Prerequisite: MKA 1511 or equivalent. (3 hr. lecture)

MKA1949**Co-op Work Experience 1:****MKA****3 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department Approval and completion of 1949 Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

TRA2010**Introduction to Transportation and Logistics****3 credits**

This course surveys the organization and operations of the commercial transportation industry and its impact on the bottom line of today's modern businesses. Students will learn to review regulations and processes affecting transportation and logistics functions as well as explore the industry job market and look at technologies and current issues shaping transportation and logistics. A.S. degree only. (3 hr. lecture)

TRA2702**International Logistics and Transportation****3 credits**

International logistics concerns the flow of materials into, through and out of an international corporation as it relates to materials management, storage, inventory locations, physical distribution and documentation. This course will emphasize international transportation infrastructure and modes such as ocean, airfreight, intermodal movement, truck and rail. Choices among these modes will be explored considering such factors as transit time, packaging, risks, predictability and cost. The roles of freight forwarders and custom brokers in moving international cargo and operation of foreign trade zones will be discussed. Prerequisites: TRA 2010, 2321. (3 hr. lecture)

TRA2945**Transportation & Logistics****Capstone I****1 credit**

In this Transportation & Logistics Capstone course, students will learn to incorporate the major concepts presented in the transportation courses through the application of special projects, internship and/or examination. The course will assess the students understanding of major concepts in transportation and logistics. Prerequisites: Departmental Approval & Completion of the Program Core Requirements. (1 hr. lecture)

TRA2946**Transportation & Logistics****Capstone II****1 credit**

This Transportation & Logistics course is a continuation of Capstone I. Students will learn to further the concepts acquired in Capstone I through a special project, internship or examination to assess the students understanding of major concepts presented in the courses in the degree program. Prerequisite: TRA2945. (1 hr. lecture)

Mass Communications

MMC2000

Introduction to Mass Communications 3 credits
Development of a critical perception of the mass communications process and its results in both printed and electronic media. Applications of the ethics and codes of journalism to the changing roles and forms of journalistic media. MMC 2000 will transfer for mass communications majors to various universities within the Florida State System. (3 hr. lecture)

PUR2003

Public Relations 3 credits
This course provides students with a broad spectrum of topics as related to the Public Relations profession. Current practices or organized programs used in business to earn public acceptance and good will for products, services, personnel, and policies are explored, studied and experienced. The course employs a hands-on approach to applying public relations technique in hypothetical business situations. Students prepare press releases, brochures, and other collateral materials. (3 hr. lecture)

Mathematics College Level

MAC1105

College Algebra 3 credits
This course introduces the student to the concept of functions and their graphs. Students will learn to graph linear, quadratic, rational, exponential, logarithmic, radical, power, and absolute value functions and transformations; perform operation son and compositions of functions; find the inverse of a function; apply the laws of logarithms to simplify expressions and solve equations; graph non-linear inequalities; solve related applications and modeling problems. Prerequisite: MAT 1033 with a grade of C or better, or equivalent. Special fee. Gordon Rule Assigned. (3 hr. lecture)

MAC1106

Integrated College and Precalculus Algebra 5 credits
This course is intended for students preparing for STEM careers and will cover topics found in MAC1105 & MAC1140. Students will learn how to analyze linear, quadratic, polynomial, rational, radical, absolute value, composite, inverse, piecewise, exponential, and logarithmic functions; conic sections; systems of equations/inequalities; matrices/determinants; sequence & series; Binomial Theorem; applications of mathematical modeling such as optimization problems, and exponential growth/decay. Prerequisite: MAT1033. (5 hr. lecture)

MAC1114

Trigonometry 3 credits
This course is primarily designed for students who expect to take physics and/or the courses

in the calculus sequence. Students will learn and use the fundamental trigonometric identities and solve conditional trigonometric equations, perform operations on complex numbers in trigonometric form, work with vectors, and graph both polar and parametric equations. Prerequisite: MAC 1105 or MAC 1140 or MAD 2104 with a grade of "C" or better. Special fee. Fulfills Gordon Rule computational requirement. (3 hr. lecture)

MAC1140

Pre-Calculus Algebra 3 credits
This course is primarily designed for students who are majoring in areas that require one or more courses in the calculus sequence. The student will analyze and graph algebraic, exponential, logarithmic, piecewise-equations, as well as systems of linear and nonlinear equations. The student will identify arithmetic and geometric sequences and series and solve related problems. The student will use the Binomial Theorem to expand polynomials and solve related problems. The student will use mathematical induction to prove statements regarding the properties of natural numbers. The student will solve applications and statements regarding the properties of natural numbers. The student will solve applications and modeling problems related to the above topics. Prerequisite: MAC 1105 with a grade of "C" or better or equivalent. Fulfills Gordon Rule computational requirement. (3 hr. lecture)

MAC1147

Pre-Calculus Algebra and Trigonometry 5 credits
This course includes all the topics covered in Pre-Calculus Algebra (MAC 1140) and in trigonometry (MAC 1114). See the course description for MAC 1140 and MAC 1114 for the MAC 1147 topics. The course is designed for students with a strong high school background in algebra and trigonometry, or for students who performed very well in college algebra. Prerequisite: MAC1105 with a grade of "C" or better or departmental permission. Fulfills Gordon Rule computational requirement. (5 hr. lecture)

MAC2233

Business Calculus 3 credits
An introduction to the basic concepts of differential and integral calculus for business majors. Topics include limits; continuity; differentiation and integration of polynomial, log arithmetic and exponential functions with applications to business. Prerequisite: MAC 1105 with a grade of C or better or departmental permission. Fulfills Gordon Rule computational requirement. Special fee. (3 hr. lecture)

MAC2241

Life Science Calculus 3 credits
An introduction to calculus for the Life Sciences. Students will learn plane trigonometry, vectors and vector operations, algebraic and transcendental functions, differential and integral calculus, matrices, and elementary statistics with an emphasis in the application

of these topics to the life sciences. Gordon Rule Assigned. Prerequisite: MAC 1105. (3 hr. lecture)

MAC2311

Calculus and Analytical Geometry 1 5 credits
Introduction to analytic geometry; limits; continuity; differentiation of algebraic and trigonometric functions, differentials; introduction to integration and the fundamental theorem of calculus; application of definite integrals and derivatives. Prerequisites: MAC 1114 and MAC 1140 or MAC 1147 with a grade of "C" or better or departmental permission. Fulfills Gordon Rule computational requirement. (5 hr. lecture)

MAC2312

Calculus and Analytical Geometry 2 4 credits
Techniques of integration; applications of integration; differentiation and integration of inverse trigonometric, exponential, logarithmic, and hyperbolic functions; sequences and series; parametric equations and polar coordinates; improper integrals; and indeterminate forms. Prerequisite: MAC 2311 with a grade of "C" or better. Fulfills Gordon Rule computational requirement. (4 hr. lecture)

MAC2313

Calculus and Analytic Geometry 3 4 credits
Analytic geometry of three dimensions; vectors and vector valued functions; curves and surfaces in 3-space; partial differentiation and applications; multiple integrals and their applications; line integrals, surface integrals; and Green's theorem. Prerequisite: MAC 2312 with a grade of "C" or better. Fulfills Gordon Rule computational requirement. (4 hr. lecture)

MAD1100

Discrete Mathematics for Computer Science 3 credits
This course introduces students to the principles of discrete mathematics that apply to computer science. Topics include set theory, logic, Boolean algebra, number theory, vectors and matrices, combinatory, probability, relations, functions, and basic graph theory. Prerequisite: MAC1105. Special fee. Gordon Rule Assigned (3 hr. lecture).

MAD2104

Discrete Mathematics 3 credits
This course is designed for those students who are majoring in computer science, engineering, mathematics, and other highly technological fields. Topics include formal logic, set theory, combinatory, mathematical induction, relations and functions, recursion, and graph theory. Prerequisite: MAC 1140. Special fee. Fulfills Gordon Rule computational requirement. (3 hr. lecture)

MAD3107

Discrete Structures 3 credits
Topics include sets, logic, switching circuits,

Boolean algebra, combinatory, probability, mathematical proofs, mathematical induction, functions, relations, and graph theory. Credit is not also given for MAD 2104. Prerequisite: MAC 2312. (3 hr. lecture)

MAP2302
Introduction to Differential Equations 3 credits

Includes equations of order one and degree one, orthogonal trajectories, linear equations and constant coefficients, non-homogeneous equations, inverse differential operators, solutions using LaPlace Transforms, elementary existence theorems, series solutions, and applications to physics and chemistry. Prerequisite: MAC 2312 with a "C" or better or equivalent. Fulfills Gordon Rule computational requirement. (3 hr. lecture)

MAP2402
Applied Mathematics For Science And Engineering 3 credits

This course bridges mathematics and STEM fields by demonstrating applications such as angular momentum, vehicle positioning, coding, signals, graphics, sensors, and biological processes, using software and robotics. Students will learn topics such as: cross products, linear independence, subspaces, affine spaces, matrix operations, and eigenvectors, R2 and R3, as well as regression and dimensional analysis. Prerequisite: MAC1105 (High School Geometry Recommended), Pre/Corequisite: MAC1114 or MAC1147. (3 hr. lecture)

MAS2103
Elementary Linear Algebra 3 credits

Vectors, coordination of space, linear independence and bases, equations in 3-space, linear transformations, matrices, rank, and nullity. Prerequisite: MAC 2311. Fulfills Gordon Rule computational requirement. Special fee. (3 hr. lecture)

MAS3105
Linear Algebra 3 credits

This course is designed for students who are majoring in secondary mathematics education. Major topics include systems of linear equations, matrices, determinants, vector spaces, linear transformations, eigenvectors and eigenvalues, inner-product spaces and orthogonality. Prerequisite: MAC 2312. (3 hr. lecture)

MAS3301
Algebraic Structures 3 credits

This course is designed for students who are majoring in secondary mathematics education, mathematics, science or engineering. Topics include set theory, basic properties of the integers, groups, rings, fields and the homomorphism's of these algebraic structures. Prerequisite: MAC 2312. (3 hr. lecture)

MAS4203
Number Theory 3 credits

Topics include mathematical induction, divisibility, the Euclidean algorithm, primes, the Fundamental Theorem of Arithmetic, number-theoretic functions, congruence, linear

Diophantine equations, linear congruence's, the Chinese Remainder Theorem, and the theorems of Euler, Fermat, and Wilson. Prerequisite: MAC 2312. (3 hr. lecture)

MAT1033
Intermediate Algebra 3 credits

This course covers the concepts of variables representing numbers. Students will learn to strengthen their algebraic skills in linear equation solving, quadratics, factoring, rational expressions, radicals, graphing linear equations and inequalities, and related applications. Special fee. Prerequisites: Student must meet the Developmental Education mathematics requirement in State Rule 6A-10.0315 (by course, placement score, or eligible exemption). Prerequisites: MAT0022C, or MAT0028, or MAT0057. (3 hr. lecture)

MGF1106
Mathematics for Liberal Arts 1 3 credits

This course includes topics in geometry, probability and statistics, and sets and logic. It also covers selected topics in the history of mathematics. Prerequisite: MAT 1033. Fulfills Gordon Rule computational requirement. (3 hr. lecture)

MGF1107
Mathematics for Liberal Arts 2 3 credits

This course introduces the student to the concepts of financial mathematics, linear and exponential growth, numbers and number systems, history of mathematics, elementary number theory, voting techniques, and graph theory. Prerequisite: MAT 1033 with a grade of "C" or better or equivalent. Fulfills Gordon Rule computational requirement. (3 hr. lecture)

MGF1118L
Math Computation Review 1 credit

The purpose of this course is to prepare for the computational section of the CLAST exam. This course will cover all of the computational competencies of the CLAS exam as well as general test taking skills. This course will not count as a Gordon Rule mathematics course. Prerequisite: Departmental Permission. May be repeated. (2 hr. lab)

MTB1103
Business Mathematics 3 credits

Reviews the basic arithmetic processes and covers mathematics and computations used in business including cash and trade discounts, commissions, markup, markdown, depreciation, simple and compound interest and bank discounts, payroll records, taxes, insurance, inventory, analysis of financial statements, statistics (mean, median, and mode), charts and graphs, and consumer applications. (3 hr. lecture)

MTB1302L
Business Mathematics Laboratory 1 credit

Provides the business mathematics student with support to achieve the objective of MTB 1103. (2 hr. lab)

MTB1322
Technical Mathematics 2 3 credits
Applications of algebra, trigonometry, and analytic geometry needed in technical programs. Prerequisite: MAC 1105. (3 hr. lecture)

MTG2204
Geometry for Educators 3 credits
This course emphasizes Euclidean Geometry. The course includes measurements and properties of plane and solid figures, sets logic and proofs. Fulfills Gordon Rule computational requirement. Prerequisite: MAC 1105. (3 hr. lecture)

MTG3214
Euclidean Geometry 4 credits

This course encompasses a range of geometry topics and pedagogical ideas for the teaching of geometry including properties of shapes, defined and undefined terms, postulates and theorems, logical thinking and proofs, constructions, patterns, and sequences, the coordinate plane, axiomatic nature of Euclidean geometry, and basic topics of non-Euclidean geometries. Prerequisite: MAC 1147. (4 hr. lecture)

Mathematics College Preparatory

MAT0018
Developmental Mathematics 1 4 credits

The student will learn operations with whole numbers, integers, fractions, decimals, percent's and their applications; simplifying and evaluating algebraic expressions; ratios and proportions; solving linear equations in one variable and graphing solutions to linear inequalities. This course does not satisfy the college level mathematics requirements. Placement test scores or referral determine admission. Special Fee. (2 hr. lecture; 4 hr. lab)

MAT0022C
Developmental Mathematics Combined 5 credits

This course combines Developmental Mathematics I and II. The student will learn operations on signed numbers, solving linear equations and inequalities in one variable, operations on polynomials, factoring, integer exponents, radicals, graphing, and applications. This course does not satisfy the college level mathematics requirements. Placement test scores or referral determine admission. (2 hr. lecture; 4 hr. lab)

MAT0028
Developmental Mathematics 2 4 credits

The student will learn topics which include operations with signed numbers; solving linear equations and inequalities in one variable; operations with polynomials, factoring, integer exponents, radicals, rational expressions, graphing and applications of these topics. This course does not satisfy the college level

mathematics requirements. Special Fee. Prerequisite: MAT0018 with a minimum grade of S or placement test scores. (2 hr. lecture; 4 hr. Lab)

MAT0029**Developmental Mathematics****for Statistics****3 credits**

Students will investigate ratios, proportions, scaling, modeling with equations and inequalities, tables, graphs, linear functions, and exponential functions, in preparation for Statistics. Students will learn the language of mathematics and mathematical symbols, procedural fluency, strategic competence, adaptive reasoning, quantitative investigative techniques, and questioning and solution-building skills. (3 hr. lecture)

MAT0057**Developmental Mathematics****(Modules 3.0)****3 credits**

Students will learn to strengthen arithmetic, geometry, and algebra skills. This course does not satisfy the college level mathematics requirements. Prerequisite: Placement test scores or departmental permission. Special fee. (3 hr. lecture)

Medical Laboratory Technology

MLT1040L**Introduction to Medical Laboratory Technology****1 credit**

Collection of blood by venipuncture, skin puncture and donor room techniques. This includes handling of specimens, professional ethics, basic anatomy and physiology of the circulatory system, medical terminology and safety practices including those for AIDS patients. (2 hr. lab)

MLT1191**Histotechnology 1****3 credits**

This course will introduce students to the fundamental principles of histologic technology. These include the principles of fixation, processing for paraffin-embedding, microtome sectioning, staining and cover-slipping and laboratory safety. (3 hr. lecture)

MLT1191L**Histotechnology 1 Lab****2 credits**

This course will introduce students to fundamental laboratory skills and safety concepts in histologic technology. It includes laboratory aspects of specimen preparation, fixation, sectioning and routine staining. The student will also be introduced to the basic principles of record keeping, use and maintenance of laboratory equipment and quality control. (4 hr. lab)

MLT1195C**Tissue Identification 1****3 credits**

This course will introduce students to the study of human organs and tissues for the purpose of developing histotechnological skills. It will include recognition, composition, and

function of organs and tissues. Macroscopic and microscopic laboratory examination and evaluation of specimens will be included. (2 hr. lecture; 2 hr. lab)

MLT1196**Laboratory Safety and Regulations****2 credits**

This course will introduce students to the rules and regulations governing safety in the histotechnology laboratory. It will also introduce students to the federal regulations pertaining to the histotechnology laboratory and methods of compliance. Prominent safety issues to be covered include the biological and chemical hazards in histology laboratory, formaldehyde standard, hazardous waste disposal and minimization. (2 hr. lecture)

MLT1210C**Clinical Urinalysis with Lab****2 credits**

Theoretical concepts and practice in the collection and analysis of urine and other body fluids by combination didactic and laboratory instruction. Performance of routine urinalysis procedures including microscopy with identification of related disease states. Laboratory fee. A.S. degree credit only. (1 hr. lecture; 2 hr. lab)

MLT1300**Clinical Hematology****2 credits**

Didactic study of blood cells to include the origin, morphology, function and dysfunction of cells and related disease states of the blood. Theoretical concepts and principles of routine hematology procedures, quality control and instrumentation. Corequisite; MLT 1300L. A.S. degree credit only. (2 hr. lecture)

MLT1300L**Clinical Hematology Laboratory****2 credits**

Manual and automated procedures in hematology. This includes blood cell counts and other basic hematologic procedures in the simulated laboratory and in the clinical setting. Corequisite: MLT 1300. Laboratory fee. A.S. degree credit only. (4 hr. lab/clinic)

MLT1330**Clinical Coagulation****1 credit**

Didactic study of hemostasis, various clotting mechanisms, and related disease states. Corequisite: MLT 1130L. A.S. degree credit only. (2 hr. lecture)

MLT1330L**Clinical Coagulation Laboratory****1 credit**

Performance of selected coagulation assays by manual and automated methods. The significance of test results to assess hemostasis in health and disease is included. Corequisite: MLT 1330. Laboratory fee. A.S. degree credit only. (2 hr. lab)

MLT1500**Clinical Immunology/Serology****2 credits**

Theoretical concepts of the human immune

system in health and disease. Relationships to immunohematology, infection, and serological procedures are analyzed. Pre/corequisite: BSC 2085; prerequisite: BSC 2086; corequisite: MLT 1500L. A.S. degree credit only. (2 hr. lecture)

MLT1500L**Clinical Immunology/Serology****Laboratory****1 credit**

Performance of serological procedures that are identified in MLT 1500. The clinical significance of test results to disease states is included. Pre/corequisites: BSC 2085, 2086; corequisite: MLT 1500. A.S. degree credit only. Laboratory fee. (2 hr. Lab)

MLT1610**Clinical Chemistry 1****2 credits**

Theoretical concepts and principles of carbohydrate, non-protein nitrogen, and electrolyte chemistry analyses with emphasis on their relationships to various disease states. Analytical procedures to assess liver function and acid-base balance are also included. Prerequisite: CHM 1025; corequisite: MLT 1610L. A.S. degree credit only. (2 hr. lecture)

MLT1610L**Clinical Chemistry 1****Laboratory****2 credits**

Performance of chemistry procedures on body fluids with emphasis on manual and automated instrumentation. Prerequisite: CHM 1025L. Laboratory fee. A.S. degree credit only. (4 hr. lab/clinic)

MLT1752**Quality Control Laboratory****Mathematics****2 credits**

Emphasis on mathematical computations related to procedures in the clinical laboratory including dilutions, solutions, calorimetry, hematology math, enzymatic calculations, calculations relating to renal function tests, and mathematical principles related to ionic solutions. The student will also be given specific statistical tools necessary for quality control procedures as well as interpretations of Levy-Jennings charts and troubleshooting tools. (2 hr. lecture)

MLT1840L**Histotechnology****Practicum 1****5 credits**

This is a clinical experience in which students will learn the techniques of processing human tissue for histological purposes. Prerequisite: MLT 2192. (240 hr. practicum)

MLT2180C**Infectious Diseases & Control****Practices****3 credits**

This course will focus on the principles of transmission and control of diseases with an emphasis on infectious tissue specimens. Prerequisites: MCB 2013, 2013L. (2 hr. lecture; 2 hr. lab)

MLT2192**Histotechnology 2 3 credits**

This course is a continuation of Histotechnology 1. Students will be introduced to advanced processing techniques of human tissue for anatomical pathology and concepts of instrumentation. Prerequisite: MLT 1191. (3 hr. lecture)

MLT2192L**Histotechnology 2 Laboratory 2 credits**

This course is a continuation of Histotechnology Lab 1. Students will be introduced to more complex laboratory techniques in histotechnology. Prerequisite: MLT 1191L; corequisite: MLT 2192. (2 hr. lecture; 4 hr. lab)

MLT2197C**Tissue Identification 2 4 credits**

This course will provide the students with the correlations between histotechnological procedures and diseases processes. Students will study the changes in tissue that are associated with various disease states, and will learn the usefulness of selected special stains and techniques in identifying disease processes. Prerequisite: MLT 1195C. (2 hr. lecture; 4 hr. lab)

MLT2198**Histochemistry 3 credits**

This course will introduce students to organic chemistry of stains and special stains, dyes, hydrocarbons; aromatics, alcohols, ethers, aldehydes, ketones, carbonyl compounds, amines and amides. Prerequisites: CHM 1033, 1033L; corequisite: MLT 2198L. (3 hr. lecture)

MLT2198L**Histochemistry Laboratory 2 credits**

This course will introduce students to biochemicals used in histology with emphasis on laboratory preparation and use of histochemical and immune histochemical stains. Prerequisite: CHM 1033L; corequisite: MLT 2198. Laboratory fee. (4 hr. lab)

MLT2403**Clinical Microbiology 2 2 credits**

This course will provide a working knowledge of clinical bacteriology and should complement the Microbiology 2 Lab. The student will be exposed to some of the indigenous flora and the pathogenicity of microorganisms as they affect various body sites. Specimen transport, collection, laboratory identification techniques, and antimicrobial therapy also provides the knowledge base necessary for working in a clinical setting. (2 hr. lecture)

MLT2403L**Clinical Microbiology Lab 2 2 credits**

This course is designed to complement the Microbiology 2 lecture and provide students with the necessary knowledge base and laboratory skills to effectively identify microorganisms associated with infectious diseases. (4 hr. lab)

MLT2440**Clinical Microbiology 1 1 credit**

This course will provide an overview of clinical mycology and parasitology. Topics will include both parasites and fungi and will cover life cycles, epidemiology, and etiology. Emphasis will be given to the most commonly encountered mycoses and parasitic infestations. This course should be taken concurrently with Clinical Microbiology 1 Lab. (1 hr. lecture)

MLT2440L**Clinical Microbiology Lab 1 1 credit**

This course provides a practical overview of mycology and parasitology. Students will also obtain hands-on experience working with formalin preserve ova and parasites. They will also obtain the knowledge necessary to be able to identify at least the genus level of the most commonly encountered yeasts and fungi using microscopic and macroscopic techniques. This course should be taken concurrently with Clinical Microbiology. Corequisite: MLT 2440. Laboratory fee. (2 hr. lab)

MLT2525**Immunohematology 2 credits**

Theoretical concepts involving blood group systems, hemolytic diseases, and blood bank procedures relating to transfusion and component therapy. Prerequisite: MLT 1500; corequisite: MLT 2525L. A.S. degree credit only. (2 hr. lecture)

MLT2525L**Immunohematology Laboratory 2 credits**

Performance of basic blood typing, blood bank assays on prepared specimens, and appropriate quality control procedures. Interpretation of results is included. Prerequisite: MLT 1500L; corequisite: MLT 2525. Laboratory fee. A.S. degree credit only. (4 hr. lab)

MLT2620**Clinical Chemistry 2 2 credits**

Theoretical concepts and principles of proteins, enzymes, and lipids with emphasis on their relationship to various disease states. Prerequisite: MLT1610; corequisite: MLT 2620L. A.S. degree credit only. (2 hr. lecture)

MLT2620L**Clinical Chemistry 2 Laboratory 1 credit**

Performance on those analyses identified in MLT 2620 including electrophoresis and quality control. Prerequisite: MLT 1610L. Corequisite: MLT 2620. Laboratory fee. A.S. degree credit only. (2 hr. lab)

MLT2624L**Special Techniques in Clinical Chemistry 2 credits**

The principles and performance of radioimmunoassay, EMIT, ELISA, and toxicological techniques for thyroid function,

hormones, and toxic substances. Prerequisites: MLT 1610, 1610L; corequisites: MLT 2620, 2620L. Laboratory fee. A.S. degree credit only. (4 hr. lab)

MLT2807L**Hospital Practicum: Immunohematology 3 credits**

A supervised laboratory rotation in a clinical immunohematology facility. This provides the student an opportunity for the practice of skills previously learned and for the acquisition of new procedural skills. The development of interpersonal skills and the transition from student to professional are emphasized. Prerequisites: MLT 2525, 2525L; corequisite: MLT 2930. A.S. degree credit only. (144hr. practicum)

MLT2809L**Hospital Practicum: Hematology 3 credits**

A supervised laboratory rotation in a clinical hematology facility. This provides the student an opportunity for the practice of skills previously learned and for the acquisition of new procedural skills. The development of interpersonal skills and the transition from student to professional are emphasized. Prerequisites: MLT 1300, 1300L, 1330, 1330L; corequisite: MLT 2930. A.S. degree credit only. (144 hr. practicum)

MLT2810L**Hospital Practicum: Chemistry 3 credits**

A supervised laboratory rotation in a clinical chemistry facility. The development of interpersonal skills the transition from student to professional are emphasized. This provides the student an opportunity for the practice of skills previously learned and for the acquisition of new procedural skills. Prerequisites: MLT 2620, 2620L, 2624L; corequisite: MLT 2930. A.S. degree credit only. (144 hr. practicum)

MLT2811L**Hospital Practicum: Microbiology 3 credits**

A supervised laboratory rotation in a clinical microbiology facility. This provides the student an opportunity for the practice of skills previously learned and for the acquisition of new procedural skills. Prerequisites: MLT 2403, 2403L; corequisite: MLT 2930. A.S. degree credit only. (144 hr. practicum)

MLT2841L**Histotechnology Practicum 2 5 credits**

This clinical experience will introduce the students to the basic techniques of microtomy, staining and preparation of human tissue for anatomical pathology. Corequisite: MLT 1840L. (45 hr. practicum)

MLT2930**Medical Laboratory Technology**

Seminar 2 credits
Clinical correlations, professional issues, updates in Medical Laboratory Technology with student's reports on recent professional journal articles, and the use of microcomputers in the laboratory. Corequisite: MLT 2807L, 2809L, 2810L, 2811L. A.S. degree credit only. (2 hr. seminar)

MLT2931**Histotechnology Seminar 2 credits**

This course will prepare students for career entry. Emphasis will be placed on current topics in histotechnology, legal and ethical responsibilities of health care professionals, knowledge of the health care delivery system, including health policies and financing and employability skills. Corequisite: MLT 1840L. (2 hr. lecture)

Meteorology

MET1010**Introduction to Weather 3 credits**

An introduction to fundamentals of weather and their impact on human activities. Topics include temperature, humidity, clouds, precipitation, air masses fronts, and storms. Emphasis is on understanding how these processes take place and their results. Pre/corequisite: PSC 1515. Optional laboratory, MET 1010L. (3 hr. lecture)

MET1010L**Introduction to Weather****Laboratory 1 credit**

An elective laboratory to accompany MET 1010. An investigation through experimentation of fundamental meteorological problems. Map analysis, temperature and humidity experiments. Pre/corequisite: MET1010. Laboratory fee. (2 hr. lab)

MET3702**General Meteorology 3 credits**

This course will cover general knowledge in meteorology. The student will learn about the atmospheric structure and composition, weather and circulation systems, physics of atmospheric processes; as well as global climate and climate change and their impact on human activities. Corequisite MET 3702L. (3 hr. lecture)

MET3702L**General Meteorology****Laboratory 1 credit**

The meteorology lab is a separate 1 credit course designed to be taken in conjunction with a meteorology lecture. Experiments performed each week are chosen with the material being studied in the lecture. Corequisite: MET3702. (2 hr. lab)

Military Science

AFR1101**The Foundation of the United States Air Force - Part 1 1 credit**

This course is designed to show the potential Air Force officer, what role today's Air Force plays in defense of our nation, what role they can fill in today's Air Force, and finally what the Air Force offers them both today and AF-ROTC and later should they choose the Air Force as a profession after AFROTC.

AFR1111**Introduction to the United States****Air Force - Part 3 Sem Basic****Air Force ROTC 1 credit**

This course is designed to examine general aspects of air and space power through a historical perspective. We will cover the time period from the first balloons and dirigibles to the space-age global positioning systems to the Persian Gulf War. Historical examples will be provided to extrapolate the development of Air Force capabilities and missions to demonstrate the evolution of what has become today's U.S. Air Force air and space power.

AFR2130**The Foundation of the United States****Air Force - Part 2 1 credit**

This course is designed to show the potential Air Force officer, what role today's Air Force plays in defense of our nation, what role they can fill into today's Air Force, and finally what the Air Force offers them both today and AF-ROTC and later should they choose the Air Force as a profession after AFROTC.

AFR2131**Introduction to the United States****Air Force - Part 2 1 credit**

This course is designed to examine general aspects of air and space power through a historical perspective. We will cover the time period from the first balloons and dirigibles to the space-age global positioning systems to the Persian Gulf War. Historical examples will be provided to extrapolate the development of Air Force capabilities and missions to demonstrate the evolution of what has become today's U.S. Air Force air and space power.

MSL1001**First Year Basic Army ROTC 2 credits**

Introduction to Army organizations, military customs, basic marching drills, map reading, and land navigation techniques, drown-proofing, rappelling, river crossing techniques, and physical fitness. Physical fitness training and laboratory required.

MSL1002**First Year Basic Army ROTC 2 credits**

Continues basic leadership training. Additionally introduces students to officer duties, awards and decorations, individual military skills, radio communication procedures and physical fitness. Physical training and lab required.

MSL2101**Second Year Basic Army ROTC 2 credits**

Instruction in squad and platoon marching drills, military training and inspections, leadership techniques, advanced map reading, and refresher in skills learned at earlier levels. Physical fitness training and lab required.

MSL2102**Second Year Basic Army ROTC 2 credits**

Continued instruction in drill and ceremony, nuclear, biological and chemical warfare, practical land navigation, orienteering, and introduction to combat troop leading procedures. Physical fitness training and laboratory required.

MSL3201**Leadership and Problem****Solving 3 credits**

This is a leadership & problem solving course for ROTC Cadets. Students will learn to examine skills that underlie effective problem solving, analyze military missions and plan military operations, and execute squad battle drills. Prerequisite: Cadets Eligible to Contract per ROTC Enrollment Officer and/or MAN2021. (3 hr. lecture)

MSL3202**Leadership and Ethics 3 credits**

This course explores leader responsibilities that foster an ethical command climate. Students will learn to develop Cadet Leadership competencies, and apply principles and techniques of effective written and oral communication. Prerequisite: Cadets Eligible to Contract per ROTC Enrollment Officer and/or MAN2021. (3 hr. lecture)

Music

MUC1201**Composition 1 2 credits**

A two semester sequential course introducing the basic elements and construction blocks of a musical composition and analysis. In addition, students will be expected to compose original short pieces as well as have them performed in a composition recital at the end of the semester. (2 hr. lecture)

MUC1202**Composition 2 2 credits**

A two semester sequential course introducing the basic elements and construction blocks of a musical composition and analysis. In addition, students will be expected to compose original short pieces as well as have them performed in a composition recital at the end of the semester. (2 hr. lecture)

MUC2001**Experimental Composition 3 credits**

Experience with 20th century compositional techniques through listening, analysis, composition, and performance. May be repeated for credit by permission of the instructor. Prerequisite: MVK 1111. (3hrs. per week)

MUC2101**Composition Skills 3 2 credits**

This course is a continuance of the composition workshop at a more advanced level. Students receive private lessons in music composition. Students are encouraged to apply their theoretical skills to a diverse media, including writing for a variety of small ensembles. This will culminate into a mini recital at the end of the term which will also help prepare the student to effectively coordinate and organize performances of his or her own works in front of an academic and general audience. In the process the student learns to work with a variety of performers and appreciate exposure and feedback from a diverse group of people. (2 hr. lecture)

MUC2102**Composition Skills 4 2 credits**

This course is a continuance of Composition Skills 3 at a more advanced level. Students receive private lessons in music composition. Students are encouraged to apply their theoretical skills to a diverse media, including writing for a variety of small ensembles. This will culminate into a mini recital at the end of the term which will also help prepare the student to effectively coordinate and organize performances of his or her own works in front of an academic and general audience. In the process the student learns to work with a variety of performers and appreciate exposure and feedback from a diverse group of people. (2 hr. lecture)

MUC2601**Introduction to Songwriting 3 credits**

This course explores the art and craft of popular songwriting. Students will learn the basics of lyric writing, chord progressions, melodic creation, and structure as they apply to popular song. (3 hr. lecture)

MUC2617**Songwriting 2 3 credits**

This course continues the study of the art and craft of popular songwriting. Students will learn techniques of lyric writing, chord progressions, melodic creation, and structure as they apply to popular song. Prerequisite: MUC2601. (3 hr. lecture)

MUE1430**Voice Techniques 1 credit**

Class instruction designed to provide basic performance and teaching skills in voice or instruments from each area. (2 hrs. per week)

MUE1440**String Techniques 1 credit**

Class instruction designed to provide basic performance and teaching skills in voice or instruments from each area. (2 hrs. per week)

MUH2111**Survey of Music History 1 3 credits**

An introduction to the history of musical styles from antiquity through the Baroque Period by the examination of representative literature. (3 hr. lecture)

MUH2112**Survey of Music History 2 3 credits**

An introduction to the history of musical styles from the Baroque Period through the present by the examination of representative literature. Prerequisite: MUH 2111. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

MUL1010**Music Appreciation 3 credits**

The development of the various styles, forms, and idioms, in music. The emphasis is given to the student's ability to understand and enjoy music. (3 hr. lecture)

MUL2380**Jazz and Popular Music in America 3 credits**

A survey of the development of popular and jazz music with an emphasis on musical styles and outstanding artists. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

MUM1949**Co-op Work Experience 1: MUM 3 credits**

This course is designed to provide students with training in their chosen field of study (Sound Engineering or related area) through "on the job" work experience. Students are graded on the basis on documentation of learning acquired as reported by student and employer. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education office to obtain registration approval. Prerequisite: Co-op department approval. (3 hr. lecture and field experience)

MUM2030**Commercial Music Performance 3 credits**

A performance experience with concentration on repertoire, style and management of commercial engagements. Includes transcription, harmonization and show reading. Prerequisite: MUT 1112 or permission of instructor. May be repeated for credit. (3 hrs. per week)

MUM2600**Sound Recording 1 3 credits**

An introduction to techniques, practices and procedures in making eight-track recordings. The student will gain experience with acoustical balancing, editing and over-dubbing in a wide variety of sound situations. Corequisite: MUM 2600L. (3 hr. lecture)

MUM2600L**Sound Recording 1 Lab 1 credit**

Participation in MUM 2600L offers students directed "hands on" experience coinciding with lectures in MUM 2600. Corequisite: MUM 2600. Special fee. (2 hr. lab)

MUM2601**Sound Recording 2 3 credits**

This course explores advanced multi-track

recording skills and audio production techniques. Emphasis is on mixing board skills, microphone techniques, and use of outboard equipment and live 2 track recording. Prerequisite: MUM 2600. (3 hr. lecture)

MUM2601L**Sound Recording 2 Lab 1 credit**

Corequisite for MUM 2601. Advanced Sound Recording. Participation in MUM 2601L offers students directed "hands on" experience paralleling lectures in MUM 2601. Corequisite: MUM 2601. Special fee. (2 hr. lab)

MUM2604**Multi-Track Mix down Techniques 1 credit**

This course deals with the application of signal processing gear to multi-track master recording mix down to 2 track stereo mastering machines; includes editing and packaging. Prerequisites: MUM 2600, 2600L. (2 hr. lab)

MUM2605**Multi-Track Production Techniques 1 1 credit**

Multi-track production technique offers students with a background in multi-track recording an opportunity to sharpen their skills in recording, mix down editing, and audio production. Prerequisites: MUM 2600, 2600L. Must precede MUM 2606 and 2607. (1 hr. lecture)

MUM2606**Multi-Track Production Techniques 2 1 credit**

Multi-track production technique offers students with a background in multi-track recording an opportunity to sharpen their skills in recording, mix down editing, and audio production. Prerequisites: MUM 2600, 2600L, 2605. (1 hr. lecture)

MUM2623C**MIDI Electronic Music 1 2-3 credits**

This course is designed to acquaint music students with basic applications of Musical Instrument Digital Interface (MIDI) for the purpose of composition and performance and learning pre-production concepts with multi-track recording studio. Emphasis will be placed on keyboards, outboard gear, drum machines, and computer-assisted operations. Special fee. (1-2 hr. lecture; 2 hr. lab)

MUM2624C**MIDI-Electronic Music 2 2-3 credits**

This course is designed to provide music students further study in the application of the Musical Instrument Digital Interface (MIDI). Emphasis will be placed on advanced techniques in sequencing, routing, synchronization, composition and arranging. Prerequisite: MUM 2623C. Special fee. (1-2 hr. lecture; 2 hr. lab)

MUM2640L**Multi-Track Mix down Techniques 1 credit**

This course deals with the application of

signal processing gear to multi-track master recording mix down to 2 track stereo mastering machines includes editing and packaging. Prerequisites: MUM 2600, 2600L. Laboratory fee. (2 hr. lab)

MUM2700**Music Business 1 3 credits**

The fundamentals, guidelines and the use of copyright law, contracts, agencies and management, publishing, song writing, recording production and marketing. Prerequisite: One year of college-level music study or equivalent. Corequisite: MUM 2703. Special fee. (3 hr. lecture)

MUM2702**Music Business 2-Careers 3 credits**

A systematic look at career options in the Music Industry. Topics discussed include record promotion, marketing, distribution, music publishing, working in the local music industry, radio and television, film scoring, advertising, "jingle" production, teaching as a business, music merchandising, arts administration, working in the national and international scene, live performance, and recording agreements. Students will develop a written business plan for their own music business enterprise and write their resumes. This course will prepare the student for the Music Business Internship. Special fee. Corequisite: MUM 2704. (3 hr. lecture).

MUM2703**Music Business 3-Computer 3 credits**

This course will provide an overview, and hands-on experience, with a wide variety of computer-based music technology and cross-platform software applications used within the Music Business environment. Software studies include Microsoft Word (word-processing), Microsoft Excel (spreadsheet), Microsoft PowerPoint (presentation), and Adobe Photoshop (scanning, photo touch-up). Students will present projects in class. Prerequisite: Basic computer experience with the Macintosh and/or Windows 95 operating systems. Special fee. (6 hr. lab)

MUM2704**Music Business 4-Computer Applications 3 credits**

This course will provide an overview, and hands-on experience, with computer-based music technology and cross-platform software applications used within the Music Business environment. Software studies include Adobe Photoshop, Adobe PageMaker (page layout), Quicken (financial record keeping), and Adobe Page Mill (Web page development). Students will create their own Web site, useful for promotion and networking in their own Music Business enterprise. Students will present projects in class. Special fee. Prerequisite: MUM 2703. (6 hr. lab)

MUM2949**Co-op Work Experience 2:****MUM 3 credits**

This course is designed to continue training for a second term in a student's field of study through work experience in sound engineer-

ing or related area. Students are graded on the basis on documentation of learning acquired as reported by student and employer. All students must contact the Cooperative Education office to obtain registration approval. Prerequisite: Co-op approval and completion of MUM 1949 Co-op Work Experience. (3 hr. lecture and field experience)

MUN1120**Concert Band 1-3 credits**

The opportunity for performing concert band literature through participation in the College Band. Emphasis is on music originally composed for bands. It may be repeated for credit. (2-6 hr. lab)

MUN1210**Symphony Orchestra 1-3 credits**

An opportunity in performing and reading orchestra literature through participation in the College Orchestra. This course is open to all students. May be repeated for credit. (2-6 hr. lab)

MUN1310**College Choir 1 credit**

An opportunity for participation in the College Choir. Repertoire includes a wide range of music literature from various periods. This course is open to all students. May be repeated for credit. (3 hrs. per week)

MUN1340**Chamber Singers 1 credit**

An opportunity for talented singers to study and perform the smaller choral works, with special emphasis on the madrigal. This course is open to all students with the permission of the instructor. May be repeated for credit. (3 hrs. per week)

MUN1391**Gospel Ensemble 1 credit**

Provides an opportunity to study and perform music of Black composers with emphasis placed on contemporary gospel idioms. This course is open to all students with the permission of the instructor. May be repeated for credit. (3 hrs. per week)

MUN1420**Chamber Music, Woodwind Ensemble 1-3 credits**

A performing group introducing students to literature for small woodwind ensembles. Chamber music from Baroque to modern is covered. This course is open to all students with the permission of the instructor. May be repeated for credit. (3-9 hrs. per week)

MUN1430**Chamber Music, Brass Ensemble 1-3 credits**

A performing group providing experience with brass literature from the five major periods. This course is open to all students with the permission of the instructor. May be repeated for credit. (3-9 hrs. per week)

MUN1440**Percussion Ensemble 1-3 credits**

An opportunity for percussion majors to gain

experience in ensemble playing. Open to all percussion students with the permission of the instructor. May be repeated for credit (3-9 hrs. per week)

MUN1460**Chamber Music, Strings and Mixed Ensemble 1-3 credits**

The performance of ensemble literature involving strings or other instruments in combination with strings. Particular attention given to literature of the five major periods. Open to all students with the permission of the instructor. May be repeated for credit. (3-9 hrs. per week)

MUN1480**Guitar Ensemble 1-3 credits**

Extended rehearsal schedule provides acquisition of specialized ensemble performance techniques. Literature includes classical and popular. May be repeated for credit or taken for variable (1-3) credit by permission of instructor. (3-9 hrs. per week)

MUN1710**Jazz Workshop 1-3 credits**

A course providing the opportunity for performing both modern big-band jazz as well as experience in smaller combo groups. This course is open to all students with permission of the instructor. May be repeated for credit. (3-9 hr. lab)

MUN1720**Vocal Jazz/Pop Ensemble 1 credit**

The study and performance of jazz and commercial music for vocal ensemble, including improvisation. May be repeated for credit. (3 hrs. per week)

MUN2030**Performance Lab 1 credit**

Lab held in conjunction with weekly concert hour performance. This course is designed to provide music majors with the varied musical experiences necessary to broaden a musician's background. May be repeated for credit. (1 hr. lecture)

MUN2341**Vocal Ensemble 2-3 credits**

An in-depth performance experience including classical and popular choral literature. Extensive public performance schedule provides professional training. Prerequisite: permission of instructor. May be repeated for credit. (4-6 hr. Lab)

MUN2410**String Ensemble 2-3 credits**

Extended rehearsal schedule provides acquisition of specialized ensemble performance techniques. Literature includes classical and popular. May be repeated for credit. By permission of instructor. (4-6 hr. Lab)

MUN2473**Early Music Consortium 1 credit**

The performance of chamber music to introduce the instruments, literature, styles, and performance practices of the music of the middle Ages, Renaissance, and Baroque peri-

ods. Enrollment requires the instructor's permission and selectivity is dependent upon the instrumentation required and the instruments available. Prerequisite: by audition or permission of instructor. May be repeated for credit. (3 hrs. per week)

MUN2711
Jazz Ensemble 2-3 credits

A performing group providing advanced skill in reading and interpreting jazz literature. Prerequisite: Permission of instructor. May be repeated for credit. (4-6 hr. Lab)

MUN2712
Studio Jazz 1 credit

The class will rehearse standard and original tunes commonly played by small jazz ensembles. The student will develop the basic skills required of a musician performing with such a group, and will develop an understanding of the musical concepts involved in the performance of this style of music. A small ensemble would consist of a rhythm section plus 1-4 horns. The class will perform jazz tunes including, but not limited to, those based on the 12-bar blues form, I Got Rhythm chord changes, II-V-I chord changes, and the modes of major and minor scales. Concepts will include the various approaches to soloing, the use of chord substitutions, chord-scale relationships, playing in correct rhythmic time, and the use of dynamics and rhythmic variation. Group concepts discussed will include rhythm section function, musical interplay between soloist and rhythm section, and the creation of introductions, interludes, and endings. May be repeated for credit. (3 hr. lecture)

MUO1501
Opera Workshop 1-3 credits

The study and performance of scenes from standard operas and musical comedies with special attention to the fundamentals of stage movement, acting, and characterization as related to musical production. This course is open to all students. May be repeated for credit. (3-9 hr. lab)

MUS1211
Diction in Singing 1 2-3 credits

Diction in Singing 1 will introduce the student to the International Phonetic Alphabet and instruct the student to the proper diction for English to the standard Vocal Repertoire. Emphasis will be placed on practical application through actual performances by students of assigned and individually selected songs. (2-3 hr. lecture)

MUS1241
Diction in Singing 2 2-3 credits

Diction in Singing 2 will introduce the student to the International Phonetic Alphabet and instruct the student in the proper diction for Italian in the standard Vocal Repertoire. Emphasis will be placed on practical application through actual performance by students of assigned and individually selected songs. Prerequisite: MUS 2231. (2-3 hr. lecture)

MUS1935
Piano Seminar 1-3 credits

Extended rehearsal schedule provides acquisition of specialized ensemble and accompanying performance techniques. Literature includes classical and popular. May be repeated for credit or taken for variable (1-3) credits by permission of instructor. (7.5 hrs. per week)

MUT1001
Fundamentals of Music Theory 3 credits

Basic music reading, notation, scales, intervals, triads, keys, rhythm, and meter. For students with little or no previous musical experience. Corequisite: MUT 1003. (3 hr. lecture)

MUT1003
Fundamentals of Music Theory

Lab 1-3 credits
The development of basic aural skills through sight singing and ear training exercises. Corequisite: MUT 1001. (2-6 hrs. per week)

MUT1111
Theory 1 3 credits

The techniques of writing four-part chord progressions using root position and inversions of the primary and secondary triads and the dominant and supertonic seventh; also, non-harmonic tones, melodic writing, and an introduction modulation. Prerequisite: MUT 1001 or passing score on departmental placement exam; corequisites: MUT1241. (3 hr. lecture)

MUT1112
Theory 2 3 credits

The techniques of writing four-part chord progressions using root position and inversions of the primary and secondary triads and the dominant and supertonic seventh; also, non-harmonic tones, melodic writing, and an introduction modulation. Prerequisite: MUT 1111 or passing score on departmental placement exam; corequisites: MUT 1242. (3 hr. lecture)

MUT1241
Sight singing & Ear Training

1 Year 1-2 credits
The development of aural skill by means of rhythmic and melodic dictation and sight singing. Prerequisite: MUT 1241 for 1242; corequisites: MUT 1111, 1112. (2-4 hrs. per week)

MUT1242
Sight singing & Ear Training

2 Year 1-2 credits
The development of aural skills by means of rhythmic and melodic dictation and sight singing. Prerequisite: MUT 1241 for 1242; corequisites: MUT 1111, 1112. (2-4 hrs. per week)

MUT2116
Theory 3 3 credits

The continuation of modulation and the presentation of diatonic sevenths, secondary dominants, altered chords, augmented and Neapolitan sixths; melodic and harmonic analysis of selected works; ninth, eleventh,

and thirteenth chords, and instrumental part writing. Prerequisites: MUT 1112; corequisites: MUT 2246. (3 hr. lecture)

MUT2117
Theory 4 3 credits

The continuation of modulation and the presentation of diatonic sevenths, secondary dominants, altered chords, augmented and Neapolitan sixths; melodic and harmonic analysis of selected works; ninth, eleventh, and thirteenth chords, and instrumental part writing. Prerequisites: MUT 2116; corequisites: MUT 2247. (3 hr. lecture)

MUT2238
Introduction to Jazz Keyboard

Harmony 1 credit
Jazz harmonic progression as related to music arranging. Includes jazz harmonization of melodic lines, chord symbol interpretation and chord construction. Prerequisite: MVK 1111 or permission of instructor; corequisite: MUT 2351. Special fee. (2 hrs. per week)

MUT2239
Jazz Keyboard Harmony 2 1 credit

Experience with extended and altered harmonic progression. Will include harmonic analysis and bitonal structures. Prerequisite: MUT 2238; corequisite: MUT 2352. (2 hrs. per week)

MUT2246
Sight singing and Ear

Training 1 1-2 credits
Develops aural and visual skills by means of rhythmic, melodic and harmonic dictation and sight singing. Emphasis is on chromatic materials. Prerequisites: MUT 1242 for 2246, MUT 2246 for 2247; corequisites: MUT 2116, 2117. (2-4 hrs. per week)

MUT2247
Sight singing and Ear

Training 2 1-2 credits
Develops aural and visual skills by means of rhythmic, melodic and harmonic dictation and sight singing. Emphasis is on chromatic materials. Prerequisites: MUT 1242 for 2246, MUT 2246 for 2247; corequisites: MUT 2116, 2117. (2-4 hrs. per week)

MUT2351
Introduction to Popular Music

Arranging 3 credits
Provides basic experience with instrumental, ranges, transpositions, two- and three-part writing. Prerequisite: MUT 1112 or permission of instructor; corequisite: MUT 2238. (3 hrs. per week)

MUT2352
Popular Music Arranging 2 3 credits

A continuation of Introduction to Popular Music Arranging with the addition of four-, five- and six-part writing. Concentration on scoring techniques. Prerequisite: MUT 2351; corequisite: MUT 2239. (3 hrs. per week)

MUT2641**Introduction to Jazz****Improvisation 1** 3 credits

A performance experience with concentration on scales, rhythmic patterns, chord progression, and blues forms. Prerequisite: MVK 1111 or permission of instructor; corequisite: MUT 2351. Special fee. (3 hrs. per week)

MUT2642**Jazz Improvisation 2**

3 credits

A continuation of Introduction to Jazz Improvisation 1 with the introduction to modal improvisation, jazz structures, and complex harmonic progressions. Prerequisite: MUT 2641 (3 hrs. per week)

MVB1011**Pre-Applied Trumpet**

2 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fees. (1 hr. per week)

MVB1012**Pre-Applied French Horn**

2 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fees. (1 hr. per week)

MVB1013**Pre-Applied Trombone**

2 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fees. (1 hr. per week)

MVB1014**Pre-Applied Tuba**

2 credits

Private instruction for those music students who are not prepared to perform at the college music major level. Special fees. (1 hr. per week)

MVB1015**Pre-Applied Tuba**

2 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fees. (1 hr. per week)

MVB1211**Trumpet Secondary Instrument****First Year** 1 credit

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB1212**French Horn Secondary Instrument First Year**

1 credit

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB1213**Trombone Secondary Instrument****First Year** 1 credit

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB1214**Baritone Horn Secondary Instrument****First Year** 1 credit

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB1215**Tuba Secondary Instrument****First Year** 1 credit

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB1311**Trumpet Principal Instrument****First Year** 2-3 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB1312**French Horn Principal Instrument****First Year** 2-3 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB1313**Trombone Principal Instrument****First Year** 2-3 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB1314**Baritone Horn Principal Instrument****First Year** 2-3 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB1315**Tuba Principal Instrument****First Year** 2-3 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB2221**Trumpet - Secondary Instrument****Second Year** 1 credit

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB2224**Baritone Horn Secondary Instrument****Second Year** 1 credit

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB2225**Tuba Secondary Instrument****Second Year** 1 credit

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB2321**Trumpet Principal Instrument****Second Year** 2-3 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB2322**French Horn Principal Instrument****Second Year** 2-3 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB2323**Trombone Principal Instrument****Second Year** 2-3 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB2324**Baritone Horn Principal Instrument****Second Year** 2-3 credits

MVK1012

Pre-Applied Harpsichord 2 credits
Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVK1013

Pre-Applied Organ 2 credits
Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVK1111

Class Piano 1 1 credit
The secondary area of piano with emphasis on sight-reading, melody harmonization, and ensemble playing. Required of all music students except piano majors. May be repeated for credit. (2 hrs. per week)

MVK1112

Class Piano 2 1 credit
A continuation of MVK 1111. Prerequisite MVK 1111 or placement by exam. (2 hr. lab)

MVK1211

Piano Secondary Instrument
First Year 1 credit
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVK1212

Harpichord Secondary Instrument
First Year 1 credit
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVK1213

Organ Secondary Instrument
First Year 1 credit
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVK1311

Piano Principal Instrument
First Year 2-3 credits
Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVK2121

Class Piano 3 1 credit
Further development of elementary keyboard techniques and musicianship, enhancing skills previously developed: Prerequisite MVK 1112 or placement by exam. (2 hr. lab)

MVK2122

Class Piano 4 1 credit
A continuation of MVK 2121. Prerequisite MVK 2121 or placement by exam. May be repeated for credit. (2 hr. lab)

MVK2221

Piano Secondary Instrument
Second Year 1 credit
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVK2222

Harpichord Secondary Instrument
Second Year 1 credit
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVK2223

Organ Secondary Instrument
Second Year 1 credit
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVK2321

Piano Principal Instrument
Second Year 2-3 credits
Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVK2322

Harpichord Principal Instrument
Second Year 2-3 credits
Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVO1214

Recorder Secondary Instrument
First Year 1 credit
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVP1011

Pre-Applied Percussion 2 credits
Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVP1211

Percussion Secondary Instrument
First Year 1 credit
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVP1311

Percussion Principal Instrument
First Year 2-3 credits
Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVP2221

Percussion Secondary Instrument
Second Year 1 credit
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVP2321

Percussion Principal Instrument
Second Year 2-3 credits
Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVS1011

Pre-Applied Violin 2 credits
Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVS1012

Pre-Applied Viola 2 credits
Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVS1013

Pre-Applied Cello 2 credits
Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVS1014

Pre-Applied String Bass 2 credits
Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVS1015

Pre-Applied Harp 2 credits
Private instrumental for those music students who are not prepared to perform at the col-

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVV1111
Voice Class **1 credit**
Designed for non-music students providing class instruction in the elective area of voice. Prerequisite: MUE 1430. May be repeated for credit. (2 hrs. per week)

MVV1211
Voice Secondary Instrument
First Year **1 credit**
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVV1311
Voice Principal Instrument
First Year **2-3 credits**
Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVV2221
Voice Secondary Instruments
Second Year **1 credit**
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVV2321
Voice Principal Instrument
Second Year **2-3 credits**
Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW1011
Pre-Applied Flute **2 credits**
Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVW1012
Pre-Applied Oboe **2 credits**
Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVW1013
Pre-Applied Clarinet **2 credits**
Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVW1014
Pre-Applied Bassoon **2 credits**
Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVW1015
Pre-Applied Saxophone **2 credits**
Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVW1211
Flute Secondary Instrument
First Year **1 credit**
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW1212
Oboe Secondary Instrument
First Year **1 credit**
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW1213
Clarinet Secondary Instrument
First Year **1 credit**
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW1215
Saxophone Secondary Instrument
First Year **1 credit**
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW1311
Flute Principal Instrument
First Year **2-3 credits**
Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW1312
Oboe Principal Instrument
First Year **2-3 credits**
Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW1313
Clarinet Principal First Year **2-3 credits**
Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW1314
Bassoon Principal Instrument
First Year **2-3 credits**
Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW1315
Saxophone Principal Instrument
First Year **2-3 credits**
Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW2221
Flute Secondary Instrument
Second Year **1 credit**
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW2223
Clarinet Secondary Instrument
Second Year **1 credit**
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW2224
Bassoon Secondary Instrument
Second Year **1 credit**
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW2225
Saxophone Secondary Instrument
Second Year **1 credit**
Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW2321
Flute Principal Instrument
Second Year **2-3 credits**
Private instruction in a principal instrument

or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW2322**Oboe Principal Instrument****Second Year****2-3 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW2323**Clarinet Principal Instrument****Second Year****2-3 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW2325**Saxophone Principal Instrument****Second Year****2-3 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

Nuclear Medicine

NMT1002**Introduction to Nuclear Medicine****2 credits**

This course is designed to provide an introduction to the field of Nuclear Medicine. Students will learn about the history of the profession, terminology, hospital and patient safety, infection control, patient assessment, accessing and utilizing the patients' medical record, critical thinking, Nuclear Medicine protocols, and patient education. Prerequisites: CHM 1033, 1033L; co-requisite: NMT 1002L. (2 hr. lecture)

NMT1002L**Introduction to Nuclear Medicine Laboratory****1 credit**

The student will learn the fundamentals of clinical nuclear medicine before going to the hospital and/or clinical site for actual patient interaction. The student will be introduced to radio-pharmacology, radiopharmaceutical chemistry, and characterization of radiopharmaceuticals, localization, and FDA approval process. Prerequisites: CHM1033, 1033L. Corequisites: NMT 1002, 1312, 2613. (2 hr. lab)

NMT1312**Radiation Protection****2 credits**

This course covers all local, state and federal regulations related to Nuclear Medicine.

Students will learn the appropriate protection procedures to limit exposure, the performance of area surveys and wipe tests, the proper decontamination procedures, the disposal of radioactive waste procedures, and personnel monitoring of radiation exposure. Corequisites: NMT 1002L, 1002, 2613. (2 hr. lecture)

NMT1713**Nuclear Medicine****Procedures 1****2 credits**

This course will include the imaging parameters necessary to obtain images for the basic procedures performed in a Nuclear Medicine department. Students will learn about imaging procedures related to the following systems: skeletal, central nervous, cardiovascular genitourinary, respiratory and gastrointestinal. Instrumentation necessary to produce the required images as well as patient management during the procedures will be addressed. Prerequisites: BSC 2085, 2085L, 2086, 2086L, CHM1033, 1033L; corequisites: NMT 2130, 2534, 2804C. (2 hr. lecture)

NMT2102**Nuclear Medicine****Administration****2 credits**

The student will learn the administrative duties required of a nuclear medicine technologist. Areas covered include patient scheduling, radioisotope ordering; scheduling and testing; communication; patient and clinician satisfaction. Prerequisites: NMT 2130, 2534; corequisites: NMT 2723, 2573, 2814C. (2 hr. lecture)

NMT2130**Nuclear Medicine****Pharmacology****2 credits**

Students will learn how to maintain radiopharmaceutical laboratory records and materials, obtain a generator equate, prepare radiopharmaceuticals and perform quality control tests, as well as dispose of radioactive waste appropriately. The ordering of pharmaceuticals in appropriate dosage and effective time frames will also be included. Prerequisites: NMT 1002, 1002L, 1312, 2613; corequisites: NMT 1713, 2534, 2804C. (2 hr. lecture)

NMT2534**Nuclear Medicine Instruction****2 credits**

This course will integrate and correlate the principles of electrical and nuclear physics associated with the operation and calibration of radiation detection devices employed in nuclear medicine. The student will learn the various types of devices that are used to provide information from which the diagnostic images are obtained. Prerequisites: NMT 1002, 1002L, 1312, 2613 and PHY1004; corequisites: NMT 1713, 2130, 2804C. (2 hr. lecture)

NMT2573**Nuclear Medicine QA/QC****2 credits**

The student will learn to perform quality assurance and quality control testing of imaging systems; calibrate and operate scintillation counters; calibrate and operate gas-filled detectors; and perform quality assurance testing of routine imaging and assay procedures. Pre-

requisites: NMT 1713, 2534, 2613; co-requisites: NMT 2102, 2814C, 2723. (2 hr. lecture)

NMT2613**Nuclear Medicine Physics****2 credits**

Students will learn the basic concepts of atomic, nuclear and radiation physics with an emphasis on the interactions of radiation with matter. Alpha, beta, and gamma sources are explained in this course. Prerequisites: MAC 1105, PHY 1004; corequisites: NMT 1002, 1002L, 1312. (2 hr. lecture)

NMT2723**Nuclear Medicine****Procedures 2****2 credits**

A continuation of Nuclear Medicine Procedures 1, students will learn the imaging parameters necessary to obtain images as well as the use of instrumentation necessary to produce the required images performed in a nuclear medicine department. Exposure to patient management during the procedures will also be addressed. Prerequisites: NMT 1713, 2804C; corequisites: NMT 2573, 2814C. (2 hr. lecture)

NMT2804C**Nuclear Medicine Clinic Practice & Conference 1****6 credits**

This course will introduce the student to the fundamentals of clinical nuclear medicine primarily through hospital involvement. The student will learn practical experience in a Nuclear Medicine department by performing the principles taught in class. Prerequisites: NMT 1002L, 1002, 1312, 1713. (21 hr. clinic)

NMT2814C**Nuclear Medicine Clinic Practice & Conference 2****6 credits**

This course is a continuation of NMT 2804C Clinic1 and will provide the student the opportunity to participate in the fundamentals of clinical nuclear medicine in the hospital involvement. The student will learn practical experience in a Nuclear Medicine department by performing the principles taught in class. Prerequisites: NMT 2804C, 2130, 2534, 2613. (21 hr. clinic)

NMT2824C**Nuclear Medicine Clinic 3****7 credits**

This is the final course in the series of three clinical courses. Students will learn to apply all didactic competencies in the Nuclear Medicine department setting, as well as perform all procedures from the two Nuclear Medicine Procedures courses with minimal supervision. The ARRT Competency Requirements must be completed in this course. Prerequisites: NMT 2814C. (24.5 hr. clinic)

NMT2932**Nuclear Medicine Seminar****2 credits**

The student will learn to incorporate all theory related to the production of a nuclear medicine image. The student will also learn about radiation protection, instrumentation, physics, pharmacology, and Quality Assurance/Quality Control. Prerequisites: NMT 1312, 2534, 2573, 2613; co-requisite: NMT2824C. (2 hr. lecture)

Nursing

NSP3685

End-of-Life Nursing Care 3 credits

The purpose of this course is to provide healthcare professionals an overview of End-of-Life palliative and hospice care. Students will learn pain and symptom management, ethical and cultural considerations, assess psychosocial and emotional concerns of the patient and family, and describe the care of the patient during the last hours. Course is restricted to BSN students, requires departmental permission. (3 hr. lecture)

NUR1002

Transition to Professional Nursing 6 credits

This course introduces students with prior healthcare education to the nursing profession, nursing role, nursing process and the implementation of health-promoting activities to meet patient needs. Students will learn the nurse's role in meeting short and long term needs of the patient through preventive, therapeutic and palliative care. Students will also explore nursing care of the adults with moderate alterations in health within a body systems framework. Prerequisite: Admission to the School of Nursing. Co-requisites: NUR 1002L, 1142. Special fee. (6 hr. lecture)

NUR1002L

Transition to Professional Nursing Laboratory 4 credits

This lab introduces students with prior health care education to the nursing profession. Students will learn the nurse's role in meeting short and long term needs of the patient through preventive, therapeutic and palliative care. Students will also explore nursing care of the adults with moderate alterations in health within a body systems framework. Prerequisite: Program Admission; co-requisites: NUR 1002, 1142. (8 hr. lab)

NUR1025

Fundamentals of Nursing 3 credits

This course provides an introduction to the nursing profession. Students will learn the roles basic to nursing practice, nursing process, and how nurses are involved in health promoting activities to meet client needs. Prerequisite: Program Admission; co-requisites: NUR 1025C, 1060C, and 1142. Special fee. (3 hr. lecture)

NUR1025C

Fundamentals of Nursing Skills Lab 2 credits

Students will learn of the opportunities for the explanation, demonstration, and practice of care provider activities essential to the basic practice of nursing. Learning experiences are provided in the skills laboratory. Prerequisite: Program Admission; corequisites: NUR 1025, 1060C, 1142. Special fee. (1 hr. lecture; 2 hr. lab)

NUR1025L

Fundamentals of Nursing Clinical Lab 2 credits

This course provides an introduction to the profession of nursing. Students will learn the roles basic to nursing practice and opportunities to apply the nursing process in selected clinical experiences. The emphasis is on health promoting activities to meet client needs in a variety of settings including community based experiences. Prerequisite: Program Admission; corequisites: NUR 1025. Special fee. (6 hr. clinical lab)

NUR1060C

Adult Health Assessment 2 credits

This course is designed to provide students with the necessary skills to perform an in-depth nursing history and a complete physical examination on an adult client. The focus will be on clients with minimal or no alterations in their health state. Students will be introduced to and will demonstrate the techniques used in physical examination. Prerequisite: Admission to the School of Nursing; Corequisites: NUR 1025, 1025L, 1142. Special fee. (2 hr. lecture)

NUR1141

Nursing Math & Pharmacology 2 credits

Students will learn about medications and their effects on different body systems. The conceptual and mathematical operations necessary for safe and effective administration of intravenous medications, preparing medications that come in powdered form and adjusting medication administration based on medical protocols are discussed. Prerequisites: NUR 1025, 1025C, 1025L, 1060C, 1142; corequisites: NUR 1211, 1211L. (2 hr. lecture)

NUR1142

Introduction to Nursing Math & Pharmacology 1 credit

Students will learn concepts of medications including history, nomenclature, sources of drug information, federal drug laws and standards, medication classifications, pharmacokinetics, pharmacodynamics, variables affecting medication actions and effects, and methods of delivery. Prerequisites: Program Admission; co-requisites: NUR 1025, 1025C, 1060C or NUR 1002, 1002L. (1 hr. lecture)

NUR1211

Medical-Surgical Nursing 4 credits

This course provides an introduction to the adult nursing care. Students will learn the nurse's role in meeting the short and long term needs of the client and community through preventive, therapeutic and palliative care are discussed. Prerequisites: NUR 1025, 1025C, 1060C, 1142; corequisites: NUR1211L, 1214C. Special fee. (4 hr. lecture)

NUR1211L

Medical Surgical Nursing Clinical Lab 4 credits

Students will learn how to apply concepts of adult health nursing. Experiences in both in-patient and community settings

will be provided. Students are encouraged to participate in projects emphasizing preventive aspects of nursing care. Prerequisites: NUR 1025, 1025C, 1025L, 1060C, 1142; corequisites: NUR 1211, 1214C. Special fee. (192 Hr. Clinical Lab)

NUR1214C

Medical Surgical Nursing Skills Lab 1 credit

Students will learn the opportunities for the explanation, demonstration, and practice of skills related to adult health nursing. Learning experiences are provided in the School of Nursing Skills Laboratory. Prerequisites: NUR 1025, 1025C, 1025L, 1060C, 1142; corequisites: NUR 1211, 1211L. Special fee. (.5 hr. lecture; 1 hr. lab)

NUR2212

Advanced Medical-Surgical Nursing 3 credits

This course explores the medical surgical nursing care of clients with complex alterations in health. Students will learn advanced concepts in medical surgical nursing which is discussed within a body systems framework focusing on the nurse's role in meeting the needs of the client, family, and community. Prerequisites: NUR 2310, 2310L, 2420, 2420L, 2680L; corequisites: NUR 2212L. Special fee. (3hr. lecture)

NUR2212L

Advanced Medical-Surgical Nursing Clinical 3 credits

This course provides students with the opportunity to apply advanced concepts of medical surgical nursing. Students will learn to provide health care delivery in both in-patient and community settings. Students will focus on the nurse's role in meeting the needs of the client, family and community. Students are encouraged to actively participate in projects assisting clients in preventive care and maintenance of health. Prerequisites: NUR 2310, 2310L, 2420, 2420L, 2680L; Corequisites: NUR 2212L. Special fee. (144 hr. clinical)

NUR2310

Pediatric Nursing 2 credits

This course provides a family centered approach to the nursing care of pediatric clients and their families. Students will learn the nurse's role in meeting the short and long term needs of the pediatric client, family, and community through preventative, therapeutic and palliative care, with recognition for the multicultural aspects of client needs. Prerequisites: 1211, 1211L, 1214C or 1002, 1002L; 1142; corequisites: NUR 2310L, 2420, 2420L, 2680L. Special fee. (2 hr. lecture)

NUR2310L

Pediatric Nursing Clinical Lab 1 credit

This course allows the student to apply the nursing process to the care of clients in selected pediatric clinical settings. Students will learn to observe cultural diversity and implement care to the pediatric client, family, and community

through preventive, therapeutic and palliative measures. Prerequisites: NUR 1211, 1211L, 1214C or 1002, 1002L; 1142. Corequisites: NUR 2310, 2420, 2420L, 2680L. Special fee. (48 hr. Clinical)

NUR2420
Obstetrical Nursing 2 credits

This course provides a family centered approach to the nursing care of obstetrical clients and their families. Students will learn to assess the pregnant client, to implement caring behaviors for the laboring client, educate the postpartum client, and manage the care of the newborn and collaboration of care for the high risk client. Prerequisites: NUR 1211, 1211L, 1214C or 1002, 1002L, 1142. Corequisites: NUR 2310, 2310L, 2420L, 2680L. Special fee. (2 hr. lecture)

NUR2420L
Obstetrical Nursing
Clinical Lab 1 credit

This course provides an introduction to obstetrical nursing clinical practice. Students will learn to apply the nursing process to the care of clients in selected obstetrical clinical settings. Prerequisites: NUR 1211, 1211L, 1214C or 1002, 1002L; 1142. Corequisites: NUR 2310, 2310L, 2420, 2680L. Special fee. (48 hr. clinical)

NUR2520
Psychiatric Nursing 2 credits

This course introduces students to the basic concepts of psychiatric nursing. Students will learn to provide care in in-patient and community settings, focusing on the nurse's role in meeting the needs of the patient, family, and the community. Prerequisites: NUR 1211, 1211L, 1214C or 1002, 1002L; 1142. Co-requisites: NUR 2520L. Special fee. (2 hr. lecture)

NUR2520L
Psychiatric Nursing
Clinical Lab 2 credits

This course provides the student opportunities to apply concepts of psychiatric nursing. Students will learn psychiatric procedures for both in-patient and community settings, focusing on the nurse's role on meeting the needs of the client, family, and community. Students actively participate in projects assisting clients in preventative care and maintenance of mental health. Prerequisites: NUR 1211, 1211L, 1214C or 1002, 1002L; 1142. Co-requisites: NUR 2520. Special fee. (96 hr. clinical)

NUR2680L
Community Health
Nursing Lab 1 credit

This laboratory course assists the students in applying knowledge of community health resources. Students will learn to manage community health resources to support the delivery of care to the childbearing/child-rearing families. Special emphasis is placed on the understanding of cultural influences on the

health practices and beliefs within the family. Prerequisites: NUR 1211, 1211L, 1214C or 1002, 1002L; co-requisites: NUR 2310, 2310L, 2420, 2420L.0L. Special fee. (48 hr. clinical)

NUR2811C
Professional Nursing
Leadership 4-5 credits

This course provides the student with the theoretical and clinical knowledge necessary for actualization of the role of the registered professional nurse. Students will learn how to apply the role of the registered nurse with emphasis on delegation and supervision. Prerequisites: NUR 2310, 2310L, 2420, 2420L, 2680L. Laboratory fee. A.S. degree credit only. (2 hr. lecture 9 hr. lab)

NUR3045
Culture in Nursing Practice 3 credits

This course focuses on the use of the nursing process to provide culturally competent health care, including assessing and identifying cultural practices, values and beliefs that affect nursing practice. The student will be introduced to the components of cultural competence, which includes awareness, sensitivity, and brokering interventions. This course will incorporate culturally relevant planning, implementation and evaluation. Minimum grade of "C" or better required. Corequisite: NUR 3805 (3hr. lecture)

NUR3069
Advanced Health Assessment 3 credits

This course will focus on the assessment of individuals, families, and culturally diverse communities throughout the life span. The course will also include relevant theories, evidenced based practice concepts for the comprehensive assessment and management of health throughout the family life cycle. The course includes lecture, discussion and demonstration of history-taking and an integrated physical assessment. Minimum grade of "C" or better required. Corequisite NUR 3846. (3 hr. lecture)

NUR3165
Nursing Research 3 credits

This course provides a basic understanding of the steps and processes of qualitative and quantitative nursing research, with an emphasis on the development of the basic skills of analyzing research findings and how they can be incorporated and applied to clinical practice. Ethical and theoretical issues will be discussed. Minimum grade of "C" or better required. Prerequisite: Admission to the program. (3 hr. lecture)

NUR3178
Complementary and Alternative
Health Care 3 credits

This is an upper division course in complementary and alternative healthcare. Students will learn holistic aspects of care while evaluating complementary and alternative healthcare in diverse populations across the lifespan and around the globe. The course addresses different complementary and alter-

native treatment practices through evidence-based research. (3 hr. lecture)

NUR3289
Foundations of Gerontology 3 credits

This course focuses on the special healthcare needs of the geriatric population. Students will learn the physical, physiological, psychosocial and gero-pharmacologic implications related to aging. The trends in the changing demographics and the social consequences of aging will be identified. Established geriatric assessment and evaluative tools will also be discussed. Prerequisite: Admission to the BSN - RN program N9100. (3 hr. lecture)

NUR3674
Faith Based Community
Nursing 3 credits

This course will provide education in faith-based community nursing to registered nurses. Students will learn the skills needed to integrate the care of mind, body, and spirit in faith-based communities. The intentional care of the spirit is part of the process in preventing and minimizing illness in a faith-based community. Prerequisite: RN with at least 2 years of experience and baccalaureate degree standing. Departmental permission required. (3 hr. lecture)

NUR3805
Transition to Professional
Nursing 3 credits

This course focuses on the transition of nursing students from an associate degree program to the role of the BSN nursing graduate. The BSN role builds on concepts and experiences previously introduced. The history and evolution of the nursing profession, ethical imperatives, and current trends and issues impacting professional practice in an evolving healthcare delivery environment are foundations for the development of the professional nurse. The role of the BSN prepared graduate focuses on utilization of evidenced-based nursing practices and advanced leadership and management skills in a variety of settings within a global community. Minimum grade of "C" or better required. Corequisite: NUR 3045. (3 hr. lecture)

NUR3826
Ethical Issues in Health Care
and the Environment 3 credits

This course is designed to acquaint students with current ethical issues in health care and the environment. Students will learn to analyze issues/dilemmas using ethical decision making models. Students will learn the process involved in advocating for change in the health care setting and the global environment. Prerequisites: PHI 2604 or NUR 3041. (3 hr. lecture)

NUR3846
Foundations of Professional
Nursing 3 credits

This course explores the evolution of professional nursing knowledge and theories. Concepts are analyzed in relation to conceptual theoretical frameworks within Nursing. Stu-

dents will integrate philosophies and theories in the delivery of healthcare and theories are introduced as a foundation for the delivery of healthcare in a multicultural/global environment. Minimum grade of "C" or better required. Corequisite: NUR 3069. (3 hr. lecture)

NUR4636**Community Health Nursing 3 credits**

This course focuses on the holistic aspects of community nursing care applied to diverse global populations across the lifespan. The course introduces students to community nursing practice and formulates a paradigm shift from individual patient's to the global community, addressing the history, evolution, theoretical framework, and purpose of community health nursing practice with an introduction to epidemiological principles, concepts of community assessment, health promotion, maintenance and education. The course involves the analysis of current knowledge and practice to illness prevention, health promotion, health restoration, community education and empowerment. Minimum grade of "C" or better required. Prerequisite: NUR 3069, 3805; corequisite: NUR 4636L. (3 hr. lecture)

NUR4636L**Community Health Nursing****Practicum 3 credits**

This course focuses on the clinical application of Community Health Nursing Theory. Students will utilize the nursing process in the delivery of healthcare within the community environment. Students will assess the individual, family, and/or community, develop a plan of care, and deliver care to an individual, family and/or community within a multicultural environment. Minimum grade of "C" or better required. Corequisite: NUR 4636. (144 hr. practicum)

NUR4667**Globalization of Nursing****Practice 3 credits**

This course focuses on world health issues that influence international health practices with an emphasis on preparing the professional nurse to become a major contributor to the international healthcare team. The course will include economic, political, social, and demographic issues that affect health care systems of select countries and address the role of nurses in the delivery of global health care. Minimum grade of "C" or better required. Prerequisite: NUR 3069, 3805; corequisite: NUR 4827. (3 hr. lecture)

NUR4827**Leadership and Management****Theory 3 credits**

This is an introductory course to leadership and management concepts and theories needed in today's health care environment. The course focuses on unique and innovative approaches to delegation, decision-making, budgeting, quality improvement, evidence-based practice, and population-based practice. Minimum grade of "C" or better required. Corequisite: NUR 4667. (3 hr. lecture)

NUR4945C**Advanced Concepts****Practicum 3 credits**

This course is a capstone of prior learning, including evidenced-based interventions, theoretical concepts, and critical thinking skills, with an emphasis on the application to professional nursing practice. The focus is on multicultural populations which are experiencing physical, psychological, social, or spiritual imbalances. The student, working with a preceptor, will facilitate the delivery of health care to diverse cultures in various specialized settings. Prerequisites: Minimum grade of "C" or better required, NUR 4636, NUR 4667. (96 hr. practicum)

Nutrition

HUN1012**Nutritional Counseling 3 credits**

Basic principles of nutrition of an optimum diet for building and maintaining sound teeth and body tissues. Emphasis is placed on nutritional counseling. (3 hr. lecture)

HUN1201**Essentials of Human Nutrition 3 credits**

The Essentials of Human Nutrition is a general education course designed to acquaint students with the specific role of carbohydrates, fats, proteins, vitamins, minerals, and water in daily life. Students will learn how the human body systems manage the breakdown, assimilation, and excretion of nutrients and their metabolic wastes. Students will also learn the relationships between food and optimal health including physical fitness and the relationships between nutritional imbalances and diseases. (3 hr. lecture)

Oceanography

OCE1001**Introduction to Oceanography 3 credits**

The oceans, their nature and extent. The causes and effects of waves and current; biology of sea life; geology of the sea floor, erosion and bottom deposits and related meteorological and economic effects. (3 hr. lecture)

OCP3002**Survey of Oceanography 3 credits**

This course explores the ocean origin, physical properties, salinity, temperature, sound, radiative properties, heat budget and climatic controls, tides, wind-driven motion, monsoon circulation, El Nino phenomenon, subsurface water masses, oceanic circulation and paleoclimates. This course is designed for upper level students pursuing a BS in Science Education. Prerequisites: GLY 1010, OCE1001; Corequisite: OCP 3002L. (3 hr. lecture)

OCP3002L**Survey of Oceanography****Laboratory 1 credit**

A laboratory course designed to give students hands-on knowledge of specific concepts discussed in OCP 3002. (2 hr. lab)

Office Technology

OST2335**Business Writing 3 credits**

Covers the procedures for writing effective business letters and memorandums, a review of grammar, and the proper format of today's business correspondence. Students learn how to prepare inquiry letters, direct and indirect response letters, application letters and resumes, and short reports. Prerequisite: OST 1330. (3 hr. lecture)

Paralegal

PLA1949**Co-op Work Experience 1:****PLA 3 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. Prerequisite: 2.0 GPA, approval of Co-op Director, and a minimum of 6 credits in field or approved work experience. (3 hr. lecture)

PLA2003**Fundamentals of Law 3 credits**

This course provides students with an overview of the American legal system. It explores the basic concepts of law in society including the different sources of law. The federal, state and county court systems are examined along with judicial interpretation of the law. The course also covers the distinctions between procedural and substantive law, civil versus criminal and a court of equity and a court of law. The roles of paralegals are discussed with an emphasis given in their professional relationships, functions, career opportunities and ethical obligations. Prerequisite: ENC 1101. Special fee. (3 hr. lecture)

PLA2104**Legal Research 3 credits**

This course provides students with an understanding of the process of legal analysis. Student's will become familiar with research materials, tools, strategies, and learn how to locate research sources in a traditional law library. Prerequisite: PLA 2003. Special fee. (3 hr. lecture)

PLA2114**Legal Writing 3 credits**

This course provides knowledge and understanding of how to present legal research and analysis in proper written format. As legal research is an integral part of legal writing, the course will reinforce the skills used in legal research. It will also cover basic writing skills, the process of legal analysis, methodology involved in drafting a Memorandum of law, practice in drafting pleadings, and various types of specific law office correspondence. Prerequisites: ENC 1101, PLA 2003, 2104. (3 hr. lecture)

PLA2203**Trial Preparation 3 credits**

Trial Preparation focuses on the role of the paralegal in litigation and involves knowledge of the rules of civil procedure and the preparation and use of various written instruments utilized throughout the trial process. Prerequisites: PLA 2104, 2114. Special fee. (3 hr. lecture)

PLA2223**Trial Practice & Appeals 3 credits**

Trial Practice and Appeals examines the differences between jury and bench trials, the trial process, and the role of the litigation paralegal who assists the attorney in the preparation for trial. Prerequisites: PLA 2114, 2203. Special fee. (3 hr. lecture)

PLA2273**Torts 3 credits**

This course provides an examination of the theories governing tort law and the use of various pre-litigation tools. Topics covered include intentional torts, negligence and strict liability. The course also requires students to utilize the knowledge obtained to draft documents employed in practice. Prerequisites: PLA 2114, 2203. Special fee. (3 hr. lecture)

PLA2303**Criminal Law & Litigation 3 credits**

This course focuses on the substantive areas of criminal law including the offenses, elements, defenses and parties to a criminal law proceeding. It also emphasizes the role of the criminal justice system in adjudicating, enforcing and sentencing criminal defendants. It examines the Florida Rules of Criminal Procedure and provides practice in drafting documents required in the conduct of a criminal trial. Prerequisites: PLA 2114, 2203. Special fee. (3 hr. lecture)

PLA2600**Wills, Trust, Estate 3 credits**

Wills, Trusts, and Estates is a study of the laws governing wills and interstate succession. The course provides practice in drafting a simple will and trust. It also examines the procedures and rules involved in probate administrations and explains the ethical obligations of attorneys and paralegals who are involved in this area of practice. Prerequisites: PLA 2114, 2203, REE 2040. Special fee. (3 hr. lecture)

PLA2763**Law Office Management 3 credits**

A survey of economical and efficient law office practices and procedures including the proper use of law office equipment; business data processing law office management, personnel selection, training and management; employer/employee relationships; correct utilization of time and space; correct time keeping and billing procedures. Prerequisites: PLA 2114, 2203. Special fee. A.S. degree credit only. (3 hr. lecture)

PLA2800**Family Law 3 credits**

An examination of the legal aspects of domestic relations. This course focuses upon dissolution of marriage law with emphasis on pleadings, discovery, and property settlements. Other areas of family law such as adoption and annulment will be reviewed. Prerequisites: PLA 2114, 2203. A.S. degree credit only. (3 hr. lecture)

PLA2931**Legal Specialty Seminars 1 credit**

Intensive practical and theoretical training is provided in a seminar format. The seminar topics cover current and timely legal issues and are addressed by practicing attorneys. The topics are announced at the beginning of the fall and winter semesters. Prerequisites: PLA 2003, 2104, 2114. A.S. degree credit only. (1 hr. lecture)

PLA2932**Legal Specialty Seminars 1 credit**

Intensive practical and theoretical training is provided in a seminar format. The seminar topics cover current and timely legal issues and are addressed by practicing attorneys. The topics are announced at the beginning of the fall and winter semesters. Prerequisites: PLA 2003, 2104, 2114. A.S. degree credit only. (1 hr. lecture)

PLA2933**Legal Specialty Seminars 1 credit**

Intensive practical and theoretical training is provided in a seminar format. The seminar topics cover current and timely legal issues and are addressed by practicing attorneys. The topics are announced at the beginning of the fall and winter semesters. Prerequisites: PLA 2003, 2104, 2114. A.S. degree credit only. (1 hr. lecture)

PLA2934**Legal Specialty Seminars 1 credit**

Intensive practical and theoretical training is provided in a seminar format. The seminar topics cover current and timely legal issues and are addressed by practicing attorneys. The topics are announced at the beginning of the fall and winter semesters. Prerequisites: PLA 2003, 2104, 2114. A.S. degree credit only. (1 hr. lecture)

PLA2935**Legal Specialty Seminars 1 credit**

Intensive practical and theoretical training is

provided in a seminar format. The seminar topics cover current and timely legal issues and are addressed by practicing attorneys. The topics are announced at the beginning of the fall and winter semesters. Prerequisites: PLA 2003, 2104, 2114. A.S. degree credit only. (1 hr. lecture)

PLA2940**Legal Assisting Internship 1-3 credits**

Prerequisite: Permission of the Program Director.

Philosophy and Logic

PHI1100**Introduction to Logic 3 credits**

This is a foundation course in philosophy. Students will learn the basic principles of valid reasoning, and practice in the application of various techniques of analysis. (3 hr. lecture)

PHI2010**Introduction to Philosophy 3 credits**

This is a foundation course in philosophy. Students will learn about topics such as epistemology, metaphysics and ethics. The course introduces the methods of philosophy, addresses some major philosophical questions and examines the views of various philosophers from around the world. Prerequisite: ENC 1101. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

PHI2070**Introduction to Eastern****Philosophy 3 credits**

This is a foundation course in philosophy. Students will learn various philosophies of the East. Philosophers from various traditions such as Buddhism, Confucianism, Hinduism and Taoism will be discussed and analyzed. (3 hr. lecture)

PHI2604**Critical Thinking/Ethics 3 credits**

This is a foundation course in philosophy. Students will learn critical thinking skills and will study major theories of ethics. Students will use methods of effective reasoning to reflect critically upon their values, ethical standards, and the ethical permissibility of topics such as euthanasia, animal rights, and environmental ethics. Prerequisite: ENC 1101 (3 hr. lecture)

PHM2300**Political Philosophy 3 credits**

This is a foundation course in philosophy. Students will learn major political theories by examining the ideas of various political philosophers. In order to evaluate the policies and practices of contemporary societies, basic philosophical concepts which underlie modern societies such as rights, duties, legal obligations, and freedoms will be discussed and analyzed. (3 hr. lecture)

Photography

PGY2110C

Color Photography 1 3-4 credits

An introductory course in the making of Type C photographic prints, including the dark-room techniques of developing color film, color filtering, color balance and density control. There will be an exploration of significant contributions to the aesthetics of color photography. Students must provide their own cameras, film and photographic paper. Prerequisite: PGY 2401C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

PGY2111C

Color Photography 2 4 credits

Deals primarily with printing methods used in printing color negatives. Concentrated practice is given in light, color balancing, exposure and processing of color printing materials; the techniques of producing matched multi-size prints are demonstrated. Prerequisite: PGY 2110C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

PGY2112C

Color Photography 3 4 credits

An introduction to the use of the view camera to explore the problems of form and content in large format color photography. View camera will be provided. Special fee. (1-2 hr. lecture; 4 hr. lab)

PGY2211

Portrait and Still Photography 4 credits

Fundamentals of portrait and still photography are presented. Basic and advanced exercises are taught in lighting, posing, make-up and camera angles. Composition, lighting and design functioning to describe people and objects for a variety of clients are explored. Prerequisite: PGY 2410C. (1-2 hr. lecture; 4 hr. lab)

PGY2222

Fashion Photography 4 credits

The production of commercially viable photographs illustrating clothes as desirable objects as well as recent trends in fashion industry are studied. An awareness of mood, make-up, and dramatic impact is stressed. (1-2 hr. lecture; 4 hr. lab)

PGY2238

Illustrative Photography 1 4 credits

The use of the camera to illustrate either an original concept or a concept provided by an art director for clients such as magazines, manufacturing concerns, advertising agents, newspapers, technical publications and schools. The creative approach is stressed in planning and production-effective color and black/white illustrations. Prerequisite: PGY 2410C. Laboratory fee. (1-2 hr. lecture; 4 hr. Lab)

Physical Education

HLP1080

Wellness 2 credits

This course enables students to assess their present aerobic fitness level, lung capacity, percentage of body fat, flexibility and strength. From data collected, the student will be able to set personal wellness goals. Lectures, demonstrations, and multi-media materials will be used to provide the scientific basis for meeting one's personal wellness goals. (2 hr. lecture/lab)

HLP1081

Fitness & Wellness for Life 3 credits

In this course students will learn the roles of exercise, physical activity, diet, and stress management in achieving optimal wellness. Students will explore current developments in health and complete lab assignments, which will assist in the determination of their current health status. Individualized exercise and dietary protocols based on these assessments will be developed. Special fee. (3 hr. lecture/lab)

HLP1083

Weight Management 3 credits

This course is designed for students to develop an understanding of the role of exercise and nutrition as it applies to the implementation of a weight management plan. (3 hr. lecture)

PEO2321

Skills and Practices in Volleyball 2 credits

Develops and analyzes the teaching and coaching of volleyball. This course also emphasizes skills and practices in volleyball. Special fee. (1 hr. lecture; 2 hr. lab)

PEO2621

Skills and Practices Basketball 2 credits

Develops and analyzes the teaching and coaching of basketball. This course also emphasizes skills and practices of basketball. Special fee. (1 hr. lecture; 2 hr. lab)

PET1949

Co-op Work Experience 1: PET 3 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

PET2622C

Techniques of Athletic Training 3 credits

Develops competence, knowledge and skill in the prevention and care of athletic injuries.

A familiarization with the latest equipment, supplies, modalities and therapeutic aids is provided. Special fee. (2 hr. lecture; 2 hr. lab)

PET2949

Co-op Work Experience 2: PET 3 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op work experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

Physical Therapist Assistant

PHT1102

Anatomy for the Physical Therapist Assistants 3 credits

Regional description of the musculoskeletal landmarks utilized in implementing and documenting assessment and treatment procedures in physical therapy. Corequisites: BSC 2085, 2085L, PHT 1201, 1201L, 1211, 1211L, PHY 1004, 1004L. (3 hr. lecture)

PHT1201

Introduction to Physical Therapy 2 credits

Survey and history of the physical therapy profession. Role and responsibilities of the physical therapist assistant as they react with patients and other health care workers are discussed. Overview of common medical and surgical conditions treated in physical therapy is presented. Corequisites: BSC2085, 2085L, PHT1102, 1201L, 1211, 1211L, PHY 1004, 1004L. (2 hr. lecture)

PHT1201L

Introduction to Physical Therapy Laboratory 1 credit

Basic patient care and treatment procedures which are typically required in a physical therapy service area. Treatment procedures include the proper administration of steam packs, cold packs, paraffin, whirlpool, and gait training. Corequisites: BSC2085, 2085L, PHT 1102, 1201, 1211, 1211L, PHY 1004, 1004L. Laboratory fee. (2 hr. lab)

PHT1211

Disabilities and Therapeutic Procedures 1 2 credits

Cause and effect factors associated with selected orthopedic and neuromuscular disabilities. Corequisites: BSC 2085, 2085L, PHT 1211L, 1201, 1201L, 1102, PHY 1004, 1004L. (2 hr. lecture)

PHT1211L**Disabilities and Therapeutic Procedures 1 Lab****1 credit**

Laboratory practice of basic technical skills relating to electro-hydrotherapy, therapeutic exercise and patient care procedures. Corequisite: BSC 2085, BSC 2085L, PHT 1102, 1201, 1201L, 1211, PHY 1004, 1004L. Laboratory fee. (2 hr. lab)

PHT1949**Co-op Work Experience 1:****PHT****3 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

PHT2120**Applied Kinesiology****2 credits**

Anatomical structures and movements as related to physical therapy procedures. Recognition and understanding of biomechanics of all human motion as related to the function of the musculoskeletal system during therapeutic exercise and gait training is discussed. Prerequisites: PHT 1201, 1211, 1211L; corequisites: BSC 2086, 2086L, PHT 2120L, 2224, 2224L. A.S. degree credit only. (2 hr. lecture)

PHT2120L**Applied Kinesiology Laboratory****1 credit**

Procedures in measuring and analyzing muscle strength and function as related to the biomechanics of human motion. Prerequisites: PHT 1201, 1211, 1211L; corequisites: BSC 2086, 2086L, PHT 2120, 2224, 2224L. Laboratory fee. (2 hr. lab)

PHT2162**Survey of Neurological Deficits****3 credits**

Survey and description of clinical manifestations of neurological dysfunction frequently treated in physical therapy. Prerequisites: PHT 2120, 2120L, 2224, 2224L; corequisites: PHT 2701, 2701L, 2801. (3 hr. lecture)

PHT2224**Disabilities and Therapeutic Procedures 2****3 credits**

Cause and effect factors associated with the more complex medical and surgical problems resulting in disability. Prerequisites: PHT 1201, 1211, 1211L; corequisites: BSC 2086, 2086L, PHT 2120, 2120L, 2224. (3 hr. lecture)

PHT224L**Disabilities and Therapeutic Procedures 2 Lab****2 credits**

Laboratory practice of more complex technical skills and competencies related

to preparing equipment and treatment of patients with a variety of medical, surgical and neuromuscular disabilities. Prerequisites: PHT 1201, 1211, 1211L; corequisites: BSC 2086, 2086L, PHT 2120, 2120L, 2224. Laboratory fee. (4 hr. lab)

PHT2701**Rehabilitation Procedures****3 credits**

Clinical manifestations and treatment techniques related to physical therapy, intervention for children and adults with injuries and disabilities (spinal cord and brain injuries or disease, limb amputations, burns). Prerequisites: PHT 2120, 2120L, 2224, 2224L. Corequisites: PHT 2162, 2701L 2801. (3hr. lecture)

PHT2701L**Rehabilitation Procedures****2 credits****Laboratory**

Laboratory practice in the technical skills and competencies required in the total rehabilitative care and treatment of the child or adult who has had a severe injury or disease resulting in multiple disabilities. Prerequisites: PHT 2120, 2120L, 2224, 2224L; corequisites: PHT 2162, 2701, 2801. Laboratory fee. (4 hr. lab)

PHT2810**Clinical Practice 1****7 credits**

Intermediate clinical experiences in selected patient care activities under the supervision of a licensed physical therapist. Prerequisites: PHT 2162, 2701, 2701L, 2801; corequisite: PHT 2931. (21. hr. clinic)

PHT2820**Clinical Practice 2****9 credits**

Advanced clinical experiences in patient care activities under the direct supervision of a licensed physical therapist. Prerequisites: PHT 2810, 2931. (27 hr. clinic)

PHT2931**Seminar for Physical Therapist****Assistants****3 credits**

Recognition of the expected current competency levels, and ethical and legal responsibilities of the physical therapist assistant in the health care system. Prerequisites: PHT 2162, 2701, 2701L, 2801. Corequisite: PHT 2810. A.S. degree credit only. (3 hr. lecture)

PHT2949**Co-op Work Experience 2:****PHT****3 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op work experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

Physician Assistant

PAS1800C**Physical Diagnosis 1****2 credits**

A course which provides the students with the critical basis for and clinical exposure to techniques used in the proper performance and recording of the physical examination of patients. Prerequisites: BSC 2085, 2085L, 2086, 2086L, CHM 1033, 1033L. (1 hr. lecture; 2 hrs. lab)

PAS1801C**Physical Diagnosis 2****2 credits**

In the hospital and classroom setting, the student will obtain experience in performing and recording patient histories and physical examinations and presenting clinical data. Prerequisites: MCB 2010, 2010L, PAS 1800C, 1812, 1813, 1822C, 1823, 1831. (1 hr. lecture; 2 hrs. lab)

PAS1810C**Surgical Problems & Procedures****5 credits**

During this course the student will be exposed to the various aspects of general, orthopedic, cardiovascular, thoracic, ENT, neurologic, urologic, and pediatric surgical problems, their diagnosis and treatment. Laboratory components of this course will include learning fundamental techniques necessary in preoperative and postoperative care, including nasogastric intubation, central venous line placement, arterial and venous punctures and sterile techniques. Prerequisites: PAS 1801C, 1811, 1821, 1824, 1830. (4 2/3 hr. lecture; 1 hr. lab)

PAS1811**Introduction to Medicine 1 for PAs****5 credits**

The first course in the sequence PAS 1811, 1820. Focuses on signs, symptoms, and pathophysiology of common diseases affecting pediatric, adult, and geriatric patients; diagnosis, therapeutic intervention and follow-up; patient education and preventative medicine are included. Prerequisites: MCB 2010, 2010L, PAS 1800C, 1812, 1813, 1822C, 1823, 1831. (5 hr. lecture)

PAS1812**Behavioral & Community Medicine 1 for PAS****1 credit**

A biopsychosocial system approach to identify the individual, the family and community within the health care delivery system. Studies the American health care system, emphasizing the role of the PA profession, patient education, preventative medicine, community health, and medical legal ethics. Prerequisites: BSC 2085, 2085L, 2086, 2086L, CHM 1033, 1033L. (1 hr. lecture)

PAS1813**Pathophysiological Basis of Disease 1****2 credits**

First course in the sequence PAS 1813, 1824. An introduction to the underlying pathologic bases for specific disease processes. Prereq-

quisites: BSC 2085, 2085L, 2086, 2086L, CHM 1033, 1033L. (2 hr. lecture)

PAS1820

Introduction to Medicine 2

for PAS

5 credits

The second course in the sequence PAS 1811, 1820. Focuses on signs, symptoms, and pathophysiology of common diseases of all ages. Prerequisites: PAS 1801C, 1811, 1821, 1824, 1830. (5 hr. lecture)

PAS1821

Behavioral & Community

Education Medicine 2 for PAS

1 credit

The second course in the PAS 1812, PAS 1821 sequence. A continuation of the study of the biopsychosocial model for health. Prerequisites: PAS 1801C, 1812, 1813, 1822C, 1823, 1831. (1 hr. lecture)

PAS1822C

Electrocardiography/

Cardiology

2 credits

A study of the principles and practical application of electrocardiography for the physician assistant. Includes practice in Basic and Advanced Cardiac Life Support measures for life threatening emergencies. Prerequisites: BSC 2085, 2085L, 2086, 2086L, CHM 1033, 1033L. (1 hr. lecture; 2 hrs. lab)

PAS1823

Pharmacology

2 credits

The first course in the sequence PAS 1823, 1830. The study of the preparation, uses, and action of drugs. Prerequisites: BSC 2085, 2085L, 2086, 2086L, CHM 1033, 1033L. (2 hr. lecture)

PAS1824

Pathophysiological

2 credits

A continuation of PAS 1813 Focus is on cell dynamics and immunity. Prerequisites: MCB 2010, 2010L, PAS 1800C, PAS 1812, 1813, 1822C, 1823, 1831. (2 hr. lecture)

PAS1830

Pharmacotherapeutics

4 credits

The second course in the sequence PAS 1823, 1830. The study of the use of drugs to treat disease, including contraindication and incompatibilities; drug interactions; side effects and their treatment, and dosages and calculations. Prerequisites: PAS1800C, 1812, 1813, 1822C, 1823, 1831. (4 hr. lecture)

PAS1831

Clinical Diagnostic Imaging

1 credit

A study of multiple imaging modalities employed in the diagnosis of pathologic processes. Prerequisites: BSC 2085, 2085L, 2086, 2086L, CHM 1033, 1033L. (1 hr. lecture)

PAS2840L

Internal Medicine

4 credits

The clinical course focuses on basic medical practice. The student is exposed to common medical problems encountered on in-patient and out-patient medical services. Emphasis is placed on the history

and physical examination and the process required in the proper work-up and management of the patient. Patient care experience in the various subdivisions of internal medicine including oncology, hematology, neurology, nephrology, gastroenterology, rheumatology, pulmonology, cardiology, and infectious diseases may be required. Prerequisites: PAS 1810C, 1821, 1820, 1830. (18 hr. lab)

PAS2841L

Geriatrics

2 credits

This clinical course provides the opportunity for students to become familiar with common physical and psychological problems encountered by the geriatric patient including cardiac and respiratory insufficiency, urinary tract infection, strokes, and diabetes mellitus. Prerequisites: PAS 1810C, 1820, 1821, 1830. (96 hr. clinical)

PAS2842L

Psychiatry

2 credits

This clinical course in a psychiatric care setting will allow students to participate in daily rounds and become knowledgeable of the use of psychotropic medications for psychiatric disorders. Group therapy sessions will be a major part of the learning experience. Prerequisites: PAS 1810C, 1820, 1821, 1830. (96 hr. clinical)

PAS2850L

Surgery

2 credits

During the clinical course the student will be exposed to a variety of clinical problems routinely seen on the surgical service. Emphases will be placed on preoperative, intraoperative and postoperative management of the patient. In the operating room the student will practice aseptic technique, operating room principles, and assist in surgery. Prerequisites: PAS 1820, 1821, 1830. (96 hr. clinical)

PAS2860L

Pediatrics

4 credits

This clinical course in pediatric care settings will introduce students to childhood illnesses and normal variations of growth and development. Students will perform histories and physical examinations and manage patients in the newborn nursery, pediatric out-patient clinic and emergency room. Prerequisites: PAS 1810C, 1820, 1821, 1830. (192 hr. clinical)

PAS2866L

Family Medicine

4 credits

This clinical course introduces the student to the family practice setting where emphasis is placed on the common diseases treated by primary care practitioners in conjunction with other members of the health care team. The student is exposed to rural epidemiology, cultural diversity, and problems that affect delivery of health care in rural and under-served areas. Prerequisites: PAS 1810C, 1020, 1821, 1830. (192 hr. clinical)

PAS2870L

Obstetrics/Gynecology

2 credits

During this clinical course the student will participate on the obstetrical service managing pregnancy, labor and delivery and be introduced to pre-and postnatal complications. The student will also participate in the management of common gynecologic problems. Prerequisites: PAS 1810C, 1820, 1821, 1830. (96 hr. clinical)

PAS2876L

Emergency Medicine

2 credits

This clinical course in an emergency care setting will provide opportunities for the student to manage the acutely ill and traumatized patient. The student will learn to perform history and physical examination on the acutely ill patient with emphasis being placed on the management and support measures necessary in situations which are life threatening. Prerequisites: PAS 1810C, 1820, 1821, 1830. (96 hr. clinical)

PAS4470

Physician Assistant Practice

Management

3 credits

This course is designed to assist the PA in understanding and applying the principles of management to a primary care practice. Students will learn the basic concepts of managing the patient/client, the office and medical team. (3 hr. lecture)

PAS4936

Contemporary Issues for

the PA

3 credits

In this course the student will examine current issues, challenges, and practices influencing leaders in the field of health care education. The student will learn to use evidenced based medicine to research topics including leadership perspectives on health care education and promotion; the changing nature of health care delivery in the United States; demographic, economic, ethical, and political factors influencing the practice of health education. (3 hr. lecture)

PAS4946

Physician Assistant Capstone

Course

6 credits

This is an experiential course that incorporates all the learning competencies of the BAS-HS with an option in PA courses. The student will learn to apply the knowledge, skills and abilities they have garnered throughout the program by identifying, researching and presenting a current challenge or trend in healthcare. (3 hr. lecture)

Physics

AST1002

Descriptive Astronomy

3 credits

The solar system, the nature of electromagnetic radiation, astronomical instruments, stars, galaxies, and cosmology. Sessions are devoted to viewing the sky and to laboratory activities. Special fee. (3 hr. lecture)

AST1002L**Descriptive Astronomy****Laboratory 1 credit**

This is a laboratory course available to students taking the introductory Astronomy course AST 1002. Students will learn to obtain astronomically relevant scientific information by performing experiments, exercises or observations. They will learn to measure, collect, and analyze scientific data, to do calculations with the data, and to report their results. (2 hr. lab)

PHY1004**Physics with Applications 1 3 credits**

Emphasizes the basic concepts and principles and their practical applications. Designed specifically for students in technical studies and for others wishing to strengthen their physics background before taking advanced courses. Prerequisite: MAT 1033 with a grade of "C" or better; Corequisite: PHY1004L with a grade of "C" or better. Special fee. (3 hr. lecture)

PHY1004L**Physics with Applications 1****Lab 1 credit**

Laboratory for PHY 1004. Prerequisite: MAT 1033; corequisite: PHY 1004. Laboratory fee. (2 hr. lab)

PHY1005**Physics with Applications 2 3 credits**

Emphasizes the basic concepts and principles and their practical applications. Designed specifically for students in technical studies and for others wishing to strengthen their physics background before taking advanced courses. Prerequisite: PHY 1004; Corequisite: PHY 1005L. Special fee. (3 hr. lecture)

PHY1005L**Physics with Applications 2****Lab 1 credit**

Laboratory for PHY 1005. Prerequisite: PHY 1004; corequisite: PHY 1005. Laboratory fee. (2 hr. lab)

PHY1020**General Education Physics 3 credits**

This is a general education course for non-science majors. The students will learn the fundamentals laws of physics at an introductory level. Must be completed with a grade of "C" or better. (3 hr. lecture)

PHY1025**Basic Physics****3 credits**

This course will help students to facilitate the transition from high school to college/university physics. The course will emphasize problem-solving techniques. Topics may include units of measure, particle mechanics, conservation laws, and basic field concepts. Prerequisite: MAC1105. (3 hr. lecture)

PHY2048**Physics with Calculus 1****4 credits**

Foundation course for physical science and engineering majors. PHY 2048 covers classical mechanics and thermodynamics. PHY

2049 includes electricity, magnetism, waves and optics. Prerequisites: High school physics or PHY 1025, PHY 2053 or departmental approval and MAC 2311; corequisite: PHY 2048L. Special fee. (4 hr. lecture)

PHY2048L**Physics with Calculus 1 Lab 1 credit**

Laboratory for PHY 2048. Prerequisite: High school physics or PHY 1025 or PHY 2053 or departmental approval and MAC 2311; corequisite: PHY 2048. Laboratory fee. (2 hr. lab)

PHY2049**Physics With Calculus 2 4 credits**

Foundation course for physical science and engineering majors. PHY 2048 covers classical mechanics and thermodynamics. PHY 2049 includes electricity, magnetism, waves and optics. Prerequisite: PHY 2048; corequisites: PHY 2049L and MAC 2312. Special fee. (4 hr. lecture)

PHY2049L**Physics with Calculus 2 Lab 1 credit**

Laboratory for PHY 2049. Prerequisite: PHY 2048; corequisites: PHY 2049 and MAC 2312. Laboratory fee. (2 hr. lab)

PHY2053**Physics (without Calculus) 1 3 credits**

An introduction to the basic principles of physics. PHY 2053 covers mechanics, sound and thermodynamics. Prerequisite: MAC 1114 or MAC 1147; corequisite PHY 2053L. Special fee (3 hr. lecture)

PHY2053L**Physics (without Calculus) 1****Lab 1 credit**

Laboratory for PHY 2053. Prerequisite: MAC 1114 or MAC 1147 corequisite: PHY 2053L. Special fee. (2hr. lab)

PHY2054**Physics (without Calculus) 2 3 credits**

An introduction to the basic principles of physics. PHY 2053 covers mechanics, sound and thermodynamics. PHY 2054 includes electricity, magnetism and optics. Prerequisite: PHY 2053; corequisite: PHY 2054L. Special fee. (3 hr. lecture)

PHY2054L**Physics (without Calculus) 2****Lab 1 credit**

Laboratory for PHY 2054. Prerequisite: PHY 2053; corequisite: PHY 2048. Laboratory fee. (2 hr. lab)

PHY3101**Modern Physics****3 credits**

This course will provide students with a deep understanding in areas of physics that lie beyond the scope of classical mechanics, thermo-dynamics and electromagnetism. Its content includes: the theory of relativity; wave properties of matter; an introduction to the quantum theory of atoms; the properties of molecules and solids; nuclear properties, interactions and applications; a brief descrip-

tion of elementary particles; and an overview of modern cosmology. The course will emphasize descriptive models and problem-solving techniques. Prerequisites: PHY 2048, 2049; Corequisite: PHY 3125L. (3 hr. lecture)

PHY3101L**Modern Physics Laboratory 1 credit**

This course is a laboratory course designed to enhance the student's practice and understanding of areas of physics that lie beyond the scope of classical mechanics, thermo-dynamics and electromagnetism. These areas are covered in PHY 3101. While the main purpose of the course is to promote scientific understanding, the student will also acquire and demonstrate skills in the observation, measurement, recording, analysis, and reporting of experimental data. Prerequisites: PHY 2049, MAP 2302; corequisite: PHY 3125. (2 hr. lab)

PHY3504C**Thermodynamics & Waves 4 credits**

This course is an introduction to mechanical waves and classical thermodynamics. The student will learn the physics of oscillations and mechanical waves and the postulates and results of the kinetic theory of gases, the laws of thermodynamics and their applications to heat engines. (3 hr. lecture; 2 hr. lab)

PHY3802L**Intermediate Physics****Laboratory 1 credit**

This is a laboratory course consisting of a series of experiments related to intermediate courses in classical mechanics, waves, thermodynamics, electromagnetism and modern physics. The student will learn skills in the design, performance and reporting of physics experiments as well as reinforcing concepts learned in the corresponding physics courses. Prerequisites: PHY 2048L, 2049L, PHY 3504. (2hr. lab)

PHY4220**Classical Mechanics****3 credits**

This one-semester course will provide students with a deep understanding of some fundamental topics of classical mechanics, reinforcing the concepts learned in PHY 2048, and providing a sound foundation for their comprehension. Most of the topics of elementary mechanics will be studied in a rigorous manner, requiring a higher level of math. Content includes Newtonian particle mechanics, oscillations, no inertial reference frames, central forces, dynamics of systems, mechanics of rigid bodies, the lagrangian formulation of dynamics, and an overview of the Hamiltonian formulation. The course will emphasize problem-solving techniques and computer simulations. Prerequisites: PHY 2048, 2049, MAP2302. (3 hr. lecture)

PHY4320**Intermediate****Electromagnetism****3 credits**

This course will provide students with a deep understanding of electricity and magnetism

at an intermediate level. It will reinforce the concepts learned in PHY 2049, providing a better understanding of the fundamental electromagnetic phenomena. Content includes: vector calculus, electrostatics, dielectrics, electric currents, magneto statics, electromagnetic induction, Maxwell's equations, wave optics, and electromagnetic radiation. The course will emphasize classical models and problem-solving techniques. Prerequisites: PHY 2049, MAP 2302, PHZ 3113. (3 hr. lecture)

PHY4424

Geometrical & Physical Optics 3 credits
This course is an intermediate study of topics in classical optics, as well as a conceptual introduction to modern optics. The student will learn the fundamental principles and applications of classical optics and optical instruments, and will gain an understanding of unfamiliar optical phenomena through inquiry activities. Prerequisites: PHY 2048, 2049, MAP 2302, PHY 3504. (3 hr. lecture)

PSC1121

General Education Physical Science 3 credits
A study of the major concepts and principles from each of the following areas: physics, chemistry, and astronomy. Prerequisite: MAT1033. (3 hr. lecture)

PSC1191

Physical Science Lab Fundamentals 1 credit
Students will learn to develop observation, measurement, analysis, and presentation skills using hands-on collaborative physics and chemistry activities. These skills will enhance future performance in Science, Technology, Engineering and Mathematics (STEM) courses and careers. Students will use current technology as well as critical thinking. (2 hr. lab)

PSC1515

Energy in the Natural Environment 3 credits
Investigation of the physical environment using energy as a theme to demonstrate the impact of science and technology on the environment and on the lives of people. Special fee. (3 hr. lecture)

PSC1515L

Energy in the Natural Environment Laboratory 1 credit
A laboratory course designed to complement PSC 1515. Laboratory exercises explore the ways in which energy moves through the atmosphere, hydrosphere, lithosphere and biosphere, the advantages and disadvantages of various energy sources, and the potential of conservation as an energy resource. Laboratory fee. (2 hr. lab)

Political Science

CPO2100

Comparative European Government 3 credits
This course discusses the structures and functioning of the systems of government of three European states: Britain, France, and the Federal Republic of Germany. An attempt is made to analyze some of the current problems facing parliamentary governments, and to assess their performance in resolving them. A prior course in History or Social Science is desirable. Offered first semester. Given in English. Offered through Overseas Study Program. (3 hr. lecture)

INR1949

Co-op Work Experience 1: INR 3 credits
This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

INR2002

International Relations 3 credits
The nature of international relations, the causes of leading international problems, foreign policies of world powers, international political organizations, and the origins of war and peace in the international arena. (3 hr. lecture)

INR2440

International Law and Organization 3 credits
International law and problems in world politics; a review of man's attempt to control international politics through international law and organizations, including the League of Nations, the United Nations, NATO, and the European Union. A prior course in History or Social Science is desirable. Offered second semester. Given in English. Offered through Overseas Study Program. (3 hr. lecture)

INR2949

Co-op Work Experience 2: INR 3 credits
This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op work experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

ISS2270

Multicultural Communications and Relations 3 credits
This course uses an interdisciplinary approach to examine the complex interactions among ethnicity, race, gender, age, and class, as well as other ways in which we differ as they pertain to shaping personal awareness, understanding, and skills that will allow them to interact more effectively with diverse populations, age, groups, and lifestyles and to think through and value human diversity. This course has an overriding principle based on the concept of human rights. (3 hr. lecture)

POS2041

American Federal Government 3 credits
The American Constitution and its development, the organization and functions of the national government, political parties and the electoral process, and the relationship of the individual to the federal government. (3 hr. lecture)

POS2112

State and Local Government in America 3 credits
The typical state and local government organization, together with political practices in America, with special emphasis on the governmental organization and the major contemporary political problems of the State of Florida and of Florida communities. (3 hr. lecture)

POT2014

European Political Theory 1 3 credits
This course covers the more important trends in European political thought from Plato to the present. It examines those ideas which have contributed to the shaping of the political cultures of Western and Eastern Europe. It discusses the historical evolution of key concepts of politics such as freedom, order, political obligations, justice, consent, rights and duties, power and authority. A prior course in Government, History or Philosophy is desirable. Given in English. Level 1. Offered through Overseas Study Program. (3 hr. lecture)

Portuguese Language

POR1120

Elementary Portuguese 1 4 credits
An integrated (multi-media) approach to acquire proficiency in the basic skills (of the language)—listening/understanding, speaking, reading, writing, and cross-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice in class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

POR1121

Elementary Portuguese 2 4 credits
A continuation of POR 1120. A proficiency-oriented course emphasizing the mastery of the basic skills of the language. Prerequisite: POR 1120. (4 hr. Lecture)

POR2220

Intermediate Portuguese 1 4 credits
Students will understand, speak read write, and gain cultural awareness of Portuguese through a systematic review (using an integrated, multimedia approach) of reading, grammar, and writing skills with emphasis on oral and written communication. Prerequisite: POR 1121 or equivalent. (4 hr. lecture)

POR2221

Intermediate Portuguese 2 4 credits
This is a continuation of Intermediate Portuguese 1. Students will learn to understand, speak, read, and write Portuguese. Students will also learn to develop cross-cultural awareness through a systematic review of reading and writing skills with emphasis on oral as well as written expression. Prerequisite: POR 2220 or equivalent. (4 hr. lecture)

Psychology

CLP1006

Psychology of Personal Effectiveness 3 credits

This is an applied psychology course which emphasizes understanding of the principles of effective human behavior and applying these to the areas of personal awareness, interpersonal relations, communication, and work/career development. Students will learn strategies to apply these principles in both their personal and professional lives. (3 hr. lecture)

CLP2000

Dynamics of Behavior 3 credits
Analysis of mechanisms of adjustment, motivation, frustration and conflict, learning personality and psychotherapy. Emphasis is on the psychological processes of the normal individual functioning in society rather than on behavior disorders. (3 hr. lecture)

CLP2001

Basic Human Development 2-3 credits
Identification and classification of personal strengths, potentials, feelings, needs and values, to articulate personal goals, and to develop behavioral guidelines to increase the possibility of achieving these goals. Emphasis is on congruity between strengths, needs, feelings, and values, and behavior in order to experience greater interpersonal integrity and self-esteem. This is an experientially-taught course, with regular use of student interaction in dyads, triads, and small group experience. (2-3 hr. lecture)

CLP2140

Abnormal Psychology 3 credits
This course examines the major categories of mental disorders and their diagnostic criteria and treatments. Students will analyze the impact of mental disorders on individuals, families, and society and the impact of cultural factors, public attitudes, community resources, ethical issues, and legislation on the diagnosis and treatment of mental disorders. Prerequisite: PSY2012. (3 hr. lecture)

DEP2000

Human Growth and Development 3 credits
This course examines the physical, cognitive, social and emotional development of human beings from conception to death. Students will learn about theories of development, key issues in the field and apply research in developmental psychology throughout the prenatal, infancy, childhood, adolescence and adulthood periods of the lifespan. (3 hr. lecture)

DEP2100

Child Growth and Development 3 credits
This course in Child Growth and Development is designed especially for the student interested in the human life span from birth through the first eight years. The course is intended to acquaint the student with basic theoretical models of development and such specific topics as heredity teratogenic agents, learning, intelligence, socialization, personality, sex role identification, language acquisition and moral development. (3 hr. lecture)

DEP2481

Death Attitudes and Life Affirmation 3 credits
An analysis of the psychology, philosophy, and social function of death and dying, especially in relation to the general negative view of death in American society. Encourages a reconstruction of the participant's approach to living through a confrontation of their fear of death and of those life-denying traits and values which inhibit their growth. The course also investigates humane possibilities for funeral, bereavement, and counseling the terminally ill. (3 hr. lecture)

INP2390

Psychology of Work 3 credits
Applies the understanding of effective human relations to work situations. Personal dynamics for success are also considered. Students will be taught how to influence behavior on the job as they apply their knowledge and interpersonal skills to specific experiences in the work place. (3 hr. lecture)

PCO2731

Human Relations 3 credits
Emphasizes an awareness of the problems of a person's relationship to others, and the known laws and generalizations about the action patterns of individuals and groups. Effort is made to develop an awareness of the techniques of effective interpersonal relations. (3 hr. lecture)

PSB2442

The Psychology of Addiction 3 credits
This course will examine psychological, medical, pharmacological, legal, economic and sociological aspects of addiction to and use of various chemicals. The course will take an in-depth look at narcotic sedatives, and stimulants including alcohol, cocaine, heroin, cannabis, caffeine and tobacco. (3hr. lecture)

PSY2012

Introduction to Psychology 3 credits
This course provides an overview of the field of psychology. Students will learn about the biological and environmental bases of behavior, and theories and concepts in such areas as personality, intelligence, learning, motivation, emotions and mental illness. Students will increase their knowledge about the brain-body connection and applied neurosciences. (3 hr. lecture)

PSY2050

Introduction to Forensic Psychology 3 credits
This course explores the interaction between psychology and the legal system. Students will learn the foundations, history, and terminology of forensic psychology and the influence of media and cultural issues. Students will also learn about the forensic psychologist's role in criminal and civil proceedings, public policy, law enforcement, and victimization. Prerequisite: PSY2012. (3 hr. lecture)

PSY2800

Psychology of Genocide 3 credits
Students will learn the psychological, social, and cultural roots of genocide, human cruelty, and mass violence. Students will examine the various factors influencing such acts, and the emotional and psychological impact upon victims, perpetrators, rescuers, and society. Prerequisite: ENC1101. (3 hr. lecture)

SOP2002

Social Psychology 3 credits
Combines a knowledge of psychology and sociology, in an interdisciplinary approach to the study of human interaction. Main themes deal with the nature of attitudes, how attitudes may be changed, the processes of interaction and the nature of group structures. (3 hr. lecture)

SOP2772

Human Sexuality 3 credits
This course examines the biological, theoretical, social, psychological, and cultural aspects of human sexuality. Students will learn about sexual anatomy, sexual response cycle, sex and gender development, sexual attraction and relationships, reproductive health issues, and social issues in sexuality. (3 hr. lecture)

Quantitative Methods in Business

QMB2100

Basic Business Statistics 3 credits
The application of basic statistical methods to business problems. Emphasis is on learning to select the appropriate statistical method of solving a given business problem, applying the chosen method, and interpreting the solution. Prerequisite: Acceptable score on the Algebra Placement test or equivalent; corequisite: QMB 2100L. Fulfills Gordon Rule computational requirement. (3 hr. lecture)

QMB2100L

Basic Statistics Laboratory 1 credit
Students will learn to interpret and solve problems related to the business field. Additional support will be provided to students in order to achieve the objectives of QMB2100. Laboratory fee. Gordon Rule Assigned. Corequisite: QMB2100. (2 hr. lab)

Radiation Therapy Technology

RAT1021

Principles and Practice of Radiation Therapy 1 2 credits
A study of all major radiotherapy equipment such as linear accelerators and superficial ortho- and mega-voltage units. Auxiliary equipment such as simulators, immobilization devices, beam directors and modifiers will also be discussed. Patient positioning, treatment planning, patient flow, and quality assurance will be presented in detail. Corequisites: RAT 1021, 1614, 1814L, 2243. (2 hr. lecture)

RAT1211

Human Disease 1 credit
The relationship of the human body to neoplastic and other pathologic diseases. Topics will include cells, tissues, organs and systems. Skeletal, muscular, nervous, endocrine, circulatory, reticulo endothelial, digestive, urinary, respiratory, and reproductive systems will be discussed. Prerequisites: ENC 1101, MAC 1105, BSC 2085, BSC 2085L; corequisites: RAT 1001, 1840. (1 hr. lecture)

RAT1614

Radiation Therapy Physics 1 2 credits
A basic radiation physics course containing fundamental principles and concepts. The course includes radiation production, properties, and characteristics as well as structure of the atom and matter, electrostatics, magnetism, electrodynamics, and the electromagnetic spectrum. Corequisites: RAT 1001, 1021, 1211, 1804L. (2 hr. lecture)

RAT1619

Elements of Treatment Planning 2 credits
Determination of radiation doses in treatment planning using computerized methodology. Corequisites: RAT 2690, 2834L. (2 hr. lecture)

RAT1657

Radiation Protection/Quality Assurance 2 credits
The student will learn to present basic principles of radiation protection and safety in radiation therapy. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are included. Specific responsibilities of the radiation therapist are discussed, examined and evaluated. (2 hr. lecture)

RAT1801L

Introduction to Clinic 2 credits
Students will rotate through various diagnostic imaging areas of the hospital in order to observe the equipment, procedures, and images produced. Opportunities to apply the skills learned in HSC0003 as well as the competencies achieved in RTE1000 will be included. Prerequisite: RAT 1840. (96 hr. clinic)

RAT1804L

RAT Clinic 1 5 credits
Students will learn radiation therapy procedures in a local radiation therapy department. Students are closely supervised by certified radiation therapy technologists as they are introduced to record-keeping and treatment units. Prerequisite: RAT 1801L. (240 hr. clinic)

RAT1814L

Clinic 2 8 credits
Continued patient treatment assignments. The responsibilities of the students increase as more complex competencies in patient treatment are mastered under direct supervision. Prerequisite: RAT 1804L. (384 hr. clinic)

RAT1824L

Clinic 3 8 credits
Continuation of advanced patient treatment competencies under the supervision of an ARRT Certified Radiation Therapy Technologist. Prerequisite: RAT 1814L; corequisites: RAT 2243. (24 hr. clinic)

RAT2022

Principles & Practice of Radiation Therapy 2 2 credits
Continued application of radiation therapy and its effectiveness in treatments. Advanced patient positioning, planning and flow, and quality assurance will be discussed. Prerequisite: RAT 1021; corequisites: RAT 1657, 1824L, 2241, 2618. (2 hr. lecture)

RAT2241

Radiobiology 2 credits
Principles of cell response to radiation. Factors influencing the effects of radiation, tissue sensitivity, and environmental factors are dis-

cussed. Corequisites: RAT 1657, 1824L, 2022, 2618. (2 hr. lecture)

RAT2243

Clinical Oncology & Neoplasms 2 credits
A continuation of medical oncology and pathology 1. Corequisites: RAT 1021, 1614, 1814L. (2 hr. lecture)

RAT2618

Radiation Therapy Physics 2 2 credits
Specifics of ionizing radiation such as details of production, interactions, and types of radiation and their application to the patient treatment. Properties of production, photon interactions, beam characteristics, and particle irradiation will be discussed. Prerequisite: RAT 1614; corequisites: RAT 1657, 1824L, 2022, 2241. (2 hr. lecture)

RAT2690

Integration of Radiation Therapy Concepts 2 credits
This course integrates anatomy, clinical oncology and neoplasms, radiation physics, radiation biology, and radiation protection as they relate to the treatment planning process. Basic concepts used to develop the treatment plan for patients with particular needs will be discussed. Prerequisite: RAT2022; corequisites: RAT 1619, 2690. (2 hr. lecture)

RAT2834L

Clinic 4 6 credits
This course includes clinical rotations through the radiation therapy department. Students will be provided the opportunity to apply theory learned from the previous semester in the various areas of the treatment process. Prerequisites: RAT 1824L; corequisites: RAT 1619, 2690. (288 hr. clinic)

Radiologic Technology

RTE1000

Orientation to the Imaging Sciences 2 credits
This course is an introduction to the overall field of Imaging Sciences, radiography in particular. Students will learn the basic principles of radiation protection as it applies to the various modalities in imaging and treatment, a history of the imaging sciences, ethical/legal issues, professional behavior, medical terminology, and math/physics. (2 hr. lecture)

RTE1418

Radiographic Technology 1 3 credits
Introduction to radiographic imaging including the relation of technical factors and accessories. The chemistry of manual and automatic film processing is included. Prerequisites: RTE 1503, 1503L, 1804. (3 hr. lecture)

RTE1503

Radiographic Positioning 1 3 credits
Basic routine positioning of the chest, abdomen, upper and lower extremities, digestive and urinary systems. Prerequisites: RTE 1000, 1418, 1503L, 1804. (3 hr. lecture)

RTE1503L

Radiographic Positioning Laboratory 1 1 credit
Laboratory for RTE 1503. Corequisite: RTE 1503. Laboratory fee. (2 hr. lab)

RTE1513

Radiographic Positioning 2 3 credits
Positioning of the bony pelvis, shoulder girdle, bony thorax, spinal column, skull and facial bones. Prerequisites: RTE 1418, 1503, 1503L, 1804; corequisites: RTE 1513L, 1613, 1814. (3 hr. lecture)

RTE1513L

Radiographic Positioning Laboratory 2 1 credit
Laboratory for RTE 1513. Corequisite: RTE 1513. Laboratory fee. (2 hr. lab)

RTE1613

Radiologic Physics 2 credits
Basic principles of physics involving x-radiation equipment, production and control. Prerequisite: RTE 1000. (2 hr. lecture)

RTE1804

Radiographic Clinic 1 5 credits
The first in a series of six clinical courses. Under direct supervision of faculty and clinical staff, performance of basic diagnostic radiographic procedures is carried out. Corequisites: RTE 1418, 1503, 1503L. (15 hr. clinic)

RTE1814

Radiographic Clinic 2 5 credits
The student will be evaluated on competency performances in routine fluoroscopic, and in urographic procedures. This is the second of six clinical education courses. Prerequisite: RTE 1804; corequisites: RTE 1513, 1513L, 1613. (15 hr. clinic)

RTE1824

Radiographic Clinic 3 5 credits
The student continues to rotate, under supervision, through different units of a Radiology Department. Development of a capability to assist in diagnostic procedures at a more complex level. Prerequisite: RTE 1814. (24 hr. clinic)

RTE2010

New Imaging Modalities in Radiology 1 credit
This course will enable the students to compare and contrast the current imaging modalities with the emerging technologies available in Radiology departments. Included in this course will be pictorial archiving and communications systems (PACs), digital imaging, and fusion imaging. Prerequisites: RTE 1418, 1613, 2457; corequisite: RTE2854. (1 hr. lecture)

RTE2385

Radiation Biology 2 credits
The biologic effects of the interaction of ionizing radiation with living matter. Prerequisite: RTE1000; 2834. (2 hr. lab)

RTE2457

Radiologic Technology 2 3 credits
A more in-depth study of radiographic exposure factors as they relate to specialized procedures and equipment. Prerequisite: RTE 1824; corequisites: RTE 2563, 2834, 2782. (3 hr. lecture)

RTE2563

Radiographic Positioning 3 2 credits
Radiographic procedures which utilize contrast media, sterile techniques, and/or specialized equipment and accessories. Prerequisite: RTE1824; corequisites: RTE 2457, 2782, 2834. (2 hr. lecture)

RTE2834

Radiographic Clinic 4 5 credits
Performance of procedures of increasing levels of complexity and responsibility including specialized diagnostic procedures. At this level the program faculty and clinical supervisor will determine if the student can perform procedures with less supervision. Prerequisite: RTE 1824; corequisites: RTE 2457, 2563, 2782. (15 hr. clinic)

RTE2844

Radiographic Clinic 5 8 credits
The fifth in a series of six clinical education courses. During this clinical course the student will perform standard quality assurance tests on radiographic equipment and accessories. In addition, the student will have competency evaluations to include a gastrointestinal series and either paranasal sinuses or facial bone studies. Prerequisite: RTE 2834. (24 hr. clinic)

RTE2854

Radiographic Clinic 6 3 credits
The student will complete the competencies required by the American Registry of Radiologic Technologists to become eligible to apply to sit for the certification exam. The student will socialize into radiography practice by beginning to work more independently of a radiographer. The student will use organizational skills to provide care to patient clients assigned to them during radiographic exams. During this course the student will be assigned to one rotation during hours other than the normal working hours of the radiology department to gain competency in procedures not usually available during the day. Prerequisite: RTE 2844. (9 hr. clinic)

Reading

REA1125

Reading Skills Review 1-3 credits
This course is designed to help students to develop specific literal and critical reading com-

prehension skills which are needed in preparation for the CLAST exam. Course content will focus on prescribed instruction based on reading assessment scores. (1-3 hr. lecture)

Reading College Preparatory

REA0007

Developmental Reading I 4 credits
REA 0007 is a college preparatory reading course. Students will learn to build vocabulary skills, literal and critical comprehension skills, and successful reading strategies. Lab time required. Laboratory fee. Prerequisite: Computerized Placement Test (CPT) or the Post-secondary Education Readiness Test (PERT). (2 hr. lecture; 4 hr. lab)

REA0017

Developmental Reading II 4 credits
REA 0017 is an intermediate college preparatory reading course. Students will learn to build vocabulary skills, literal and critical comprehension skills, and successful reading strategies. Lab time required. Laboratory fee. Prerequisite: Computerized Placement Test (CPT) or the Post-secondary Education Readiness Test (PERT). (2 hr. lecture; 4 hr. lab)

REA0056

Developmental Reading Module 2 credits
This course is designed to develop reading comprehension skills for students whose entry placement scores do not meet requirements for degree credit courses (course not applicable for graduation requirements). This course may be taken in place of REA0017 for students who completed REA0017 in a prior term but did not earn a passing grade. Students will learn to focus on their individual reading skills to prepare for successful entry into college credit English courses. Prerequisite: Students must score 102-103 on the PERT or receive departmental permission. (2 hr. lecture)

Reading Education

LAE4211

Methods and Resources for Literacy Development in Young Children 3 credits
The student will utilize a variety of assessment tools to measure and evaluate literacy in a K-3 setting. The student will learn to create and administer informal assessments, evaluate results, and differentiate instruction encompassing the reading components. Twenty hours of clinical experience and 1 observation required. Pre-requisites: RED3009; Co-requisites: EEC4268. Special Fee. (3 hr. lecture)

RED3009

Early and Emergent Literacy 3 credits
This second course in literacy provides in-

formation on emergent and early literacy development and the conditions promoting literacy from birth through lower elementary grades. The student will learn all aspects of literacy learning: reading, writing, listening, and speaking, and will utilize emergent and early literacy theory and research. (15 hours of clinical experience and 1 observation required). Pre-requisites: EEC2224, EEC3301. Special Fee. (3 hr. lecture)

RED3013
Foundations of Reading Instruction 3 credits

The student will learn about reading instruction from birth to secondary levels. The student will learn educational neuroscience theory and current research-based literacy instruction approaches. All components of the reading process are explored: phonemic awareness, phonics, vocabulary, fluency, oral language, and comprehension. Fifteen hours of clinical experience are required. Pre/Co-requisites: EDG3321. Special Fee. (3 hr. lecture)

RED3393
Differentiated Instruction in Content Reading 3 credits

The student will learn about educational neuroscience research and best practices related to the instruction of efferent reading. The student will determine and select appropriate instructional materials, differentiate instruction for diverse learners, and scaffold for effective literacy instruction across the curriculum. Fifteen hours of clinical experience are required (Note: This course is intended for ESE Majors). Pre-requisites: RED3013. Special Fee. (3 hr. lecture)

RED4519
Diagnosis and Instructional Intervention in Reading 3 credits

The student will learn how assessments are utilized to diagnose K-12 student's strengths and weaknesses in the reading components. The student will learn how to create and administer informal assessments, evaluate the results, and plan instructional interventions utilizing educational neuroscience research and best practices. Fifteen hours of clinical experience are required. Pre-requisites: RED3393. Special Fee. (3 hr. lecture)

Real Estate

REE2040
Real Estate Principles and Practices (P&P 1) 4 credits

Topics include real property, liens, titles, contracts, tax factors, mortgages, property evaluation, real estate market, licensing requirements, legal aspects of the real estate business, and property management. Completion of this course is required by the Florida Real Estate Commission for approval to take the State Examination. (4 hr. lecture)

REE2085
Post Licensure Education for Salespersons 3 credits

Is a state required course that all newly licensed salespersons must complete within two years of obtaining their first sales license. This survey course covers finance, appraising, salesmanship, property management and office management. It is the intent of the Florida Real Estate Commission that this course prepare a new licensee in a more functional and in-depth basis than does the license course. (3 hr. lecture)

REE2200
Real Estate Finance 3 credits

Methods of financing Real Estate, in fixed rate, variable rate, FHA, VA, and graduated mortgage compared from the lenders', and the borrowers' point of view. Creative financing techniques such as buy-downs, and wrap-around mortgages will be discussed. (3 hr. lecture)

REE2270
Mortgage Banking and Brokerage 3 credits

Development of an understanding of the finance industry as it relates to real estate. Detailed information concerning legal aspects of mortgages, brokerage regulation, ethics and all major sources of funds for real estate financing will be covered. Prerequisite: REE 2200 (3 hr. lecture)

Religion

REL1210
Religion of the Old Testament 3 credits

The historical sources and material in the Old Testament, with emphasis on its literary and cultural importance. (3 hr. lecture)

REL1240
Religion of the New Testament 3 credits

The historical sources and material in the New Testament, with emphasis on its literary and cultural importance. (3 hr. lecture)

REL2121
Survey of Religion in the U.S. 3 credits

A survey of non-native American religions in the United States from the 17th century to the present and their impact on American culture. The course will examine four general areas: the colonial era; the religions of the frontier, the South and African-American responses to before and after the Civil War; the 19th century continuing social, political and theological tension. (3 hr. lecture)

REL2300
Survey of World Religions 3 credits

A survey of the origins, beliefs and contemporary practices of the world's religions: Hinduism, Islam, Taoism, Zen Buddhism, Judaism, Christianity and Confucianism. Attention is given to the interactions between specific religions and the cultures in which they are practiced. (3 hr. lecture)

REL2600
Jewish History and Culture 3 credits

A survey of the development of Jewish history and culture from Biblical times to the present. (3 hr. lecture)

Respiratory Therapy Technician

RET1024
Introduction to Respiratory Care 2 credits

This is an introductory course to the Respiratory Care discipline. Students will learn the history of the profession, terminology, hospital and patient safety, infection control, patient assessment, accessing and utilizing the patient's medical record, critical thinking, Respiratory Care protocols, and patient education. Prerequisite: ENC 1101; corequisite: RET 1024L, 1484. A.S. degree credit only. (2 hr. lecture)

RET1024L
Introduction to Respiratory Care Laboratory 1 credit

Laboratory for RET 1024. Corequisite: RET 1024. Laboratory fee. (2 hr. lab)

RET2264
Advanced Modalities and Monitoring 2 credits

This is an advanced course relating to critical care. Students will learn advanced techniques in invasive and non-invasive monitoring, electrocardiographic monitoring and interpretation, alternatives to conventional ventilation and advanced cardiovascular support systems. Prerequisite RET 2284; corequisite RET 2714. A.S. degree credit only. (2 hr. Lecture)

RET2350
Respiratory Care Pharmacology 2 credits

This course is designed to provide training in the basic principles of the administration of medications including dosage and solutions. The drugs administered by respiratory therapists are covered in-depth, along with an introduction to the general pharmacological classifications of other drugs that may be administered to pulmonary patients. Prerequisites: CHM 1033, RET 1484; corequisites: RET 2503, 2275, 2275L. (2 hr. lecture)

RET2414
Pulmonary Studies 2 credits

In-depth study of diagnostic techniques in the field of pulmonary medicine which includes lung volumes, static and dynamic mechanics of breathing, ventilation, distribution of gases, diffusion and arterial blood gas sampling and handling. Corequisite: RET 2414L. (2 hr. lecture)

RET2414L
Pulmonary Studies Laboratory 1 credit

Laboratory for RET 2414. Simulated clinical settings of diagnostic techniques used to evaluate pulmonary functions. Laboratory fee. (2 hr. lab)

RET2503**Respiratory Care****Pathophysiology 2** 3 credits

This is a foundation course on cardiopulmonary disease. The student will learn the pathogenesis, diagnosis, treatment and rehabilitation of the diseases included in the course. Prerequisite: RET 1484; Prerequisite: RET 1484. A.S. degree credit only. (2 hr. lecture)

RET2601**Respiratory Care Seminar** 2-3 credits

This is an advanced course focuses on clinical and nonclinical issues. Students will learn concepts including, but not limited to, clinical research, legal and ethical concerns, home care, extended care, rehabilitation and management. ACLS and PALS certification obtained. A.S. degree credit only. (2-3 hr. lecture)

RET2714**Perinatal and Pediatric****Respiratory Care** 2 credits

This course is designed to provide training in perinatal and pediatric respiratory care. Students will learn assessment and therapeutic techniques related to critical care. Corequisites: RET 2264, 2714L. A.S. degree credit only. (2 hr. lecture)

RET2714L**Perinatal & Pediatric Respiratory Care Laboratory** 1 credit

This is an introductory laboratory course that will explore assessment and Respiratory Care therapeutics of the perinatal and pediatric patient populations. The student will learn to apply physical assessment techniques, oxygen aerosol and humidity therapies, therapeutic procedures, airway management, resuscitation and management of mechanical ventilation. Corequisite: RET 2714. A.S. degree credit only. (2 hr. lab)

RET2832**Respiratory Care Clinic 1** 2 credits

This is an introductory clinical practice course. The student will learn psychomotor skills related to basic respiratory care and patient care procedures including patient charting, vital signs, infection control and non-pressurized oxygen adjuncts. Prerequisites: RET 2274, 2274L. A.S. degree credit only. (6 hr. clinical)

RET2833**Respiratory Care Clinic 2** 5 credits

In conjunction with RET 2274, 2274L and RET 1024, 1024L, RET 2832 is designed to allow the student to develop psychomotor skills related to basic respiratory care and patient care procedures (patient charting, vital signs, infection control and non-pressurized oxygen adjuncts). During the rotation, the student is provided with the opportunity to apply and discuss the theory and techniques as presented in corequisite courses. Corequisites: RET 1024, 1024L, 1484, 1484L, 2274, 2274L, 2350. (15 hr. clinic)

RET2834**Respiratory Care Clinic 3** 8 credits

This course is a continuation of RET 2833. Training will be provided on the clinical application of procedures and techniques relating to respiratory critical care. Prerequisites: RET 2284, 2284L; corequisites: RET 2714. A.S. degree credit only. (24hr. clinic)

Respiratory Therapy Technology

RET1484**Respiratory Care****Pathophysiology 1** 2 credits

This is an introductory course in the study of pulmonary and cardiovascular anatomy, physiology and pathology. Students will learn terminology, disease classification, diagnostic techniques and related physiological concepts. Prerequisite: ENC 1101. corequisite: RET 1024. A.S. degree credit only. (2 hr. lecture)

RET2274**Respiratory Care Theory 1** 2 credits

Theory of supplemental oxygen and humidity in respiratory pathology. Special emphasis is given to the medical, surgical, and pediatric patients and their cardiopulmonary physiology as it relates to therapeutic oxygen techniques. Corequisite: RET 1024, 1484, 2274L. (2 hr. lecture)

RET2274L**Respiratory Care Theory Laboratory 1** 1 credit

Laboratory for RET 2274. Corequisite: RET 2274. Laboratory fee. (2 hr. lab)

RET2275**Respiratory Care Theory 2** 2 credits

Emphasis on pressure breathing modalities, chest physiotherapy, and incentive devices. Prerequisite: RET 2274; corequisite: RET 2275L. (2 hr. lecture)

RET2275L**Respiratory Care Theory Laboratory 2** 1 credit

Laboratory for RET 2275. Corequisite: RET 2275. Laboratory fee. (2 hr. lab)

RET2284**Principles of Mechanical Ventilation** 2 credits

A continuation of RET 2275. A concentrated course of study which focuses on the theoretical operation, application and procedures related to critical care and mechanical ventilation. A.S. degree credit only. Prerequisites: RET 2275, 2275L; corequisite: RET 2284L. (2 hr. lecture)

RET2284L**Principles of Mechanical Ventilation Laboratory** 2 credits

Laboratory for RET 2284. This course will provide an in depth study of the operation of mechanical ventilation devices and

associated monitors. Patient safety, troubleshooting and application are stressed. Corequisite: RET 2284. Laboratory fee. A.S. degree credit only. (4 hr. lab)

RET2835**Respiratory Care Clinic 4** 8 credits

This course is designed to provide the student with the clinical application of adult, pediatric, and neonatal intensive respiratory care. Procedures and techniques presented in RET 2280, 2714, 2264 as it relates to their clinical application will be emphasized. A.S. degree credit only. Prerequisite: RET 2834; corequisite: RET 2601. (24 hr. clinic)

Russian Language

RUS1120**Elementary Russian 1** 4 credits

An integrated (multi-media) approach to acquire proficiency in the basic skills (of the language)—listening/understanding, speaking, reading, writing, and cross-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice in class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

RUS1121**Elementary Russian 2** 4 credits

A continuation of RUS 1120. A proficiency-oriented course emphasizing the mastery of the basic skills of the language. Prerequisite: RUS 1120. (4 hr. Lecture)

Social Science

ISS1120**The Social Environment** 3 credits

The Social Environment is an interdisciplinary course that emphasizes the cultural, political, economic and global dimensions of societies. Its main objective is to promote knowledge of contemporary and historical forces that shape our social environment and engage students in a life-long process of inquiry and decision-making. (3 hr. lecture)

ISS1161**The Individual in Society** 3 credits

This is an interdisciplinary course that emphasizes understanding of oneself as a unique individual who, as part of global community, is responsible for decisions affecting his/her psychological, social, environmental, and physical well-being. Main themes include personality and self, society and culture, development and the life cycle, and the maintenance of physical and psychological health. (3hr. lecture)

ISS1935**Social Science Seminar**

1-3 credits

Small group and individual work, to analyze

in greater depth issues arising out of the interdisciplinary approach to the study of social environment and social economic change; it is designed for those students who are engaged in or have completed ISS 1120. (1-3 hr. seminar)

Sociology

SYG2000

Introduction to Sociology 3 credits
This course engages in a scientific study of society providing an overview of sociology as a social science. It includes its development as a discipline and methodology. It examines culture as a basis for human behavior, how it is acquired and its norms obeyed. It explores the issues of social inequality within society, including the issues of ethnicity and gender. The issues of social change and social institutions are examined, along with those of demography and urbanization, together with the great challenges these currently pose to the modern world. (3 hr. lecture)

SYG2010

Social Problems 3 credits
An analysis of the major contemporary and recurring social problems, emphasizing scientific search for variables involved and exploring alternative solutions. (3 hr. lecture)

SYG2230

Multi-Ethnic America 3 credits
An introduction to the theory and problems of minority groups in American society. The focus is on structural inequality, institutional discrimination, and the changing patterns of prejudice and discrimination. (3 hr. lecture)

SYG2430

Marriage and the Family 3 credits
The family as a social institution—its origin and development, its forms and functions, its interrelation with other social institutions, and its role in contemporary civilization. Areas of study include factors contributing to or acting against successful, stable marriage. (3 hr. lecture)

Sonography

SON1000L

Introduction to Sonography 1 1 credit
An introduction to the physical principles of diagnostic ultrasound. Bases of imaging with ultrasound are discussed as well as clinical units in the various areas of specialization. In conjunction with the lectures, supervised laboratory classes are conducted to familiarize students with operations of the equipment in each of the clinical areas. Corequisites: SON 1111C, 1121C. (2 hr. lab)

SON1001L

Introduction to Sonography 2 1 credit
This second introductory course will cover the past present and future of sonography. After the historical landmarks are identified, the focus will be on the current diversity of applications of diagnostic medical sonography. Students will also discover future trends and developments on the technology horizon of the profession. Prerequisite: SON 1000L. (2 hr. lab)

SON1005L

Basic Sonography 2 credits
This course is designed to cover the essential of the profession of Diagnostic Medical Sonography. Topics include: professionalism, medical ethics, hospital administration, sonographic terminology, quality assurance, photographic principles, related radiological specialties and scanning techniques. Laboratory experience will include equipment use and quality assurance techniques. Prerequisite: SON 1000L. Laboratory fee. (4 hr. lab)

SON1006L

Professional Aspects of Sonography 1 credit
An introduction to the professional aspects of sonography. Topics include: medical ethics and law, hospital administration, quality assurance/quality control and management. Laboratory experience includes actual phantom scanning conducting equipment protocols, and participation on a mock ethics board. (2 hr. lab)

SON1100L

Principles of Protocols of Imaging 2 credits
An introduction to radiographic film, its handling & processing and the various radiographic specialties. Laboratory experience includes: film composition and identification, rapid processing, photographic techniques, reading H&D curves, performing sensitometry and identifying film artifacts. During radiographic specialties, there will be an introduction to CT, MRI, and the areas of radiologic technology in order to discover how these modalities compliment sonography. (4 hr. lab)

SON1111C

Abdominal Sonography 1 2 credits
An in-depth course designed to cover all aspects of clinical abdominal ultrasound studies. Subject matter includes: review of normal anatomy (ultrasonic appearance), indications for ultrasound studies, clinical presentation and data, pathophysiological basis of disease, ultrasonic manifestations of diseases, recognition of adequate images and scanning pitfalls. Corequisite: SON 1000L. (1 hr. lecture; 2 hr. lab)

SON1112C

Abdominal Sonography 2 2 credits
An in-depth course designed to cover all aspects of clinical abdominal ultrasound studies. Subject matter includes: review of normal

anatomy (ultrasonic appearance), indications for ultrasound studies, clinical presentation and data, pathophysiological basis of disease, ultrasonic manifestations of diseases, recognition of adequate images and scanning pitfalls. Prerequisite: SON 1111C. Laboratory fee. (1 hr. lecture; 2 hr. lab)

SON1113L

Sonography Cross Sectional Anatomy 2 credits
A thorough course aimed at teaching the student to understand anatomical relationships and recognize structures on cross-sectional and sagittal diagrams, photographs of gross anatomy and sonography. The laboratory conducted in conjunction with the classroom lectures is designed to identify all normal anatomical landmarks in multiple planes in actual scanning situations. (4 hr. lab)

SON1115L

Duplex Abdominal Sonography 1 credit
This course is designed to cover aspects of duplex abdominal sonography applications. Topics include: the aorta and its branches, the IVC and its tributaries, and the portal system. Subject matter includes: etiology, pathophysiology, clinical presentations, sonographic appearance and differential diagnosis of diseases. Prerequisite: SON 1112C. (2 hr. lab)

SON1121C

Obstetrics/Gynecology Sonography 1 2 credits
An in-depth course designed to present all aspects of clinical OB/GYN ultrasound studies. Subject matter includes: review of normal anatomy (ultrasound appearance), indications for ultrasonic studies, clinical presentation, clinical data, pathophysiological basis of disease, ultrasonic manifestations of diseases, recognition of adequate images and scanning pitfalls. Corequisite: SON 1000L. (1 hr. lecture; 2 hr. lab)

SON1122C

Obstetrics/Gynecology Sonography 2 2 credits
An in-depth course designed to cover all aspects of clinical OB/GYN ultrasound studies. Subject matter includes: review of normal anatomy (ultrasound appearance), indications for ultrasonic studies, clinical presentation, clinical data, pathophysiological basis of disease, ultrasonic manifestations of diseases, recognition of adequate images and scanning pitfalls. Prerequisite: SON 1121C. (1 hr. lecture; 2 hr. lab.)

SON1141C

Small Parts Sonography 2 credits
An in-depth course designed to cover all aspects of clinical abdominal ultrasound studies. Subject matter includes: review of normal anatomy (ultrasonic appearance), indications for ultrasound studies, clinical presentation and data, pathophysiological basis of disease, ultrasonic manifestations of dis-

eases, recognition of adequate images and scanning pitfalls. Prerequisite: SON 1112C. (1 hr. lecture; 2 hr. lab)

SON1145L

Pediatric Sonography 1 credit
This course is designed to cover aspects of pediatric ultrasound examinations. Topics include: Liver, biliary, spleen, renal, adrenal, gastrointestinal, scrotum, and musculoskeletal structures. Subject matter includes: etiology, pathophysiology, clinical presentations, sonographic appearance and differential diagnosis. Prerequisite: SON 1141C. (2 hr. lab)

SON1804

Clinic 1 2 credits
This is the first in a series of six (6) clinics in which the student is assigned to a medical facility. The student is afforded a hands-on experience in sonography under the supervision of a clinical instructor, sonographer or physician. Corequisite: SON 1000L. (16 hr. clinic)

SON1814

Clinic 2 2 credits
This is the second in a series of six (6) clinics in which the student is assigned to a medical facility. The student is afforded hands-on experience in sonography under the supervision of a clinical instructor, sonographer or physician. Prerequisite: SON 1804. (8 hr. clinic)

SON1824

Clinic 3 3 credits
This is the third in a series of six (6) clinics in which the student is assigned to a medical facility. The student is afforded hands-on experience in sonography under the supervision of a clinical instructor, sonographer or physician. Prerequisite: SON 1814. (24 hr. clinic)

SON2139L

Cardiovascular Principles 1 credit
An introductory course to techniques other than echocardiography utilized in the diagnosis of cardiovascular disease. Topics discussed include physical examination, electrocardiogram, Phonocardiogram, cardiac catheterization, and nuclear medicine cardiology. Prerequisite: SON 2400C; Corequisite: SON 2401C. (2 hr. lab)

SON2161C

Neurosonography 2 credits
A comprehensive course designed to examine sonographic imaging of the neonatal and infant brain, with an introduction to ultra-operative brain and spinal cord imaging. Emphasis is placed on normal brain anatomy, congenital and malformations and acquired pathologic conditions. Prerequisites: SON 1113L, 1141C. Special fee. (1 hr. lecture; 2 hr. lab)

SON2171C

Vascular Sonography 2 credits
This course is designed to cover aspects of Clinical Vascular Technology. Topics include

the pathophysiological levels of disease, clinical presentation and data, hemodynamic of blood flow, anatomy and physiology of the vascular system and anatomical appearance. Prerequisite: SON 2161C. (1 hr. lecture; 2 hr. lab)

SON2400C

Echocardiography 1 2 credits
An in-depth course designed to present all aspects of clinical cardiovascular ultrasound studies. Topics discussed are: pathophysiological basis of diseases, clinical presentation and clinical data, Doppler and echocardiographic findings in disease, hemodynamic relationships, scanning pitfalls and differential diagnosis. Prerequisite: SON 1000L. (1 hr. lecture; 2 hr. lab)

SON2401C

Echocardiography 2 2 credits
An in-depth course designed to cover all aspects of clinical cardiovascular ultrasound studies. Topics discussed are pathophysiological basis of diseases, clinical presentation and clinical data, Doppler and echocardiographic findings in disease, hemodynamic relationships, scanning pitfalls and differential diagnosis. Prerequisite: SON 2400C. (1 hr. lecture; 2 hr. lab)

SON2614C

Acoustical Physics and Instrumentation 1 2 credits
The course will present a review of fundamental physics and in-depth study of the

physical principles of diagnostic ultrasound. Topics discussed include: properties of sound waves, interaction of sound waves with matter, generation of ultrasound and principles of Doppler ultrasound. Prerequisite: SON 1005L. (1 hr. lecture; 2 hr. lab)

SON2618C

Acoustical Physics and Instrumentation 2 2 credits
Physical principles of Ultrasound Instrumentation-A course designed to familiarize the student with the physical principles and modes of operation of diagnostic ultrasound equipment. Subject matter includes: transducers, display systems, component parts of a scanning system, real-time scanners, Doppler equipment, quality control, routine maintenance and recent developments. Prerequisites: SON 2614C, CGS 1060. (1 hr. lecture; 2 hr. lab)

SON2619C

Doppler Principles and Instrumentation 2 credits
This course presents a review of fundamental physics and an in-depth study of Doppler Physical Principles of Diagnostic Ultrasound. Topics also include Doppler Instrumentation, equipment, display systems, quality control, and hemodynamics of blood flow. Prerequisite: SON 2618C. Laboratory fee. (1 hr. lecture; 2 hr. lab)

SON2834

Clinic 4 2 credits



This is the fourth in a series of six (6) clinics in which the student is assigned to a medical facility. The student is afforded hands-on experience in sonography under the supervision of a clinical instructor, sonographer or physician. Prerequisite: SON 1824. (16 hr. clinic)

SON2844**Clinic 5 3 credits**

This is the fifth in a series of six (6) clinics in which the student is assigned to a medical facility. The student is afforded hands-on experience in sonography under the supervision of a clinical instructor, sonographer or physician. Prerequisite: SON 2834. (24 hr. clinic)

SON2854**Clinic 6 3 credits**

This is the last in a series of six (6) clinics in which the student is assigned to a medical facility. The student is afforded hands-on experience in sonography under the supervision of a clinical instructor, sonographer or physician. Prerequisite: SON 2844. (24 hr. clinic)

SON2910L**Directed Research 1 credit**

This course is designed to afford students an opportunity to develop their research skills, broaden their educational horizons, and further investigate a particular area of interest in the field of ultrasound. Students will select a topic for research, investigate and gather information, and compile the results for presentation, competition and publication. (2 hr. Lab)

SON2930L**Seminar in Sonography 1 credit**

Students will participate in the various types of continuing education. This may include: society meetings, seminars, conferences and in-services. (2hr. lab)

SON2931L**Film Critique 1 1 credit**

An extensive laboratory to prepare the student to recognize quality images, anatomy, patient positioning, pathology, and scanning technique errors as well as artifacts. For each class, the student will present a case from their current rotation of the teaching file. The class includes all technical and clinical information as well as interpretation by the supervising physician. Prerequisite: SON 1000L. Laboratory fee. (2 hr. lab)

SON2932L**Film Critique 2 1 credit**

An extensive laboratory to prepare the student to recognize quality images, anatomy, patient positioning, pathology, and scanning technique errors as well as artifacts. For each class, the student will present a case from their current rotation of the teaching file. The class includes all technical and clinical information as well as interpretation by the supervising physician. Prerequisite: SON 2931L. Laboratory fee. (2 hr. lab)

SON2933L**Film Critique 3 1 credit**

An extensive laboratory to prepare the student to recognize quality images, anatomy, patient positioning, pathology, and scanning technique errors as well as artifacts. For each class, the student will present a case from their current rotation of the teaching file. The class includes all technical and clinical information as well as interpretation by the supervising physician. Prerequisite: SON 2932L; Corequisite: SON 2401C. (2 hr. lab)

SON2934L**Film Critique 4 1 credit**

An extensive laboratory aimed at teaching the student to recognize quality images, anatomy, patient positioning, pathology, and scanning technique errors as well as artifacts. For each class, the student will present a case from their current rotation of the teaching file. The presentation will include all technical and clinical information as well as the final interpretation by the supervising physician. Prerequisite: SON 2933L. Laboratory fee. (2 hr. lab)

SON2935L**Film Critique 5 1 credit**

An extensive laboratory aimed at teaching the student to recognize quality images, anatomy, patient positioning, pathology, and scanning technique errors as well as artifacts. For each class, the student will present a case from their current rotation of the teaching file. The presentation will include all technical and clinical information as well as the final interpretation by the supervising physician. Prerequisite: SON 2934L. Laboratory fee. (2 hr. lab)

SON2950L**Journal Review 1 credit**

Students select scientific articles from sonography journals for review and presentation in class. (2 hr. lab)

Spanish Language and Literature

SPN1030**Spanish for Health Professionals 1 4 credits**

Conversational Spanish for students in the Allied Health programs only. Emphasis is on the practical application of Spanish to situations relative to patients and personnel. A.S. degree credit only. (3-4 hr. lecture)

SPN1120**Elementary Spanish 1 4 credits**

An integrated (multi-media) approach to acquire proficiency in the basic skills (of the language)—listening/understanding, speaking, reading, writing, and cross-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice in class and laboratory in understanding and using the

spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

SPN1121**Elementary Spanish 2 4 credits**

A continuation of SPN 1120. A proficiency-oriented course emphasizing the mastery of the basic skills of the language. Prerequisite: SPN 1120. (4 hr. Lecture)

SPN1170**Spain Travel Study 3-6 credits**

A course designed for students who wish to combine the study of Spanish with subsequent travel to a Spanish-speaking country. Prerequisites: SPN 1000, 1120 or permission of instructor. Offered through overseas study program. (3 hr. lecture)

SPN2220**Intermediate Spanish 1 4 credits**

Students will understand, speak, read, write, and gain cultural awareness of Spanish through a systematic review (using an integrated, multimedia approach) of reading, grammar, and writing skills with emphasis on oral and written communication. Prerequisite: SPN 1121 or equivalent. (4 hr. lecture)

SPN2221**Intermediate Spanish 2 4 credits**

This is a continuation of Intermediate Spanish 1. Students will learn to understand, speak, read, and write Spanish. Students will also learn to develop cross-cultural awareness through a systematic review of reading and writing skills with emphasis on oral as well as written expression. Prerequisite: SPN 2220 or equivalent. (4 hr. lecture)

SPN2240**Intermediate Spanish 1**

Conversation & Composition 3 credits
Promotes facility in understanding, speaking and writing the language. Emphasis on everyday conversation. Prerequisite: SPN 2221 or equivalent. (3 hr. lecture)

SPN2241**Intermediate Spanish 2**

Conversation & Composition 3 credits
Oral practice with idiomatic expressions; oral reports on collateral readings; class discussions. Prerequisite: SPN 2240 or equivalent. (3 hr. lecture)

SPN2340**Spanish for Native Speakers 1 3 credits**

Writing, spelling and punctuation, sentence structure and reading selections for vocabulary expansion as they are relevant to the training of individual students. Prerequisite: oral ability to communicate in Spanish or permission of department chairperson. (3 hr. lecture)

SPN2341**Spanish for Native Speakers 2 3 credits**

A continuation of SPN 2340. Prerequisite: SPN 2340 or equivalent. (3 hr. lecture)

SPT2842**Contrastive Analysis****Spanish/English****3 credits**

Comparison/contrastive study of the phonology, morphology and syntax of Spanish and English. Recommended for students of translation and interpretation. Prerequisite: SPN 1121 or equivalent. (3 hr. lecture)

SPW2010**Selected Readings in Spanish****Literature****3 credits**

A study of outstanding works, authors, genres, or major literary currents in Spain. (3 hr. lecture)

SPW2020**Selected Readings in Latin American****Literature****3 credits**

A study of outstanding works, authors, genres, or major literary currents in Latin America. (3 hr. lecture)

Speech Communication

SPC1017**Fundamentals of Speech****Communication****3 credits**

This course provides students with the oral communications skills necessary for success in personal, professional and educational settings. Students will learn through the study and experiential practice of interpersonal communication, presentational speaking and group dynamics of communication and be able to use them effectively. Gordon Rule assigned. Special fee. (3 hr. lecture)

SPC2050**Voice and Diction****3 credits**

Effective voice production and articulation, acceptable pronunciation, intonation, rhythm, and phrasing, a consideration of elementary vocal anatomy and the fundamentals of the science of sound. Specific speech problems will be handled on an individual basis. (3 hr. lecture)

SPC2511**Argumentation and Debate****3 credits**

The principles of argumentation, including analysis, evidence, inference and refutation, and their application to issues of current public interest. The course provides opportunities for debating practice. Prerequisite: SPC 2608 or equivalent. (3 hr. lecture)

SPC2594**Forensic Laboratory****1-3 credits**

Advanced techniques of debate and other forensics, keyed primarily to those interested in intercollegiate forensic competition. Prerequisite: Permission of the instructor. May be repeated for credit. (2-6 hr. lab)

SPC2601**Advanced Public Speaking****3 credits**

For students who have had a basic course in speech or previous experience in public

speaking. The course provides participation in such areas as contest, community and on-campus speaking, and speech criticism. Students receive instruction in audience analysis and rhetorical principles and strategies. Prerequisite: SPC 2608. (3 hr. lecture)

SPC2608**Introduction to Public****Speaking****3 credits**

SPC 2608 is a course in which students will practice speaking to audiences as well as listening to and critically analyzing oral communication. Through oral and written communication, students will learn communication theory as applied to a variety of communication situations and social interactions. Prerequisite(s): Placement by Scholastic Assessment Test (SAT) verbal subtest score; American College Testing (ACT) English subtest score; Computerized Placement Test (CPT) English subtest score; or ENC 0025 with a grade of S. Gordon Rule assigned. (3 hr. lecture)

SPC2940**Peer Teaching in Speech****Communication****3 credits**

Provides the opportunity for outstanding speech students to advance their skills by functioning as student teachers in speech courses which they have completed successfully. Prerequisite: Permission of the department. (3 hr. lecture)

Statistics

STA2023**Statistical Methods****3 credits**

This course will introduce students to statistical methods. Students will learn topics to include collecting, grouping and presenting; measures of central tendency and dispersion; probability; testing hypotheses; confidence intervals; and correlation. Prerequisite: MAT 1033. Special fee. Fulfills Gordon Rule computational requirement. (3 hr. lecture)

STA3164**Statistical Methods 2****3 credits**

This course is for students majoring in data analytics, systems engineering, and related disciplines who require advanced skills in statistical analysis. Students will learn how to perform tests of variance, analysis of variance, analysis of covariance, regression, correlation, and non-parametric statistics. Prerequisite: STA2023. (3 hr. lecture; 2 hr. lab)

STA4210**Regression Analysis****4 credits**

This course is for students majoring in data analytics, systems engineering, and related disciplines who require advanced in statistical analysis. Students will learn the principles and procedures of correlations and regression analysis and how to allocate information in data sets using statistical software. Prerequisite: STA3164. (3 hr. lecture; 2 hr. lab)

Student Life Skills

SLS1106**First Year Experience Seminar****1 credit**

This course is designed to provide students a forum for transitioning into college. Students will learn to develop the skills required for success in college and beyond. This course is intended for first time in college students, who are seeking an Associate in Arts degree program. (1 hr. lecture)

SLS1125**Student Support Seminar****3 credits**

This course provides a foundation for gaining knowledge, skills and attitudes necessary for college success. Students will learn specific social, cultural, psychological, and academic considerations that are known to impact student achievement. Students will also assess their competence in each of these areas, and learn strategies that will improve their overall student effectiveness. (3 hr. lecture)

SLS1130**College Survival Seminar****1 credit**

An introduction to the campus, college policies, student services and self-discovery for entering freshmen. (1 hr. lecture)

SLS1401**Psychology of Career****Adjustment****1-6 credits**

For students who have not decided, are having difficulty deciding, or need clarification in making a career choice. A format for a systematic investigation for career and life planning is included. It is concerned with "who you are," "where are you going," "how to get there," and "what's out there that fits you." Special fee. (1-6 hr. lecture)

SLS1502**College Study Skills****1-3 credits**

Skills, techniques and procedures for mastering study strategies such as taking classroom and lecture notes, mastering tests, developing memory/recall, actively listening, and proper management of time. (1-3 hr. lecture)

SLS1505**College Survival Skills****1 credit**

This is an introductory self-discovery course designed to help students make the transition to college. Students will learn the knowledge and skills necessary for success, including knowledge of academic policies and procedures, effective study strategies, and making sound academic and career choices. (1 hr. lecture)

SLS1510**Preparing for Student Success****3 credits**

This course provides an orientation to college life and helps develop academic, career, and personal goals. Students will learn college success strategies, goal-setting, learning style assessments, as well as general and discipline-specific study skills in the context of various theoretical, practical, and experiential perspectives. (3 hr. lecture)

Surveying

SUR1001C
Construction Survey 3 credits
 Practice of surveying as related to the building and construction industry. Includes a combination of classroom instruction and practical field problems with the tape, level and transit. Special fee. (2 hr. lecture; 2 hr. lab)

SUR1101C
Surveying 1 4 credits
 The theories and practices in surveying and the use of the principal types of surveying instruments in horizontal and vertical planes. Problems include the measurement of distance; the use of compass, sextant, transit traverse, stadia, and basic mapping. Field and laboratory practice are required. Prerequisite: EGS 1111C, ETD 1200. Laboratory fee. (2 hr. lecture; 4 hr. lab)

SUR1202C
Surveying 2 4 credits
 Advanced study in route, land, and mapping surveying to include triangulation, astronomical observations, topographic and photogrammetric mapping. Field demonstrations and surveys performed with many modern types of survey instruments. Prerequisite: SUR 1101C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

Teaching English as a Second Language

TSL3080
ESOL in ECE I 3 credits
 The student will learn to explore theories, research, and practices of English language learners, including legal issues that have influenced the field, first and second language acquisition, concepts of cultural competence and multiculturalism, and the implications of cultural and linguistic diversity in early childhood education. Fifteen hours of clinical experience is required. Pre/Co-requisites: EDF3115, EEC3301. Special Fee. (3 hr. lecture)

TSL3240
Applied Linguistics 3 credits
 The student will learn to analyze linguistic theories for first and second language acquisition and literacy development as well as the study of language as a system and its structure. The student will apply this knowledge to enhance instruction for culturally and linguistically diverse learners. This is one of five courses required for the Florida Add-on ESOL endorsement. Prerequisite: Bachelor's degree and School of Education Approval. (3 hr. lecture)

TSL3243
ESOL I: Second Language Acquisition, Communication, and Culture 3 credits
 The student will learn to analyze and apply

theories of first and second language acquisition, literacy development, language and its structure, ways that diverse cultures and communication styles impact learning, and legal issues related to the education of culturally and linguistically diverse learners. Fifteen hours of clinical experience are required. Pre/Co-requisites: EDG3321, EEX3120. (3 hr. lecture)

TSL3331
ESOL: Language Principles and Acquisition 3 credits
 This course provides an introduction to the analysis and classroom application of Linguistic theories for first and second language acquisition and literacy development as well as the study of language and its structure. Students will examine and apply this knowledge to enhance instruction for culturally and linguistically diverse learners. Prerequisite EDG 3321. (3 hr. lecture)

TSL3520C
Cultural Dimensions of ESOL 3 credits
 The student will learn to apply the theories related to the effect of culture in language learning and school achievement for English Language Learners (ELL) from diverse backgrounds. This course is one of five required for the Florida Add-on ESOL endorsement. (15 hours of clinical experience are required). Prerequisite: Bachelor's degree and School of Education Approval. (3 hr. lecture)

TSL3521
ESOL II: Communication and Culture 3 credits
 This course provides an overview of topics related to the field of cross cultural studies and implications for instruction. The students will learn to plan and implement curriculum, instruction, and assessment activities to meet the needs of culturally and linguistically diverse learners. Fifteen hours of field experience required. (3hr. lecture)

TSL4140C
TESOL Curriculum and Materials 3 credits
 The student will learn to apply concepts, research, principles, best practices, and evidence-based strategies to plan classroom instruction in a English Language Learners supportive learning environment for ELLs'. The student will analyze, plan, design, and evaluate curriculum and materials appropriate for ELLs'. This course is one of five required for Florida Add-on ESOL Endorsement. (15 hours of clinical experience required). Prerequisite: Bachelor's degree and School of Education Approval. (3 hr. lecture)

TSL4310
ESOL in ECE II 3 credits
 This second TESOL course addresses the application of theories, principles, and current research on curriculum, methods, and assessment in early childhood, as well as how these are designed for children who use non-standard dialects of English and/or are learning English as an additional language. The student will learn modifications appropriate for con-

tent area teaching and learning. Fifteen hours of clinical experience are required. Pre-requisites: EDF3115, EEC3301, EEX3226, TSL3080. Special Fee. (3 hr. lecture)

TSL4311
ESOL II: Teaching and Assessing ESOL Students 3 credits
 The student will learn to apply TESOL instructional methods and strategies, as well as analyze, plan, design, and evaluate curriculum and materials. The student will learn to select, develop, and adapt assessment instruments and examine standardized ESOL measurement tools Fifteen hours of clinical experience are required. (3 hr. lecture)

TSL4324C
ESOL Strategies for Content Area Teachers 3 credits
 The student will learn topics related to teaching content area subjects to English Language Learners. The student will plan and implement curriculum, instruction, and assessment activities to meet the needs of culturally and linguistically diverse learners. Fifteen hours of clinical experience are required. Pre/Co-requisites: EDG3321. (3 hr. lecture)

TSL4340C
TESOL Methods 3 credits
 The student will learn to apply TESOL theories, principles, and current research in the use of instructional techniques and methodologies appropriate for teaching ELL. This course is one of five required for Florida Add-on ESOL Endorsement. (15 hours of clinical experience required). Prerequisite: Bachelor's degree and School of Education Approval. (3 hr. lecture)

TSL4347
ESOL III: Methods of Teaching ESOL Students 3 credits
 This course focuses on the application of TESOL instructional methods and strategies as well as the analysis, planning, design, and evaluating of curriculum and materials. Students will learn to select, develop, and adapt assessment instruments. Standardized ESOL assessment instruments will be examined. Fifteen hours of field experience are required. (3 hr. lecture)

TSL4441C
ESOL Testing and Evaluation 3 credits
 The student will learn about the selection, development, and adaptation of assessment instruments/evaluation materials appropriate for English Language Learners, including issues related to cultural and linguistic bias, testing in two languages, and the study of the impact of standardized tests, performance-based assessment, and other issues related to student outcomes. This course is one of five required for the Florida Add-on ESOL Endorsement. (15 hours of clinical experience is required.) Prerequisite: Bachelor's degree and School of Education Approval. (3 hr. lecture)

Theater Arts

THE1925

Studio Theatre Production 3 credits

Theoretical and practical experience with all aspects of studio theatre production including design, directing, lighting, technical and casting. The course will include faculty supervised public performances. May be repeated for credit. Prerequisite: Permission of department chairperson. (3 hr. lecture)

THE2000

Theatre Appreciation 3 credits

The development of drama from its beginning to contemporary theatre. Included are the analyses and study of major plays exemplary of outstanding periods of theatre history. Required of drama and drama education majors. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

THE2051

Children's Theatre Production 3 credits

The theory of children's theatre, its development with the American theatrical scene, its function within the American community and applications of the theories in actual productions before audiences. (3 hr. lecture)

THE2083

Theatre Problems 1-3 credits

This is an advanced course for theatre majors who have already earned credit in a required subject or who have demonstrated that they are capable of advanced, highly specialized work in a particular area of requirements and objectives. Possible areas of study include advanced scene work; intensive training in particular acting methods; playwriting; and directing. Students are assigned to a teacher, who will design, supervise, and evaluate their projects. May be repeated for credit. (1-3 hr. lecture)

TPA1200

Stagecraft 3 credits

A basic study of technical theatre practices with emphasis on scenery construction, rigging and prop construction. This course may be taken concurrently with TPP 1110. (2 hr. lecture; 2 hr. lab)

TPA1202

Introduction to Entertainment Technology 3 credits

An historical overview of the scope, current trends, methods and vocabulary connected with the variety of venues used for live entertainment (arenas, stadiums, discos, theater-auditorium, convention centers, casinos, recorded entertainment at film and video sound stages and music studios); the producing organizations of entertainment and their different styles of production management (sports, music film, video, dance, theater, theme parks); and the business aspects of equipment vendors and leasing companies. An overview of theatrical unions, engineering and professional groups and their influence on standard practices will also be addressed. (3 hr. lecture)

TPA1215

Audio-Visual, Multi-Media 4 credits

This course presents the principles and practice of unpacking, unloading, setting up and operating visual aids for conference and convention, and A/V for industrial shows, conventions, concerts and special events. Also covered is media using recorded sound (A/V) and media accompanying live presenters (V/A) including 8, 16, 35 and 70 mm. movie, single and multi-media. Students will practice this technology in labs and in performance environment, under performance conditions. Prerequisite: Permission of department. (2 hr. lecture; 4 hr. Lab)

TPA1220

Lighting 3 credits

Technical theatre practices with emphasis on lighting, sound effects, and design concepts. (2 hr. lecture; 2 hr. lab)

TPA1225

Automation & Computers 3 credits

This course presents the principles and practices of automated robotics lighting (intelligent lighting), automated machinery, rigging, wagons, turntables, lifts, event sequencing between pyro, multi-media, sound and stage lights, automated show control of up to ninety-nine elements of production and computerize control of light and sound. Prerequisite: Permission of department. (2 hr. lecture; 2 hr. lab)

TPA1232

Theatre Costuming 3 credits

An introduction to three basic areas of concentration in costuming history of dress, design concepts, and building techniques. (2 hr. lecture; 2 hr. lab)

TPA1248

Makeup for the Stage 3 credits

An introduction to the art and techniques of makeup as used by the actor, theatrical designer, and technician. Special emphasis is given to straight makeup, age makeup, hair, character extension, and stylization. (3 hr. lecture)

TPA1253

Entertainment Technology: Technician 1 3 credits

This course presents the principles and practice of stage rigging, stage carpentry, road crew and gripping. Students will practice the use of hardware, knots, hemp, counter-weight and motorized flying system for scenery, curtains and ground rigging, temporary and permanent stages, sound stages or on location, expositions and/or special outdoor events. Also covered are the principles and practices of the installation and operation of wagons, winches, chain hoists and trusses, lighting equipment, sound for on-stage or studio performance, gripping for motion pictures or video production. Occupational health and safety issues are discussed and practiced. (2 hr. lecture; 2 hr. lab)

TPA1254

Entertainment Technology: Technician 2 3 credits

This course is an advanced course in entertainment technology and continuation of the principles and practices covered in Entertainment Technology Technician 1. (2 hr. lecture; 2 hr. lab)

TPA1255

Concert & Stage Lighting 4 credits

This course presents the principles and practices of installation and operation of lighting technology for a variety of entertainment venues: theater, dance, opera, rock and roll concert tours philharmonic orchestras, music festivals, industrial shows, theme parks. Special attention will be paid to venues for performances outdoors, indoors and on sound stages. Also covered are the principles and practices involved with the installation and operation of film studio, location gaffing and equipment technology. AC and DC electrical current will be studied as it applies to lighting technology with special emphasis on power supplies, cabling electricians, and basic maintenance of generic equipment as currently used in the field. Occupational health and safety, fire safety and CPR are discussed and practiced. Prerequisite: Permission of department. (2 hr. lecture; 4 hr. lab)

TPA1260

Concert & Stage Sound 4 credits

This course presents the principles and practices of the installation and strike of sound technology for a variety of entertainment venues: theater, dance and opera, rock and roll concert tours, orchestras, choirs and music festivals, theme parks, themed entertainment and industrial shows, special events, casino and cruise line shows. Special attention is paid to venues for performances outdoors, indoors and on sound stages. Also covered are the principles and practices associated with the installation and operation of film studio, location sound and sound studio set-up technology. Emphasis is placed on equipment and its specific use in the field together with practice in cabling, patching, system layout rigging and basic maintenance of generic equipment. Occupational health safety, fire safety issues and CPR are discussed and practiced. Prerequisite: Permission of department. (2 hr. lecture; 4 hr. lab)

TPA1274

Properties Practical's Non-Electrified Special Effects 3 credits

This course provides the student: the principles and practice of unloading, installing, pre-setting operating, striking, storing, loading and packing properties, practical's, physical effects and set dressing; the preparation, care and handling and clean-up of food used during a live performance and filming; the preparation, pre-set/strike, organization and storage of properties before, during and after performance and film shots. Students learn how to take instructions from management, designers and decorators for the installation and running for furniture, dressing and effects and execut-

ing cues for their movement and operation. Prerequisite: Permission of department. (2 hr. lecture; 2 hr. lab)

**TPA1275
Special Effects-Electrified Laser
& Pyrotechnics 3 credits**

This course presents the principles and practice of operating scenic, mechanical, sound, and lighting special effects including laser light and pyro-technics. Also covered are the standard practices, rules, regulations, procedures, guidelines and precautions for the safe operation of currently available devices used in industry today and those invented or special events. Prerequisite: Permission of department. (2 hr. lecture; 2 hr. lab)

**TPA2233
Main Stage Production - Costumes
& Makeup 1 credit**

Practical experience in theatrical costuming and makeup through participation in a major theatrical production. May be repeated for credit. Prerequisite: Permission of department chairperson. (2 hr. lab)

**TPA2256
Costumes & Makeup 3 credits**

This course presents the principles and practices of unloading, receiving, unpacking and distributing costumes, wigs and accessories for live performances and the load-out duties of collecting and packing the same, and the equivalent duties for on-location trailers and/or studio wardrobe. Perform costume changes as well as other reshoot and post production set-ups and strikes. Perform maintenance duties including laundry, repair, dyeing, starching, spot cleaning, ironing, pressing, steaming, shoe repair and painting, gluing, hand and machine sewing, embroidery, millinery pattern making, tailoring/alterations, leather work, beading and other costume crafts. The principles of make-up for the stage, studio and screen and preparation and maintenance of wigs, falls, and other hair pieces including beards and mustaches is also practiced. Taking instructions from management, designers, and supervisors, executing clues, collaborating with others part of a crew has equal emphasis along with.

**TPA2276
Entertainment Technology:
Crafts 1 3 credits**

This course presents the principles and practices of woodworking, welding, smithing, casting, weaving, paperhanging, painting, ceramics, plaster sewing and plastics technology for the entertainment industry. State of the art tool technology, shop and field practice, health and safety standards will be emphasized. These crafts are entertainment industry oriented with a perspective that states that objects created are to be used for production. Prerequisite: Permission of department. (2 hr. lecture; 2 hr. lab)

**TPA2277
Crafts 2 3 credits**

This course is a continuation of the study of

the principles and practices covered in Crafts 1. Prerequisite: TPA 2276 or departmental permission. (2hr. lecture; 2 hr. lab)

**TPA2291
Main stage Production-Technical
& Lighting 1 credit**

Practical application of theatrical skills in technical support, and lighting through participation in a major theatrical production. May be repeated for credit. Prerequisite: Permission of department chairperson. (2 hr. lab)

**TPA2292
Production Lab 1-3 credits**

Students will be provided with hands-on experience in theatre technology and production, including lighting; the construction of scenery; stage make-up; costume construction; actual production management; properties construction and organization; sound production; recording, editing, and operation; and house management during actual performances. Required of all first-year students. (2-6 hr. lab)

**TPA2600
Introduction to Stage
Management 3 credits**

Introduction to Stage Management is designed to familiarize the student with the role of the stage manager in the theatre. Concepts covered includes: blocking, note taking, cue calling and company relation skills. Prerequisites: TPA 1200, 1220. (3 hr. lecture)

**TPP1100
Acting 1 3 credits**

The fundamentals of stage performance, stressing voice, movement, and the more formal and technical aspects of the actor's art. May be repeated for credit. (3 hr. lecture)

**TPP1110
Acting 1 3 credits**

Continuation of TPP 1100. Prerequisite: TPP 1100. (3 hr. lecture)

**TPP1120
Improvisation Ensemble 3 credits**

The student will develop the skills of improvisation for use in role development and for performance. (3 hr. lecture)

**TPP1150
Scene Study 1 3 credits**

This course teaches the aspiring young theatre professional how to analyze a play in terms of the author's personal statement, the historical and social context within which it was written, the particular style used by the author, and the many options open to director and actor for bringing the work to stage life. A substantial portion of class time will be devoted to oral reading and interpretation of text. (1-3 hr. lecture)

**TPP1160
Voice & Movement 1 3 credits**

An intense two-semester course designed to train the acting student in specific techniques of voice production, vocal range and control; to add flexibility and suppleness to body movement, so that the actor becomes free to concentrate on the task of building a charac-

ter. Each participant is evaluated at the beginning in relation to voice and movement levels of professional acceptability and expected to demonstrate measurable growth in a personalized program. (3 hr. lecture)

**TPP1161
Voice & Movement 1 3 credits**

Continuation of TPP 1160. Prerequisite: TPP 1160. (3 hr. lecture)

**TPP1170
Beginning Characterization 3 credits**

A course which builds upon the centered foundation of creating a role developed in TPP 1100 and TPP1110. The student uses a subjective approach to creating a character which differs from him/her physically, culturally and psychologically. He/she attempts ever greater degrees of transformation. Prerequisite: TPP 1110. (3 hr. lecture)

**TPP1190
Studio Theatre-Cast 1 credit**

Practical application of skills acquired in acting classes through public presentation of student-produced studio theatre as a member of the cast. May be repeated for credit. Prerequisite: Permission of department chairperson. (2 hr. lab)

**TPP1250
Musical Theatre 1 3 credits**

The study and performance of musical comedy excerpts with special attention to stage movement, acting and characterization as related to musical production. May be repeated for credit. Prerequisite: Permission of department chairperson; corequisite: previous or current enrollment in Voice Techniques and Jazz Techniques classes. (1 hr. lecture; 2-4 hr. lab)

**TPP1260
Acting for Camera 1 3 credits**

Acting students will learn to acquire the technical knowledge and training necessary for acting in the film and television industry. Students will also acquire knowledge of the working procedure used in this media.

**TPP1606
Playwriting 1/2 3 credits**

The process of exploring playwriting styles and techniques is continued. A one-act play of significant length and complexity will be the semester project. (3 hr. lecture)

**TPP1700
Voice for the Stage 3 credits**

The study and application of voice production, breathing, articulation, accents and movement in the actor's delivery. Emphasis is on clarity, precision, properly phrased and meaningful communication from the performer to the audience. (3 hr. lecture)

**TPP2111
Acting 2 3 credits**

In this course, actors who have learned to express themselves freely now learn to adjust this expression to the demand of the

role. Students begin to apply their skills for observation, imagination, and concentration to the study of roles close to themselves. Vocal and physical flexibility and expressiveness are now put to work in the realization of expectations of the playwright, here the student develops a systematic approval to creating a three-dimensional character. (3 hr. lecture)

TPP2112
Acting 2 3 credits
Emphasis on building a characterization. The art of improvisation, with reference to its function in the preparation of a role, is included. Prerequisite: TPP 1110. (3 hr. lecture)

TPP2151
Advanced Scene Study 3 credits
In this course the theatre student learns to analyze plays with a heavy focus on particular characters and major scenes. Emphasis will be placed on works of prime importance in the history of the theatre, both past and present, so that the aspiring actor can begin to experience some of the problems involved in approaching a significant role. Each student is required to research the performance history of the roles and scenes studied as well as to uncover the subtexts and the inner line of character development. Attention will be given to both Stanislavsky and improvisation techniques as methods by which the actor comes closer to the full reality of a part. May be repeated for credit. (3 hr. lecture)

TPP2152
Scene Study 3 3 credits
This course is the culmination of a sequence. In it the advanced acting student learns how to analyze the longer one/act or shorter full-length play and to develop the through-line of one character as a preparation for an in-class performance. The student also learns how to work with the director and to relate acquired acting techniques to the stylistic requirements of a given script. (3 hr. lecture)

TPP2162
Voice & Movement 2 3 credits
An intense two-semester course in precision techniques of voice production and bodily flexibility integrating them with specific acting exercises with an emphasis on demonstrating the automatic, non-conscious application of acquired voice and movement skills. Prerequisite: TPP 1161. (3 hr. lecture)

TPP2163
Voice & Movement 2 3 credits
Continuation of TPP 2162. Prerequisite: TPP 2162. (3 hr. lecture)

TPP2191
Main stage Production - Cast 1-3 credits
Participation in a major theatrical production as a member of the cast. Main stage productions will be presented publicly to the student body and community. May be repeated for credit. Prerequisite: Permission of department chairperson. (2-6 hr. lab)

TPP2256
Musical Theatre 2 3 credits
A continuation of TPP 1250 in which the student is expected to develop further the performing skills of singing, dancing, and acting. (3 hr. lecture)

TPP2260
Acting for the Camera 1 3 credits
Acting students will attend lecture/lab to acquire the technical knowledge and training necessary for acting in the film and television industry. They will acquire a knowledge of the working procedure and terminology used in these media. Prerequisite: TPP 1100 or permission of the instructor. (2 hr. lecture; 2 hr. lab)

TPP2300
Introduction to Play Directing 3 credits
Introduction to the basics of play directing, composition, picturization, business and movement. The course will offer the student a method of analysis and rehearsal scheduling. Prerequisite: TPP 1110 and TPA 1200. (3 hr. lecture)

TPP2303L
Main stage Production-Assistant Designer/Director 1 credit
Practical experience in theatrical design and directing through participating in a major production. May be repeated for credit. Prerequisite: Permission of department chairperson. (2 hr. lab)

Transportation and Traffic Management

TRA1410
Introduction to Rail Freight Operations 3 credits
This is an introductory course in Rail Freight Operations. Students will learn the advantages and disadvantages of freight movement by rail, how rail lines are organized and operate, including the use of intermodal transfer facilities and on-dock rail. Topics include shipping documents, shipment tracking, management of human resources and equipment, and an overview of hazardous materials shipments and security issues. Co-requisites: TRA1420, 1430. (3 hr. lecture)

TRA1420
Introduction to Trucking Operations 3 credits
This is an introductory course in Trucking Operations and the movement of goods via highways and roadways. Students will learn U.S. Department of Transportation requirements, documents for shipping, vehicle and shipment tracking, scheduling, management of human resources and equipment, just-in-time implications and integration with other transportation modes. Hazardous materials ship-

ments and security issues will be discussed. Co-requisites: TRA1410, 1430. (3 hr. lecture)

TRA1430
Introduction to Port Freight Operations 3 credits
This is an introductory course in Port Freight Operations. Students will learn how Seaports and Inland Ports are organized and operate, how freight is moved domestically and internationally, including the integration of port operations with other modes of transportation. Topics include break-bulk handling during loading, discharging, in-transit carriage, on-dock rail, harbor drayage, equipment and cargo management, and an overview of hazardous materials shipments and security. Co-requisites: TRA 1410, 1420. (3 hr. lecture)

TRA2156
Operations Management for Transportation 3 credits
This course includes the skills necessary for a supervisory role in logistics. Students will learn the roles and responsibilities in managing different types of transportation operations. Topics include human resources, design and management of production operations, productivity, capacity planning, resource management, just-in-time systems, hazardous materials management, planning and project management. Prerequisite: MAN2021. (3 hr. lecture)

TRA2321
Transportation Public Policy, Law, and Regulations 3 credits
Students will learn the transportation regulatory environment including the various levels of government regulations. Review of security, environmental requirements, regulatory research and labor laws are also covered. Prerequisite: TRA2010. (3 hr. lecture)

TRA2402
Intermodal Transportation Operations and Project Management 3 credits
Students will learn the fundamental elements necessary to plan, implement and control efficient and market-responsive integrated transportation systems. Topics include strategic, operational, and project management roles of transportation in supply chains. Emphasis is placed on services pricing, carrier selection, equipment and shipment planning, intermodal operations, financial/budgetary constraints, security and distribution services. Prerequisites: AV2120, TRA2010. Co-requisites: TRA1410, 1420, 1430. (3 hr. lecture)

TRA3034
Transportation and Traffic Management 3 credits
This course covers developments leading to national and federal regulations, division of territories, official descriptions, etc. Students will learn the scope of authority of territorial associations, factors controlling traffic flows, basic governing classification rules, principals of freight rates and tariffs, and elements of rate making. Prerequisites: MAN 2021 and TRA 1154. (3 hr. lecture)

TRA3132**Purchasing and Inventory Management****3 credits**

This course provides a comprehensive introduction to the purchasing/procurement and supply chain management field. Students will learn purchasing and supply chain issues in a variety of settings, from process industries to high tech manufacturing and services as well as public institutions. Emphasis is on the purchasing process as it relates to such topics as inventory control procedures, price/cost analysis, laws and ethics, negotiations, vendor selection and the development of vendor relationships. Prerequisites: MAN 201 and TRA 1154. (3 hr. lecture)

TRA4234**Warehouse Management****3 credits**

Students will learn warehousing functions, facility operations, and operational productivity improvements and measurements with the inclusion of concepts from marketing, finance, statistics, operations management, and human resources. The course presents an integrated business approach to the detailed operational aspects of logistics facilities such as warehouse and distribution centers. The course will use real-world warehouse data to design the layout and operations requirements for a local warehousing facility and to identify the operational equipment used in warehousing. Prerequisites: MAN 201, 3065, QMB 2100, and 2100L. (3 hr. lecture)

Travel Industry Management

HFT1454**Food and Beverage Cost Controls****3 credits**

Covers the principles and procedures involved in an effective food and beverage control system, including standards determination, the operation budget, income and cost control, menu pricing, and computer applications. (3 hr. lecture)

HFT1949**Co-op Work-study Internships I****3 credits**

This is a course designed to continue training in student's fields of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. A.S. degree credit only. A.S degree only. (3 hr. lecture)

HFT2949**Co-op Work-study Internships 2****3 credits**

In this intermediary course the student will continue learning and training in students'

field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op department approval and completion of 1949 Co-op work experience. In addition to the above the student keep a portfolio of required materials that they obtain during the course of their study. (3 hr. lecture)

Vision Care Technology/ Opticianry

OPT1110**Physical & Geometrical Optics****4 credits**

Behavior of light energy as it passes through air, plastic, glass and water with emphasis on how light is modified by prism and curved lens surfaces. These principles relate to the effect these ophthalmic devices have in correcting the errors of human vision. Corequisite: OPT 1205, 1330. (4 hr. lecture)

OPT1150**Ophthalmic Lenses****2 credits**

Characteristic of unifocal and multifocal lens reference points for proper lens selection to meet visual needs of the patients. Emphasis is on accurate positioning of the optical centers and selected multi-focal addition design. ANSI and FDA standards; prescription ordering; verification procedures; absorptive lenses; and invisible and progressive multi-focals are presented. Prerequisites: OPT 1110, 1205; corequisites: OPT 1331, 1331L. (2 hr. lecture)

OPT1205**Ocular anatomy, Physiology & Pathophysiology****3 credits**

The structure and function of the systems of the human body, emphasizing the anatomy, physiology and pathophysiology of the human eye. Visual recognition of common eye disorders is also discussed. Corequisite: OPT 1330. (3 hr. lecture)

OPT1330**Clinical Data Collection 1****2 credits**

Techniques necessary in a clinical environment for the collection of patient case history, entrance visual acuity, basic visual skills of ocular mobility and accommodation, color discrimination, depth perception and binocular fusion. Emphasis is also placed on gaining familiarity with the medical terminology as it relates to the visual system. Corequisites: OPT 1110, 1205. (2 hr. lecture)

OPT1331**Clinical Data Collection 2****2 credits**

Techniques necessary in a clinical environment for the collection of subjective and objective patient diagnostic information including visual field plotting, tonometry, lensometry, keratometry, and sphygmomanometry. Prerequisites: OPT 1150, 1331L. (2 hr. lecture)

OPT1331L**Clinical Data Collection 2****Laboratory****1 credit**

Laboratory for OPT1331 in which students are under the supervision of a licensed practitioner. Corequisite: OPT 1331. Laboratory fee. (2 hr. lab)

OPT1450**Ophthalmic Dispensing****Procedures 1****1 credit**

Basic procedures of ophthalmic dispensing such as frame selection, measurement and laboratory ordering. Emphasis will be placed on common ophthalmic frame materials; crown glass and CR-39 lenses; absorptive lenses; and frame alignment, adjustment and repair. The student will demonstrate skills necessary for entry level ophthalmic dispensing in Vision Care Clinic. Prerequisite: OPT 1330; corequisites: OPT 1331, 1331L, 1450L. (1 hr. lecture)

OPT1450L**Ophthalmic Dispensing****Procedures 1 Laboratory****1 credit**

Laboratory for OPT 1450. Corequisite: OPT 1450. Laboratory fee. (2 hr. lab)

OPT2060**Ophthalmic Management Policy & Procedures****2 credits**

Procedures and terminology used in the handling of patients, correspondence, legal and ethical principles, inter- and intra-professional relationships, and office management. Develop feasibility report of opening a retail ophthalmic dispensary. The history of opticianry, optometry and ophthalmology is traced. Special emphasis is on a comprehensive review of the curriculum. Prerequisite: OPT 1330, 2800L. (2 hr. lecture)

OPT2070L**Computers for Vision Care****1 credit**

This course introduces students to the use of computers in ophthalmic practice. Students will learn computer basics and the use of application software for maintaining patient records and billing. Elements of ophthalmic coding are included. (2 hr. lab)

OPT2375**Refractometry****1 credit**

Students will learn the basic principles of refractometry, theoretical aspects of retinoscopy, and the use of cross cylinders. Students will be able to describe various refractive problems and their solutions. Prerequisites: OPT 1150, 1205, 1331, 1331L; corequisite: OPT 2375L. (1 hr. lecture)

OPT2375L**Refractometry Laboratory 1****1 credit**

Students will practice theoretical concepts of refractometry using a retinoscope, auto-refractor, and cross cylinders in a laboratory setting. Prerequisites: OPT 1205, 1331, 1331L; corequisites: OPT 2375. (2 hr. lab)

OPT2376L

Refractometry Lab 2 1 credit
This course is designed to provide the student with the hands on experience of hand neutralizing a pair of glasses, retinoscopy, and the use of the phoropter and the Snellen chart. (2 hr. lab)

OPT2377L

Refractometry 3 Laboratory 1 credit
This laboratory course will continue to advance the skills already introduced in the previous laboratories 1 & 2. The improved skills will enhance the student's ability to determine the refractive status of the eye and be able to practice these skills on patients in the clinic. (2 hr. lab)

OPT2420

Eyewear Fabrication 1 2 credits
Theory of ophthalmic surfacing procedures. Students acquire knowledge to arrange single vision lenses; use lensometers and lens clock; operate project-o-makers for single vision lens layout; select or fabricate frame patterns; and utilize several systems for edging lenses for ophthalmic frames. Prerequisite: OPT 1150; corequisites: OPT 1450, 1450L, 2420L, 2505. (2 hr. lecture)

OPT2420L

Eyewear Fabrication 1 Laboratory 1 credit
Laboratory for OPT 2420. Corequisite: OPT 2420. Laboratory fee. (2 hr. lab)

OPT2421C

Eyewear Fabrication 2 3 credits
Advanced techniques in measurement, fabrication, and verification of unifocal and multifocal lenses. Students fabricate finished eyewear from written specifications ensuring that current ANSI and FDA standards are exceeded. Prerequisites: OPT 2420, 2420L. (1 hr. lecture; 4 hr. lab)

OPT2422C

Eyewear Fabrication 3 3 credits
A continuation of OPT 2421. Theory of evaluation and analysis of eyewear for accuracy and quality. Advanced techniques in operation of automated lens analyzer and lens edger's, and maintenance of equipment. Prerequisites: OPT 2420, 2421C. (1 hr. lecture; 4 hr. lab)

OPT2451

Ophthalmic Dispensing Procedures 2 1 credit
Theory and terminology of advanced ophthalmic dispensing. Emphasis will be placed on new technology in ophthalmic frame materials; multifocal lenses including progressive power and blended bifocals; and high index lenses. The process of analyzing the patient's specific needs for the proper frame and lens selection is highlighted. Prerequisites: OPT 1450, 1450L; corequisite: OPT 2451L. (1 hr. lecture)

OPT2451L

Ophthalmic Dispensing Procedures Laboratory 1 credit
Laboratory for OPT 2451. Corequisite: OPT 2451. Laboratory fee. (2 hr. lab)

OPT2505

Contact Lenses 1 3 credits
Basic principles of contact lens fitting, emphasizing soft lenses. Topics include lens-related terminology, anatomy and physiology, patient examination, soft lens materials, design, parameters, handling, fitting and care. Includes introduction to rigid lenses. OPT 1110, 1205. (3 hr. lecture)

OPT2506

Contact Lenses 2 2 credits
Principles of contact lens fitting, emphasizing rigid lenses. Topics include materials, design parameters, verification, handling, fitting and care. Considers advanced and specialty design and ocular complications. Prerequisite: OPT 2505. (2 hr. lecture)

OPT2506L

Contact Lenses 2 Lab 1 credit
Practical procedures designed to apply technical skills of contact lens application and removal, verification of the contact lens prescription, modification of hard and hard gas permeable contact lenses, and other skills discussed in previous lecture coursework. Prerequisite: OPT 2505; corequisite: OPT 2506. (2 hr. lab)

OPT2800L

Vision Care Clinic 1 2 credits
Introductory clinic designed to apply technical skills acquired in previous course work. Recording of clinical data, administrative procedures and techniques in patient handling under close staff supervision. Prerequisites: OPT 1331, 1331L, 1450, 1450L. Laboratory fee. (6 hr. lab)

OPT2801L

Vision Care Clinic 2 4 credits
Development of skills in patient reception, clinical data collection, assisting clinician, and ophthalmic dispensing. This is an opportunity to follow the patient through the entire cycle of vision care under close supervision of the clinical staff. Prerequisite: OPT 2800L. Laboratory fee. (192 hr. Clinical)

OPT2802L

Vision Care Clinic 3 4 credits
Development of additional skills in visual fields, tonography, ocular photo documentation, vision therapy/orthoptics, low vision, aseptic techniques, eye emergencies, and assisting in triage and laboratory diagnosis of external eye disease. On and off-campus clinics will be utilized under the close supervision of optometrists and ophthalmologists. Prerequisite: OPT 2801L; corequisite: OPT 2060. Laboratory fee. (12 hr. clinic)

OPT2830C

Contact Lenses Clinic 1 2 credits
Observe and assist an optometrist in the initial fitting and follow-up care of rigid and soft contact lenses for patients referred from the Vision Care Clinic when conventional eyewear will not suffice. Familiarization with the instructions for lens handling, cleaning, care and storage of contact lenses. Prerequisites: OPT 2506, 2506L. Laboratory fee. (4 hr. clinic)

OPT2831L

Contact Lenses Clinic 2 1 credit
Use of the soft contact lens instruments to confirm all the parameters for replacement lens. Particular attention is devoted to the patient that is having problems with contact lenses after long-term wear due to corneal changes and sensitivity to solutions under direct supervision of an optometrist. Prerequisite: OPT 2830C. Laboratory fee. (3 hr. clinic)

OPT2875L

Ophthalmic Dispensing Practicum 1 2 credits
Externship in an approved finishing laboratory of a retail ophthalmic dispensing establishment. The student will gain a working knowledge of ophthalmic frame and lens stock, inventory system, layout and blocking, chemical and heat treating, edging, tinting assembly and alignment of eyewear according to the written prescription. Prerequisites: OPT 2420, 2420L, 2451, 2451L; corequisite: OPT 2801L. (6 hr. lab)

OPT2876L

Ophthalmic Dispensing Practicum 2 2 credits
Externship in an approved retail ophthalmic dispensing establishment in the area of frame styling, ordering of appropriately designed lenses, adjustment, repair and dispensing of eyewear. The student will gain a working knowledge of administrative management procedures of the practice. Prerequisite: OPT 2875L. (6 hr. lab)

Selected Studies

###1920

WORKSHOP 3 credits
Designed to provide in-depth study in various occupational areas. It may be varied according to faculty and student planning. This offering is numbered 1920 or 2920, with prefix of the subject area, in the department or discipline of study. May be repeated for credit.

###2920

WORKSHOP 3 credits
Designed to provide in-depth study in various occupational areas. It may be varied according to faculty and student planning. This offering is numbered 1920 or 2920, with prefix of the subject area, in the department or discipline of study. May be repeated for credit.

###2990**SELECTED STUDIES****3 credits**

Designed to offer an in-depth treatment of special areas under the various occupational categories; it may be varied each term according to faculty and student planning. This offering is numbered 2990, with prefix of the subject area, in the department or discipline of study. Credits apply only to an Associate in Science degree. Prerequisite: Permission of the instructor and department chairperson.

###2995**OCCUPATIONAL PRACTICUM 3 credits**

Serves the teachers in various occupational disciplines. To study practical problems of an assigned discipline or critical study or curriculum development, laboratory planning, literature, research, and practice. May be repeated for credit.



CAREER TECHNICAL COURSES

Miami Dade College Career Technical Certificate programs are designed for immediate job entry. The career technical courses are listed in alphabetical order according to prefix and number (or suffix).

Accounting

ACO0101
Accounting 1 **2.50 credits**
This course emphasizes double-entry bookkeeping; methods and principles of recording business transactions; the preparation of various documents used in recording income, expenses, acquisition of assets incurrence of liabilities, and changes in equity and the preparation and basic interpretation of financial statements. Special fee. (75 contact hrs.)

ACO0102
Accounting 2 **2.50 credits**
This course is designed to continue the study of accounting principles. Topics include depreciation, inventory, accruals, deferrals, notes, payroll, and tax-related forms. Computer application will be provided. Special fee. (75 contact hrs.)

ACO0111
Accounting (Lab) Applications 1 credit
This course is intended to provide additional time on task for students who are attempting to fulfill the requirements of the Accounting Operations Certificate Program. The course is individualized according to each student's need. Special fee. (30 contact hrs.)

ACO0202
Accounting (Lab) Applications 2 **1 credits**
This course is intended to provide additional time on task for students who are attempting to fulfill the requirements of the Accounting Operations Certificate Program. The course is individualized according to each student's need. Special fee. (30 contact hrs.)

ACO0511
Microcomputers in Bookkeeping and Business **2.50 credits**
This course is concerned with the use of microcomputers for accounting applications. It includes the preparation, interpretation, and use of microcomputer information in financial decision making. Other business applications will be explored. Special fee. (75 contact hrs.)

ACO0751
Income Tax Accounting **2.50 credits**
This course provides the student with an overview of the federal income tax system, presents the accounting procedures and rules that need to be understood to minimize the tax amount due to the government, within the tax laws. Special fee. (75 contact hrs.)

ACO0752
Business Forms **2.50 credits**
An introduction to federal, state and local forms that must be filed by most businesses, including payroll returns and sales taxes. Special fee. (75 contact hrs.)

ACO0948
Co-op Work Experience:
ACO **1 - 3 credits**
This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Departmental approval and completion of ACO 0948 Co-Op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-Operative Educational Office to obtain registration approval. Special fee. (30-90 contact hrs.)

Apprenticeship - Electricity

BCA0350
Electricity 1 **3 credits**
This course provides students with a foundation in electrical theory, electrical safety, OSHA standards, and mathematical principles and formulas for the electrical industry. (90 contact hrs.)

Electricity 2 **3 credits**
This course presents the National Electrical Code (NEC) and its application to electrical wiring. Students are also introduced to various types of test equipment, fittings, conductors, blueprints, and residential and commercial wiring. (90 contact hrs.)

BCA0352
Electricity 3 **3 credits**
Circuits, current, and motor theory and application are presented. The student also learns about grounding, conduit systems, and conductor installations. (90 contact hrs.)

BCA0353
Electricity 4 **3 credits**
This course presents techniques for cable tray assembly and installation, crimping and splicing cable, and installation of various types of electrical services. Students also learn about circuit breakers and fuses, contactors and relays, as well as lighting and lighting fixtures. (90 contact hrs.)

BCA0354
Electricity 5 **3 credits**
This course focuses on calculating loads and conductors. It also presents information on requirements for overcurrent protection, outlet and junction boxes, and wiring devices. (90 contact hrs.)

BCA0355
Electricity 6 **3 credits**
Students are provided with information on

transformer operations and principles of light. Motor calculations, maintenance, and controls are also presented. (90 contact hrs.)

BCA0356
Electricity 7 **3 credits**
This course provides skills in calculating loads and circuits for various types of electrical systems. It offers the first part in a two-part series on motor maintenance. It also presents information on basic electronic theory, standby and emergency systems, fire alarm systems, and specialty transformers. (90 contact hrs.)

BCA0357
Electricity 8 **3 credits**
This is the second part of a two-part series on motor maintenance. It also presents the topics of advanced controls, and heating, ventilation, and air conditioning controls. (90 contact hrs.)

BCA0358
Electricity Co-op 1 **18.13 credits**
This a Year One, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the electricity Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0359
Electricity Co-op 2 **18.13 credits**
This a Year One, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0360
Electricity Co-op Summer 1 **30.40 credits**
This a Year One, Summer One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

BCA0361
Electricity Co-op 3 **18.13 credits**
This a Year Two, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0362

Electricity Co-op 4 **18.13 credits**
This a Year Two, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0363

Electricity Co-op Summer 2 **30.40 credits**
This a Year Two, Summer Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

BCA0364

Electricity Co-op 5 **18.13 credits**
This a Year Three, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0365

Electricity Co-op 6 **18.13 credits**
This a Year Three, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0366

Electricity Co-op Summer 3 **30.40 credits**
This a Year Three, Summer Three, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

Electricity Co-op 7

18.13 credits
This a Year Four, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom

instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0368

Electricity Co-op 8 **18.13 credits**
This a Year Four, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0369

Electricity Co-op Summer 4 **30.40 credits**
This a Year Four, Summer Four, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

Apprenticeship - Fire Sprinkler

BCA0470

Fire Sprinkler 1 **2.67 credits**
This course provides an introduction to the Fire Sprinkler Fitter Trade and introduces workplace safety, materials, common tools, and other topics necessary for the first semester apprentice. (80 contact hrs.)

BCA0471

Fire Sprinkler 2 **2.67 credits**
This course continues the topics introduced in Fire Sprinkler 1, and identifies and describes various types of tubing and pipe systems. (80 contact hrs.)

BCA0472

Fire Sprinkler 3 **2.67 credits**
This course provides information on various types of sprinkler systems for the second year apprentice. (80 contact hrs.)

BCA0473

Fire Sprinkler 4 **2.67 credits**
This course identifies and describes the purpose and operation of wet fire sprinkler systems and dry pipe fire sprinkler systems. (80 contact hrs.)

BCA0474

Fire Sprinkler 5 **2.67 credits**
This course provides an understanding of the planning and design of the fire sprinkler systems and the mathematics used to perform

sprinkler system design and installation for the third year apprentice. (80 contact hrs.)

BCA0475

Fire Sprinkler 6 **2.67 credits**
This course continues the planning and design of the fire sprinkler systems, with emphasis on supply systems. (80 contact hrs.)

BCA0476

Fire Sprinkler 7 **2.67 credits**
Information on special extinguishing systems and fire pumps is presented in this course for fourth year apprentices. (80 contact hrs.)

BCA0477

Fire Sprinkler 8 **2.67 credits**
This course continues special extinguishing systems with basic hydraulic concepts, system design, and hydraulic calculations. An introduction to foremanship, documentation and tracking is included. (80 contact hrs.)

BCA0480

Fire Sprinkler Co-op 1 **18.13 credits**
This is a Year One, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Fire Sprinkler Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0481

Fire Sprinkler Co-op 2 **18.13 credits**
This is a Year One, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Fire Sprinkler Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0482

Fire Sprinkler Co-op Summer 1 **30.40 credits**
This a Year One, Summer One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

BCA0483

Fire Sprinkler Co-op 3 **18.13 credits**
This is a Year Two, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Fire Sprinkler Apprenticeship program. Field activities are coordinated with classroom activities

Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

ACR0934
HVAC Co-op 5 **18.13 credits**

This is a Year Three, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

ACR0935
HVAC Co-op 6 **18.13 credits**

This is a Year Three, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

ACR0936
HVAC Co-op 7 **18.13 credits**

This is a Year Four, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

ACR0937
HVAC Co-op 8 **18.13 credits**

This is a Year Four, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

ACR0940
HVAC 1 **2.67 credits**

This course provides an introduction to the Heating, Ventilation, and Air Conditioning Trade and presents information on mathematics and tools of the trade for first year apprentices. (80 contact hrs.)

ACR0941
HVAC 2 **2.67 credits**

This course continues the topics presented in HVAC 1, and introduces students to heating and cooling systems. (80 contact hrs.)

ACR0942

HVAC 3 **2.67 credits**

This course provides instruction for second year apprentices in gas laws and the properties of air, as well as the use and installation of various types of duct systems. The principles of combustion, mechanical maintenance, and basic electronics are also presented. (80 contact hrs.)

ACR0943
HVAC 4 **2.67 credits**

The focus of this course is in understanding the function and operation of control systems, metering devices, compressors, and heat pumps. Students will be able to complete the installation and servicing of this equipment. (80 contact hrs.)

ACR0944
HVAC 5 **2.67 credits**

This course provides skills in maintenance and troubleshooting of various types of HVAC systems and equipment for the third year apprentice. (80 contact hrs.)

ACR0945
HVAC 6 **2.67 credits**

This course is a continuation of HVAC 5, with the addition of information on air distribution and steam systems, as well as establishing and maintaining good customer relations. (80 contact hrs.)

ACR0946
HVAC 7 **2.67 credits**

This course provides advanced blueprint reading, and presents the fourth year apprentice with information on energy conservation and management equipment and systems. (80 contact hrs.)

ACR0947
HVAC 8 **2.67 credits**

Students learn about water quality and treatment, and how to design heating and cooling systems. This course also covers commercial and industrial refrigeration. (80 contact hrs.)

Apprenticeship - Plumbing

BCA0444
Plumbing Summer

Co-op 1 **16.70 credits**
This is a Year One, Summer One coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Plumbing Apprenticeship Program. Field Activities. This summer cooperative experience is the continuation and completion of Plumbing Co-op 1 and 2. (500 contact hrs.)

BCA0445
Plumbing Summer

Co-op 2 **16.70 credits**
This is a Year Two, Summer Two coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom in-

struction and field experience for the Plumbing Apprenticeship Program. Field activities. This summer cooperative experience is the continuation and completion of Plumbing Co-op 3 and 4. (500 contact hrs.)

BCA0446
Plumbing Summer

Co-op 3 **16.70 credits**
This is a Year Three, Summer Three coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Plumbing Apprenticeship Program. Field activities. This summer cooperative experience is the continuation and completion of Plumbing Co-op 5 and 6. (500 contact hrs.)

BCA0447
Plumbing Summer

Co-op 4 **16.70 credits**
This is a Year Four, Summer Four coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Plumbing Apprenticeship Program. Field activities. This summer cooperative experience is the continuation and completion of Plumbing Co-op 5 and 6. (500 contact hrs.)

BCA0450
Plumbing 1 **2.70 credits**

This course covers the essentials of code law and careers related to plumbing, tools, pipes and fittings used in plumbing installation; safety and hazardous materials training; and review of basic mathematics and sciences applied to the plumber's craft. (80 contact hrs.)

BCA0451
Plumbing 2 **2.70 credits**

This course provides an overview of installation practices of plumbing fixtures, faucets and valves, first aid, occupational safety and health, and blueprint reading and sketching. (80 contact hrs.)

BCA0452
Plumbing 3 **2.70 credits**

Instruction includes plumbing installation techniques, including water pipes, distribution systems, water heaters, sewage and drainage fixtures and continued development of applied mathematics skills. (82 contact hrs.)

BCA0453
Plumbing 4 **2.80 credits**

This course teaches welding techniques and safety, including soldering, brazing and cutting, metal-arc and oxy-acetylene welding and pipe tacking. Other topics include plumbing installation techniques involving sewage pumps and ejectors, venting, and hangers; scientific concepts of water and water pressure related to plumbing; rigging and hoisting techniques and safety are reviewed. (83 contact hrs.)

BCA0454
Plumbing 5 **2.50 credits**

This course introduces residential and commercial installation of plumbing fixtures and appliances, develops more mathematical concepts used by plumbers, and covers gas codes for installation, inspection and testing. (76 contact hrs.)

BCA0455
Plumbing 6 **2.50 credits**

This course covers more topics in applied mathematics used by plumbers including calculations of tank capacities, volume and weight of water, sizing storm drains and piping expansion. Advanced applied scientific topics include heat transfer, basic electricity, electric current, electrical safety and electrical troubleshooting and advanced structural blueprint reading, including floor plans, site plans, plumbing, electrical, HVAC, and detail plans. (76 contact hrs.)

BCA0456
Plumbing 7 **2.50 credits**

This course introduces repairs and servicing of residential, commercial, institutional and industrial fixtures and piping systems. Mathematical concepts are advanced using formulas and tables to calculate pipe and system sizing. Heating systems are covered, including hot water boilers, steam boilers, hydronic, warm air, solar and humidification systems. (76 contact hrs.)

BCA0457
Plumbing 8 **2.60 credits**

This course continues the science applications related to pumps and pump repair and maintenance. Advanced blueprint reading, sketching and materials take-off and estimates are covered. Plumbing codes are emphasized including regulations regarding sanitary drainage systems, medical facility plumbing, private sewage disposal, portable water supply pumps for mobile homes and trailer parks. (77 contact hrs.)

BCA0460
Plumbing Co-op 1 **25 credits**

This is a Year One, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (750 contact hrs.)

BCA0461
Plumbing Co-op 2 **25 credits**

This is a Year One, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (750 contact hrs.)

BCA0462
Plumbing Co-op 3 **25 credits**

This is a Year Two, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (750 contact hrs.)

BCA0463
Plumbing Co-op 4 **25 credits**

This is a Year Two, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (750 contact hrs.)

BCA0464
Plumbing Co-op 5 **25 credits**

This is a Year Three, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (750 contact hrs.)

BCA0465
Plumbing Co-op 6 **25 credits**

This is a Year Three, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (750 contact hrs.)

BCA0466
Plumbing Co-op 7 **25 credits**

This is a Year Four, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills (750 contact hrs.)

BCA0467
Plumbing Co-Op 8 **25 credits**

This is a Year Four, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities

are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills (750 contact hrs.)

Apprenticeship - Sheet Metal

PTA0300
Sheet Metal Co-op 1 **18.13 credits**

This is a Year One, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0301
Sheet Metal Co-op 2 **18.13 credits**

This is a Year One, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0302
Sheet Metal Co-op 3 **18.13 credits**

This is a Year Two, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0303
Sheet Metal Co-op 4 **18.13 credits**

This is a Year Two, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0304**Sheet Metal Co-op 5 18.13 credits**

This a Year Three, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0305**Sheet Metal Co-op 6 18.13 credits**

This a Year Three, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0306**Sheet Metal Co-op 7 18.13 credits**

This a Year Four, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0307**Sheet Metal Co-op 8 18.13 credits**

This a Year Four, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0390**Sheet Metal 1 2.70 credits**

This course provides first year apprentices with an introduction to the sheet metal trade, as well as mathematics of the trade, tools of the trade, and steel and other metals, including fasteners, hangers, and supports. (81 contact hrs.)

PTA0391**Sheet Metal 2 2.70 credits**

This course provides instruction in principles of layout, sheet metal processes, and parallel line development. (81 contact hrs.)

PTA0392**Sheet Metal 3 2.70 credits**

This course provides second year apprentices with a continuation of mathematics for the trade, and an introduction to piping practices,

radial line development, bend allowances, and soldering. Students will also learn to interpret and use blueprints and specifications. (81 contact hrs.)

PTA0393**Sheet Metal 4 2.70 credits**

Students will learn about standards and codes for the industry, including sheet metal duct fabrication standards. Information on insulation, gutters and downspouts, and roof flashing is also presented. (81 contact hrs.)

PTA0394**Sheet Metal 5 2.70 credits**

Third year apprentices will learn about principles of airflow and of refrigeration, as well as about the equipment used in heating, ventilation, and air conditioning. (81 contact hrs.)

PTA0395**Sheet Metal 6 2.70 credits**

This course provides knowledge of the fabrication and layout of fiberglass duct, the principles of triangulation, and skills associated with field measurement. Students will also acquire knowledge and skills in welding, brazing, and cutting, including safety requirements and practices. (81 contact hrs.)

PTA0396**Sheet Metal 7 2.70 credits**

Fourth year apprentices learn about shop production and organization, including efficient operations and utilization of manpower. They also learn about the principles of air balance and air distribution systems. (81 contact hrs.)

PTA0397**Sheet Metal 8 2.70 credits**

This course provides students with knowledge of louvers, dampers, access doors, hoods, and ventilators. Students will also learn about fume and exhaust systems design. (81 contact hrs.)

PTA0941**Sheet Metal Co-op Summer 1 30.40 credits**

This a Year One, Summer One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

PTA0942**Sheet Metal Co-op Summer 2 30.40 credits**

This a Year One, Summer Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

PTA0943**Sheet Metal Co-op Summer 3 30.40 credits**

This a Year Three, Summer Three, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

PTA0944**Sheet Metal Co-op Summer 4 30.40 credits**

This a Year Four, Summer Four, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

Banking

BAN0930**Banking for Tellers 1.50 credits**

This course provides the necessary background information and hands-on training for an individual who wishes to obtain employment in today's banking industry. It includes orientation to different types of financial institutions and the regulations that affect them. Special fee. (45 contact hrs)

BRC0109**Teller Training 3.50 credits**

This course emphasizes the hands-on skills that a bank teller needs to master to perform effectively. Topics include cash handling and balancing at the end of the work shift, processing transactions and deposits, and compliance with banking laws and regulations. Customer service techniques and attitudes are also included. Special fee. (105 contact hrs.)

Business

MKA0250**Economic Principles of Import/Export 1 credit**

This course will help the student understand the economic forces which affect import and export activity. The course will demonstrate the effect of the economic decisions of both U.S. and foreign governments on international commerce. Emphasis will be placed on real-world solutions. Special fee. (30 contact hrs.)

MKA0251**Import/Export Financing 2 credits**

This course will show the student how public and private financing programs operate. A variety of financing vehicles, including letters of credit, will be discussed in a hands-on environment. Special fee. (60 contact hrs.)

MKA0300**Customer Service/Business 2.50 credits**

This course follows a curriculum originally developed in cooperation with American Express. Topics include understanding of the customer, effective techniques in dealing with difficult customers, and supervision of customer service. Special fee. (75 contact hrs.)

SBM0002**Small Business Management; Introduction 2.50 credits**

This course focuses on the problems that must be faced and overcome for the small business entrepreneur to be successful. Among topics covered are financial banking, employee relations, marketing plan, and legal considerations. Special fee. (75 contact hrs.)

Business Law

BUL0243**Business Law I 2.50 credits**

The objectives of business law recognize the fact that classes are comprised of business and accounting students with varying abilities, previous experience and different backgrounds, and that they are seeking the basic legal concepts and skills necessary for personal, social and business effectiveness. Special fee. (75 contact hrs.)

Computer Science & Related Technologies

CGS0281**Wireless Networking I 2.50 credits**

This course provides the student with a complete foundation of knowledge for entering into or advancing in the wireless networking industry. Topics include: an introduction to wireless LANs; RF antennas and accessories; wireless LAN standards; and wireless LAN organizations to link budget math, troubleshooting, performing a site survey. This course delivers hands-on training that benefits the novice as well as the experienced network professional. Prerequisites: CGV 0010 & CGS 0890. Laboratory fee. (75 contact hrs.)

CGS0282**Wireless Networking II 2.50 credits**

This course provides the student with a complete foundation of knowledge for entering into or advancing in the wireless networking industry. Topics include: 802.11 architecture,

MAC and physical layer discussions, troubleshooting wireless LAN installations, wireless LAN security and site survey fundamentals. This course is a second level course that delivers hands-on training that benefits the novice as well as the experienced network professional. Prerequisites: CGS 0286. Laboratory fee. (75 contact hrs.)

CGS0306**Information Systems****Development****2.50 credits**

Students will learn the design of management information systems (MIS) by using concepts of charting, investigating, documenting, and reporting. This is developed by using computerized case study software. Special fee. (75 contact hrs.)

CGS0566**Microcomputer Operating Systems (DOS)****2.50 credits**

A comprehensive course in the use of operating systems for DOS Microcomputers. DOS concept, features, commands and their applications are presented. Commercial utility programs, hard disk utilization, Edlin and DOS batch programming will be covered in detail. Special fee. (75 contact hrs.)

CTS0035**Introduction to the "C" Program****2.50 credits**

An introductory course covering the syntax and rules of the "C" language. Students will learn the topics of program design, variables, output, flow control, and functions. Students are required to code and execute business applications. Special fee. (75 contact hrs.)

CTS0036**Advanced "C" Programming 2.50 credits**

An advanced study in the techniques of programming using the "C" language. Structured modular programming and data structure are emphasized throughout the course. Students are required to code and execute business applications. Prerequisite: CTS 0035. Special fee. (75 contact hrs.)

CTS0050**Introduction to Microcomputers****2.50 credits**

This course introduces the student to modern microcomputer hardware and software. The topics covered include operation of microcomputer hardware and peripherals, operating system commands, word processing software and database management software. The 75 contact hrs. encompass both lecture and laboratory components. Special fee. (75 contact hrs.)

CTS0053**Word Processing****1.50 credits**

This is an introductory course using commercial microcomputer word processing software. The concepts, features, and commands of a word processing system are supplied to a variety of practical business applications. Classes are conducted in a hands-on lecture/laboratory environment. Each student is as-

signed a microcomputer to use during class. No previous computer training or experience is required. Special fee. (45 contact hrs.)

CTS0055**Electronic Spreadsheets****2.50 credits**

A comprehensive course in the use of a spreadsheet for microcomputers. The concepts, features, and commands of a spreadsheet are applied to a variety of applications. Programming concepts will be introduced. Classes are conducted in hands-on lecture/laboratory environment. The content of this course will continually change to keep pace with current technology. Prerequisite: CGV 0010 or equivalent. Special fee. (75 contact hrs.)

CTS0065**Database and Applications & Programming****2.50 credits**

This course is designed as an entry level programming language course for those who have a basic knowledge of microcomputer software. The student will create a database and then write user friendly programs to add, delete, and modify and create various reports. The 75 contact hrs. are comprised of both lecture and laboratory sessions and equivalent knowledge. Prerequisites: CGV 0010 or equivalent. Special fee. (75 contact hrs.)

CTS0080**Supporting Windows Server 2.50 credits**

This course includes a study of selection criteria for network hardware, management strategies, network performance optimization, advanced printing concepts, remote console management, multiple protocol support, and prevention and maintenance techniques. Special fee. (75 contact hrs.)

CTS0081**Supporting Windows Professional****2.50 credits**

A study of the terminology, components, design, installation and management of local area networks and a consideration of other data communication equipment. Featured topics: elements of LAN system, LAN standards, design considerations, installation, LAN administration, and user operation. Special fee. (75 contact hrs.)

CTS0091**Implementing a Network Infrastructure****2.50 credits**

The student will be provided the opportunity to develop the skills necessary to install, configure, manage, and support a network infrastructure. Additionally, the student will configure the DHCP Server service, configure the DNS Server service, configure WINS, configure network security protocols, configure network security by using Public Key Infrastructure (PKI), configure network security by using Internet Protocol Security (IPSec), configure remote access to a network, support remote access to a network. Prerequisite: CTS 0080. Special fee. (75 contact hrs.)

CTS0092**Designing a Network Infrastructure****2.50 credits**

This course will provide the knowledge and skills necessary to develop a Windows networking services solution for enterprise networks. The course focuses on developing strategies for TCP/IP, DHCP, DNS, WINS, RAS, Remote Authentication Dial-in User Service (RADIUS), connection manager, routing, multicasting, demand-dial routing, VPN, IP Sec, connection sharing, and proxy server. This course also introduces the process of translating business goals into strategies for implementing and managing the Windows networking services. Prerequisite: CTS 0093. Special fee. (75 contact hrs.)

CTS0093**Implementing Directory Services****2.50 credits**

The student will be provided the opportunity to gain the knowledge and skills necessary to install, configure, and administer Windows directory services. The course also focuses on implementing group policy and performing the group policy-related tasks required to centrally manage users and computers. Prerequisite: CTS 0080. Special fee. (75 contact hrs.)

CTS0095**Information Security****2.50 credits**

This course provides the student with a complete foundation of knowledge for entering into or advancing in the information technology security field. Topics include: an introduction to general security concepts; communication security; infrastructure security; basic cryptography; operational and organizational security. Including topics from troubleshooting to performing a site survey, this course delivers hands-on training that benefits the novice as well as the experienced network professional. Prerequisite: CTS 0091. Laboratory fee. (75 contact hrs.)

CTS0098**Infrastructure Security****2.50 credits**

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure, and implement secure networks. Security topics covered include in-depth TCP/IP packet and signature analysis, securing routers, securing network resources through Access Control List (ACL), and implementation of IPSEC using Linux and Windows Operating Systems (OS). The student will obtain hands-on instruction installing and using various security tools. Techniques for collecting, monitoring and auditing various activities will be afforded to the student. Students will analyze threats and intrusions for various business scenarios, and then determine which security policy provides the most protection at given acceptable levels of risk in order to conduct normal business activities. The course will provide a detailed presentation on the Internet and WWW structure, and the security issues associated with begin online. A combination of lectures, demo

EEV0554**Networking Essentials****2.50 credits**

This course is designed to provide students who are preparing to become network support technician's fundamental preparation in network concepts. Students will learn the skills necessary to identify the type, components, and design of a Local Area Network most appropriate for a given site. Prerequisite: CTS0050. Special Fee. (75 contact hrs.)

Criminal Justice & Related Technologies

CJC0104**Correctional Officer Basic****Defensive Driver Training 0.53 credits**

This course is a combination of classroom and practical exercises designed to evaluate the corrections recruit's ability to operate an emergency vehicle. Students will learn the psychological factors affecting vehicle operations, the elements of emergency driving skills, and skid-pan recoveries. For School of Justice Basic Correctional Officer students only. Special fee. (16 contact hrs.)

CJD0601**Traffic Accident****Investigator****2.66 credits**

This course prepares students to become Traffic Accident Investigators by teaching them how to manage traffic accident crash scenes and how to complete an on-scene accident investigation. This course is limited to School of Justice students only. Special fee. (80 contact hrs.)

CJK0007**Introduction to Law****Enforcement****0.36 credits**

This is an introduction to law enforcement in Florida and students will learn the history of the Criminal Justice System in Florida and contemporary law enforcement issues. (11 contact hrs.)

CJK0008**Legal****2.30 credits**

This is an introduction to law and the students will learn the basics of law, ethics elements of a crime, professionalism, and courtroom procedure. (69 contact hrs.)

CJK0011**Human Issues****1.33 credits**

This course provides the student with a basic understanding of human relations with an emphasis on the student's ability as a Police Officer to influence others in a positive manner using interpretation skills. The student will learn the important role interpersonal skills play in the relationship between the police and community. For school of Justice students only. (40 contact hrs.)

CJK0017**Communications****2.53 credits**

In this course students will learn to take statements from victims, witnesses, and suspects; write clear concise and accurate incident and arrest reports; and will engage in note taking skills such as grammar, spelling and proper sentence structure. For School of Justice students only. (76 contact hrs.)

CJK0020**CMS Law Enforcement****Vehicle Operations****1.60 credits**

Students will learn the physiological and psychological factors affecting vehicle operations. This course stresses the importance of vehicle maintenance, environmental conditions affecting driving, and elements of basic driving skills including skids and other causes of accidents. Students will demonstrate hands-on basic driving skills. For School of Justice students only. (48 contact hrs.)

CJK0031**CMS First Aid For Criminal****Justice Officers****1.33 credits**

Students will learn to initiate treatment for a variety of medical emergencies, understand and perform CPR, and know when to activate EMS and perform basic life support until help arrives. CPR and First Responder certification cards are issued upon successful completion. This course prepares criminal justice recruits for a variety of medical emergencies with minimal medical supplies. Basic training for School of Justice students only. (40 contact hrs.)

CJK0040**CMS Criminal Justice****Firearms****2.66 credits**

Students will learn how to use both handguns and shotguns. Students must qualify with both weapons under both daylight and night conditions. Students must also demonstrate ability for both accuracy and decision making. Students are also introduced to chemical weapons and their effects. (80 contact hrs.)

CJK0051**CMS Criminal Justice****Defensive Tactics****2.66 credits**

Students will learn how to physically defend themselves, physically control persons under arrest, and know what level of force is appropriate under differing circumstances. Additionally, a physical conditioning program is part of this course. For School of Justice students only. (80 contact hrs.)

CJK0061**Patrol 1****1.93 credits**

Students will learn problem solving, officer safety and survival, patrolling the assigned area and patrol functions. This course is the patrol 1 section of the Florida Department of Law Enforcement, Criminal Justice Standards and Training Commission New Basic Law Enforcement Recruit Training Program. CMS BRT Program, Version 2008.04. (58 contact hrs.)

CJK0062**Patrol 2****1.33 credits**

Students will learn about incident command, crowd control, criminal street gangs and extremist groups. Students will learn about Hazmat and Weapons of Mass Destruction. This is a vocational course in the patrol 2 section of the Florida Department of Law Enforcement, Criminal Justice Standards and Training Commission new Basic Law Enforcement recruit Training Program. CMS BRT PROGRAM VERSION 2008.04. (40 contact hrs.)

CJK0071**Criminal Investigations****1.86 credits**

The students will learn what is required when doing searches and location of physical evidence, along with the reproduction and identification collection, preservation and transporting of evidence to the crime laboratory. The students learn the basic understanding of the investigation of various crimes encountered by a street officer in their initial involvement of a crime scene. In addition, the fundamentals of interviewing, interrogation and statement taking will be addressed. For School of Justice students only. (56 contact hrs.)

CJK0076**Crime Scene Investigations****0.80 credits**

The students will learn the causes and effects of domestic violence; common facts and misconceptions about suicide and risks procedures for prevention and intervention and officer's responsibilities; identifying signs of adult, elder and child abuse and the proper procedure for reporting each. Students will learn the methods and skills for conducting an initial investigation, a death investigation, Sudden Infant Death Syndrome (SIDS) investigations, procedures for crime scene management; evidence collection and handling; developing information; and preparing an investigation report and characteristics and situations an officer may encounter. (24 contact hrs.)

CJK0082**Traffic Stops****0.80 credit**

This course is designed to teach students the necessary methods and skills for stopping a vehicle for a violation or other lawful reason. Students will learn traffic laws, professionalism, how to make traffic stops, the unknown risks of a traffic stop, and identifying, initiating and making high-risk traffic stops. Special Fee. For School of Justice students only. (24 contact hrs.)

CJK0083**DUI Traffic Stops****0.80 credits**

This course is designed to teach students to detect impaired driving. Students will learn to administer field sobriety tests, make arrests when appropriate, and record the evidence of a DUI violation. Special fee. For School of Justice students only. (24 contact hrs.)

CJK0086**Traffic Crash Investigations****1.06 credits**

The student will learn traffic crash investigations; knowledge of common violations resulting in crashes; information gathering skills; identification and handling of evidence; photographing evidence; crash scene management; determining cause of accident; and completion of crash reports and driver exchange forms and returning the scene to normal. (32 contact hrs.)

CJK0096**Criminal Justice Officer****2 credits**

The student will learn the benefits of maintaining physical fitness to include nutrition and diet. The student will also learn the effects of and how to deal with stress, how to build up muscular and cardiovascular endurance and perform the exercises as required. For School of Justice students only. (60 contact hrs.)

CJK0212**Cross-Over CO to LE CMS****High-Liability****0.26 credits**

Basic recruit students will learn the required Firearms High-Liability Proficiency Skills using a handgun (revolver or semi-automatic pistol for both daylight and night) and a long gun (shotgun or semiautomatic rifle/carbine), pursuant to Rule 11B-3524, F.A.C. (8.0 contact hrs.)

CJK0221**Correctional Cross-Over to****LE Introduction and Legal****1.56 credits**

The students will learn and understand the importance of ethics, values, and professionalism, both in their personal lives and in their role as law enforcement officers. (47 contact hrs.)

CJK0222**Correctional Cross-Over to****LE Communications****1.86 credits**

Students will learn to take statements from victims, witnesses, and suspects; write clear concise and accurate incident and arrest reports; and will engage in note taking skills such as grammar, spelling and proper sentence structure. For School of Justice students only. (56 contact hrs.)

CJK0223**Correctional Cross-Over to****LE Human Issues****1.06 credits**

This course provides the student with a basic understanding of human relations with an emphasis on the student's ability as a Police Officer to influence others in a positive manner using interpretation skills. The student will learn the important role that interpersonal skills play in the relationship between the police and community. For School of Justice students only. (32 contact hrs.)

CJK0300**Introduction to Corrections****1.06 credits**

The student will learn the responsibilities of a correctional officer to provide safety for him/herself, public, staff, and inmates. The student will learn an overview on safety and security

concerns, identification, manipulation and deception, contraband, and searches in a correctional setting. This course is for School of Justice students only. (32 contact hrs.)

CJK0305**CJSTC Communications****1.33 credits**

Students will learn practical communication skills that will assist new correctional officer in managing and supervising inmates, giving directions, answering questions, and interacting with others in a professional and safe manner. For School of Justice students only. (40 contact hrs.)

CJK0310**Officer Safety****0.53 credit**

The student will learn the responsibilities of a correctional officer to provide safety for him/herself, public, staff, and inmates. The student will earn an overview on safety and security concerns, identification, manipulation and deception, contraband, and searches in a correctional setting. This course is for School of Justice students only. (16 contact hrs.)

CJK0315**Facility and Equipment****0.26 credit**

Correctional officers are responsible for equipment and materials used to keep correctional facilities clean, safe, and secure. The student will learn basic knowledge of standard equipment used to support the safe and efficient operation of equipment, and to provide a safe environment for inmates, staff, and visitors. This course is for School of Justice students only. (8 contact hrs.)

CJK0320**Intake and Release****0.60 credits**

Students will gain the knowledge of facility policies and procedures, state laws, and legal guidelines. The student will learn intake, classification, and release processes that include verification of identity, required documentation, person and property searches, property inventory, fingerprinting, photographing, assessing custody levels, assigning housing, and releasing of inmates. For School of Justice students only. (18 contact hrs.)

CJK0325**Supervising in a****Correctional Facility****1.33 credits**

The student will develop supervisory and observational skills. The student will learn to ensure the safe operation of a correctional facility while fulfilling his or her responsibilities. For School of Justice students only. (40 contact hrs.)

CJK0330**Supervising Special****Populations****0.66 credit**

Students, as correctional officers, will learn to interact with a variety of individuals who have been grouped together such as gang members, substance abusers, mentally ill, elderly and disabled inmates. Students will learn to be aware of special populations and respond appropriately when interacting with and supervising them. For School of Justice students only. (20 contact hrs.)

CJK0335**Responding to Incidents and Emergencies****0.53 credit**

Correctional officers are expected to apply knowledge, training, and reasonable judgment to ensure the safety and security of all persons at the facility during an emergency. The student will learn to be effective in the use of equipment, crime scene control, chain of custody procedures, and documentation in any incident/emergency. For School of Justice students only. (16 contact hrs.)

CJK0340**Officer Wellness and Physical Abilities****1 credit**

Students will learn the benefits of maintaining physical fitness to include nutrition and diet. Students will learn of the effects of stress and how to deal with it; how to build up muscular and cardiovascular endurance and perform the exercises as required. For School of Justice students only. Special fee. (30 contact hrs.)

CJK0410**National Parks Service Legal****2.53 credits**

This is a Federal Law course for the CTC: Seasonal Law Enforcement Training Program at the National Parks Service (NPS). The students will learn the history and mission of law enforcement and its polices, constitutional law and the amendments, federal rules, regulations, criminal law, use of force and liability, and courtroom evidence and testimony. Special Fee. (76 contact hrs.)

CJK0411**National Parks Service Behavioral Science****1.20 credits**

This is a Behavioral Science course for the CTC: Seasonal Law Enforcement Training Program at the National Park Service (NPS). The students will learn communication and interviewing skills and conflict management. The students will learn awareness in communicating with special needs groups, managing abnormaling psychological behaviors, and understanding the need for ethical behavior and core values. (36 contact hrs.)

CJK0412**National Parks Service Enforcement Operations****1.03 credits**

This is an Enforcement Operations course for the CTC: Seasonal Law Enforcement Training Program at the National Park Service (NPS). The student's will learn about crimes against persons and property and crime scene processing including evidence collection packaging and impression evidence. The students will learn the incident command system, drugs of abuse, and knowledge of bombs and explosives. Special fee. (31 contact hrs.)

CJK0413**National Parks Service Patrol Procedures****3.43 credits**

This is a Patrol Procedures course for the CTC: Seasonal Law Enforcement Training Program at the National Park Service (NPS). The students will learn patrol skills, radio communication, report writing, traffic accident reporting,

vehicle search procedures, basic tactics, and understanding threats against resource officers. The students will also learn officer safety and survival skills and the application of use of force. (103 contact hrs.)

CJK0414**National Parks Service****Firearms****2.20 credits**

Description Procedures course for the CTC: Se this is Firearms course for the CTC: Seasonal Law Enforcement Training Program at the National Park Service (NPS). The students will learn firearms safety rules and procedures, NPS Shotgun course, semiautomatic pistol course including: semiautomatic course in reduced lighting. The student will also learn interactive cover drills, off range firearms safety, judgment pistol shooting, and safety for the downed-disabled officer. Special Fee. (66 contact hrs.)

CJK0415**National Parks Service****Driving****1.20 credits**

This is a Vehicle Driving course for the CTC: Seasonal Law Enforcement Training Program for the National Park Service (NPS). The students will learn vehicle inspection, risk and high-risk vehicle stops, skid control, emergency and non-emergency response, and will apply the same techniques in night driving. Special Fee. (36 contact hrs.)

CJK0416**National Parks Service****Physical Techniques****1.73 credits**

This is a Physical Techniques course for the CTC: Seasonal Law Enforcement Training Program for the National Park Service (NPS). The student will learn techniques for officer physical fitness, threat assessment and response, restraining subjects, ground defense, searching suspects, edged weapons, weapon retention, takedowns, baton control techniques, OC spray, striking and close quarter defensive tactics. Special Fee. (52 contact hrs.)

CJK0422**Dart-Firing Stun Gun****0.26 credits**

Students will learn how a dart-firing stun gun works, what effects a dart-firing stun gun has on the human body, and the necessary medical considerations for individuals exposed to a dart-firing stun gun. This course satisfies the statutory requirements of ES. 943.1717(2) for an officer to use a dart-firing stun gun in Florida. Special fee. (8 contact hrs.)

CJK0441**Public Service Aide Basic Training****3.66 credits**

This course prepares students to become Community Service Officers/Police Service Aides by providing them with the basic knowledge needed to conduct preliminary property crimes investigations. For School of Justice students only. Special fee. (110 contact hrs.)

CJK0451**Parking Enforcement Specialist Training 1****0.53 credit**

This course prepares students to become Parking Enforcement Specialists by teaching them traffic law, enforcement and control concepts. Course content will also include interpersonal skills, courtroom procedures and how to complete traffic citations. This course is limited to School of Justice students only. (15.9 contact hrs.)

CJT0801**Private Security Guard****Training 2: Class "G" License****0.94 credit**

This course is necessary for compliance with the state minimum training standard for a Class "G" (armed Security Guard License. (28.20 contact hrs.)

SCY0010**Surety Agent****4 credits**

This course includes introduction to the Criminal Justice system, duties of surety and bail bonding agents; bail bonding process, bail bond laws and regulations; contract law, civil and criminal laws, laws of arrest and arrest techniques, judgment and indemnifications, courtroom organizations, community relations, employability skills and firearm safety. Special fee. (120 contact hrs.)

SCY0051**Private Investigator Intern Course A****0.80 credit**

This course requires twenty four hours of training as required by Section 493.6203(b) ES. for Private Investigator Interns. Students will learn topics which include Florida Statutes and Florida Administrative Code, the Intern/Sponsor Relationship, Ethics, Liability, Surveillance, Report Writing, Equipment, Interviewing, Sources of Information, the Computer and Investigations, and Restrictions on Records. (24 contact hrs.)

SCY0052**Private Investigator Intern Course B****0.53 credit**

This course requires sixteen hours of training as required by Section 493.6203(b) ES. for Private Investigator Interns. Students will learn topics which include locating people and performing background investigations, evidence, executive protection, anti-terrorism, courtroom and formal hearing demeanor, pretrial responsibilities, and the investigator as a witness. Prerequisite: SCY 0051 (16 contact hrs.)

SCY0501**Basic Security Guard Training****1.33 credits**

This course is designed to prepare students to apply for Class "D" Private Security Officer license. Students will learn regulatory compliance, first aid and CPR, emergency procedures, ethics and entrepreneurship, public relations, courtroom procedures, interviewing techniques, the fundamentals of personal security, traffic direction and crowd control, and other security issues that may arise. Special Fee. (40 contact hrs.)

Engineering Technology-General

EEV0561 Microcomputer Maintenance & Repair 1 2.50 credits

This course is designed to provide a technician with the theoretical and practical requirements for maintenance and repair of microcomputer equipment. Topics include data communication codes and standards, transmission impairment, modems with lab applications. Special fee. (75 contact hrs.)

EEV0562 Microcomputer Maintenance & Repair 2 2.50 credits

This course teaches troubleshooting skills to repair microcomputers and printers, with emphasis on a hard disk maintenance and repair. Special fee. (75 contact hrs.)

EEV0811 D.C. Analysis 3.20 credits

This course will introduce the field of electronics, clarify the basic laws of electricity, and provide hands-on training with various types of D.C. circuits and power supplies. Special fee. (95 contact hrs.)

EEV0813 Solid State Components and Circuits 4.20 credits

This course will introduce the solid state devices that are found in electronic equipment and provide hands-on training with circuits that contain these devices. Special fee. (126 contact hrs.)

EEV0821 Electronic Fundamentals 2.50 credits

The course will introduce paper lab and safety procedures, provide hands-on soldering training, and introduce proper recording and reporting procedures. Special fee. (75 contact hrs.)

Film, Radio, TV Technology

RTT0002 Broadcast News 1.50 credits

This course will familiarize students with the procedures followed in producing and writing broadcast news. The student will become familiar with news writing formats and style-book applications. The students will write several news stories and a newscast. Special fee. (45 contact hrs.)

RTT0170 Television Graphics Procedures 3 credits

This course requires the students to participate in the practical use of and production of visual graphics material for television, covering the standards and procedures established in the field, and the most common techniques and materials. Special fee. (90 contact hrs.)

RTT0176
TV Production Procedures 2 5 credits
Students will refine skills as a member of a TV Studio Production Crew. Students will perform crew operations during various studio productions. Special fee. (150 contact hrs.)

RTT0177
Field Production Procedures 1 5 credits
Students will participate in several single camera field productions. Students will shoot; edit and post produce single camera field productions. Special fee. (150 contact hrs.)

RTT0178
Field Production Procedures 2 5 credits
Students will learn and participate in advanced single-camera production. Students will edit single-camera production using Beta cam SP A/B Roll Equipment. Students will learn and participate in a multi-camera format production outside the studio environment. Each student will perform various job functions, resulting in a class project. Special fee. (150 contact hrs.)

RTT0181
TV Production Procedures 1 5 credits
This course is to familiarize the student with the different equipment that prepares them to function as a member of a technical team for a video production in a Television Studio. Special fee. (150 contact hrs.)

RTT0182
**Television Directing
Procedures 5 credits**

Students will learn the disciplines, techniques and procedures used by the Television Director during the studio production process. The student will assume the responsibilities of the Television Director and coordinate the various production elements from the Control Room. Students will learn key terms used by the Director and master the Control Room equipment. Prerequisite: RTT 0176. Special fee. (150 contact hrs.)

RTT0184
TV Editing Procedures 5 credits

This course is designed to familiarize the student with an editing suite and to give the student the opportunity to perform the functions of an editor. In order to do this, we will use Beta Cam editing equipment and the Sony BVE 910 edit control. Students will also operate Character Generators, switchers and DVE generators to enhance assignments. Non-Linear editing has been added to this course. Students will work with and get an appreciation on the AVID non-linear editing system. Prerequisite: RTT 0177. Special fee. (150 contact hrs.)

RTT0189
**TV Film Computer Applications
Procedures 3 credits**

Applications of software and computer languages in the television industry. Includes introduction to integrated software for script-writing, storyboarding, production scheduling, cost controls, project inventory and computer

generated graphics. Special fee. (90 contact hrs.)

RTT0193
Advanced Editing Procedures 5 credits
This course is designed to familiarize students with non-linear editing. The course also gives the student the opportunity to perform the activities of a non-linear editor. In order to accomplish this, the course will use three non-linear editing systems; the AVID and Media 100 non-linear computer editing system for video and audio editing and Degi Design with Pro Tools for audio only non-linear editing. Prerequisite: RTT 0184. Special fee. (150 contact hrs.)

RTT0201
Radio Productions 3 credits
The purpose of this course is to prepare students for initial employment as a radio programming announcer broadcast technician, or to provide supplemental training for persons previously or currently employed in these occupations. Special fee. (90 contact hrs.)

RTT0210
**Radio Programming
Operations 2.50 credits**

This course provides instruction and practice in the preparation and delivery of various types of radio programming. Knowledge station organization and procedure is combined with announcing in a manner required of announcer-operators in smaller radio stations. Special fee. (75 contact hrs.)

RTT0222
Announcing on Radio 2.50 credits

This course emphasized the fundamentals of good speech, effective oral delivery, interview materials that are included in the third class license exam, and introduces employability skills needed in the industry. Special fee. (75 contact hrs.)

RTT0400
TV Master Control Operations 3 credits

This course is designed to familiarize the student with master control operations typical of a commercial broadcast station, cable company or independent provider. The course includes station operation, programming, reading of logs, SMPTE time code reading, switching operations, audio design and operation, satellite and microwave operation. Also includes: back-timing calculations, emergency procedures, documentation of engineering errors, and other techniques typical of a master control room operator. Reinforcement of operational functions learned in Television Production 1 including, video tape, audio mixer, switcher, character generator, and routing switcher operations. Special fee. (90 contact hrs.)

RTT0940
Television Studio Internship 1 5 credits
This is a 150-hour activity that provides hands-on experience in a commercial or in-house television house production studio. A contractual agreement listing the learning ob-

jectives of the course must be drawn up and signed by the student, faculty member, and site supervisor. Special fee. (150 contact hrs.)

RTT0944

Radio Internship 1 **5 credits**
This course provides practice in the skills needed for employment in a smaller type radio station. The course is established by determination of six learning objectives which are approved and evaluated in writing by student, supervisor and faculty coordinator. Special fee. (150 contact hrs.)

RTT0945

Radio Internship 2 **5 credits**
This course provides more advanced practice in the skills needed for employment in a smaller type radio station. The course is established by determination of learning objectives which are approved and evaluated in writing by student, supervisor and faculty coordinator. Special fee. (150 contact hrs.)

Fire Science

FFP0021

Fire Fighter Minimum Standards **15 credits**
This course teaches the in tital and intermediate knowledge and skills for prospective fighters. Via lectures, drills, and evolutions, students will learn to operate as a team under supervision. Successful completion of all examinations, performance objectives and adherence to the Student Manual are required. Fire Academy Students Only. (450 contact hrs.)

FFP0077

First Responder **1.50 credits**
A training course for students who will provide basic life support to victims of emergencies, to minimize patient discomfort and prevent further injury. This course is a required part of fire fighter training. Special fee. (45 contact hrs.)

Food Service

HMV0991

Selected Studies **1 credit**
Designed to offer an in-depth treatment of special areas under the various occupational categories; it may be varied each term according to faculty and student planning. This offering is numbered 0991, with prefix of the subject area, in the department or discipline of study. Credits only apply to a Vocational Credit certificate. Prerequisite: Permission of the instructor and department chairperson. (30-150 contact hrs.)

General Business

GEB0251

Cultural Issues in Conducting Business Abroad **1 credit**
This course will examine the development of culture and foster its understanding, and will identify various behavioral patterns and communications styles within different cultures. In addition, this course will focus on the enhancement of interpersonal sensitivities during the interactions with individuals of different ethnicity, gender, age, background, etc., and the impact of these differences when conducting international activities. Special fee. (30 contact hrs.)

Graphic Arts

GRA0420

Computer Graphic Design **4 credits**
This course is intended to train the desktop publishing student in programs that enable one to create and manipulate graphic illustrations. The two standard programs that are used in the industry are utilized, with lab activities that highlight important program features. Special fee. (120 contact hrs.)

GRA0430

Desktop Publishing **4 credits**
Desktop publishing is the production of high quality printed publications using relatively inexpensive equipment: personal computers, desktop scanners, and laser printers. This class explores the qualities and abilities of Aldus PageMaker, and industry-standard page layout program. Class lectures are supported with audiovisual presentation and extensive handouts. Lab classes consist of a series of typical page layout jobs. Special fee. (120 contact hrs.)

GRA0446

Principles of Typography **4 credits**
Typography is the art of designing printed matter using type as a medium. The history and development of typography, the use of printer's measurements and the aesthetic uses of type will be covered in the lecture form. The production of learned through hands-on project assignments. Instruction also will include industry standard typesetting equipment and desktop publishing personal computers and software. Special fee. (120 contact hrs.)

GRA0451

Graphic Photography Processes **4 credits**
Graphic photo processes-line is a basic course in the use of a graphic arts process camera, films, and chemistry. Numerous hands-on projects will include determining exposure and development times, enlargements and reductions, copying, scaling, print making, and proofing. Special fee. (120 contact hrs.)

GRA0452

Halftone Processes for Graphic Arts **4 credits**
A halftone is a reproduction of a continuous tone photograph that has been converted into dots of various sizes so it can be reproduced by any of the major printing processes. The various size dots are so small and numerous that they fool the eye into seeing shades of gray similar to a continuous tone photo. Numerous hands-on projects will cover the use of halftone screens and the manipulation of tones by controlled exposures and development procedures. Prerequisite: GRA 0451. Special fee. (120 contact hrs.)

GRA0457

Color Electronic Scanning **3 credits**
This course requires Color Reproduction Technology 1 as a prerequisite. The course is an advanced approach to electronic methods to color reproduction. The student will learn state-of-the-art methodology for color printing. Prerequisite: GRA 0455. Special fee. (90 contact hrs.)

GRA0460

Graphic Design 1 **4 credits**
This is an introduction to the basic skill technique of visual communication problems such as those involving perspective, proportion, and representative drawing. Special fee. (120 contact hrs.)

GRA0461

Graphic Design 2 **4 credits**
This course trains on the process of quality layout and graphic design. It covers studio projects such as ads, brochures, and logo designs. The basics of formal graphic design are covered in a creatively professional standard. Special fee. (120 contact hrs.)

GRA0463

Graphic Design 4 **4 credits**
This is a problem-solving course in graphic communications. Studio projects such as self-identity campaigns, book covers, label design and similar are covered. Electronic publishing skills in packages as Illustrator, Freehand, and Photoshop are utilized. Special fee. (120 contact hrs.)

GRA0465

Digital Graphic Painter **4 credits**
Students, working from photographs, represent the natural world on the newest artistic media: the personal computer. Fractal Design's Painter software enables student to use a wide variety of digital tools and surfaces to create electronic illustrations. Special fee. (120 contact hrs.)

GRA0472

Offset Stripping 2 **4 credits**
This is a vocational credit course that is an advanced course in film assembly for multi-color and 4 color process film assembly using the emulsion-up method. Hands-on projects will range from simple mechanically separate (fake color) projects to 4-color process separations for an 8 page brochure. This course

is highly recommended because of the increased demand for color within the advertising field. Special fee. (120 contact hrs.)

GRA0481
Paper in Graphics 1.50 credits

This course is a review of the various types and specifications of paper that are used for various types of graphic production tasks. The course is appropriate also for upgrading for persons involved in purchasing departments. Special fee. (45 contact hrs.)

GRA0840
Web Page Design One 4 credits

An introduction to the technologies and techniques of designing for the World Wide Web. This course covers all the key elements of Web design from concept to completion. The course also covers a basic introduction to WYSIWYG HTML editors. Special fee. (120 contact hrs.)

GRA0948
Co-Op Work Experience:

GRA 1-3 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op departmental approval and completion of GRA 0948 co-op work experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the cooperative education office to obtain registration approval. Special fee. (30-90 contact hrs.)

GRV0540
Advanced Electronic Publishing 4 credits

This is a high-end electronic publishing program whose features include extremely tight typographic and photographic controls. A series of job layouts will be executed in the lab. Special fee. (120 contact hrs.)

Health Information Management

HIM0001
Introduction to Health Information Management 4 credits

This is an introductory course in the principles of health information management. Students will learn ethical aspects and components of the health record, proper documentation, purposes and uses; legal principles that govern the health information field including access to patients' records, confidentiality, and informed consent. (30-60 contact hrs.)

HIM0013
Medical Law and Ethics 1 credit

This course focuses on the ethics of medicine and medical practice. Legal requirements and implications to the medical profession are stressed. Special fee. (30 contact hrs.)

HIM0061
Medical Record Transcription 1 1.50 credits

This course covers the basic foundations of medical transcription to include role, ethics and legal responsibilities of the transcriptionist. Equipment, types of medical reports, quality control and reference materials are also discussed. Special fee. (45 contact hrs.)

HIM0061L
Medical Record Transcription Applications 1 6 credits

This course is the applications for HIM 0031. Perfection of typing skills and correct use of basic transcription equipment. Prerequisite: HIM 0061. Special fee. (180 contact hrs.)

HIM0062
Medical Record Transcription 2 1.50 credits

This course is an in-depth study of types of medical reports and their components, qualitative and quantitative control standards and phraseology and language of various medical specialties. Special fee. (30-60 contact hrs.)

HIM0062L
Medical Record Transcription Applications 2 6 credits

This course is the applications for HIM 0032. Transcription from selected medical specialties. Prerequisite: HIM 0062. Special fee. (180 contact hrs.)

HIM0063
Medical Record Transcription 3 1 - 2 credits

This course focuses on the reports and terminology used primarily in pathology and autopsy procedures. Employability skills will also be discussed. Special fee. (30-60 contact hrs.)

HIM0063L
Medical Record Transcription Applications 3 2 - 7 credits

This course is the laboratory for HIM 0033. Transcriptions of reports and paraphrasing according to the content of dictation and terminology used in pathology and autopsies. Basic principles of word processing are practiced. A level of speed and accuracy consistent with employment standards is required. Prerequisite: HIM 0063. Special fee. (60-210 contact hrs.)

HIM0220
ICD-9-CM Coding 1 1 credit

The organization and development of nomenclatures and classification systems. Introduction to the international classification of disease (ICD-9-CM), volumes 1, 2, and 3. The characteristics and conventions of ICD-9-CM. Special fee. (30 contact hrs.)

HIM0220L
ICD-9-CM Coding Applications Laboratory 1 1 credit

This course deals with the application of the basic principles, characteristics and conven-

tions of ICD-9-CM. Special fee. (30 contact hrs.)

HIM0228
ICD-9-CM Coding 2 1.50 credits

This course focuses on the analysis and coding of diagnosis, procedures and symptoms with ICD-9-CM. Definitions and principles of the Uniform Hospital Discharge Data Set (UHDDS) with emphasis on assignments of the principal diagnosis and sequencing. Special fee. (45 contact hrs.)

HIM0228C
ICD Coding Systems 5 credits

This is a core International Classification Disease (ICD) coding course. Students will learn ICD coding systems using sample exercises and medical records to develop skill and accuracy in coding in various health care settings, including use of official coding guidelines and reporting requirements appropriate to the coding situation. Corequisite: HIM 0472. (150 contact hrs.)

HIM0228L
ICD-9-CM Coding Applications Laboratory 2 2 credits

This course focuses on analyzing and coding of diagnosis, procedures, and symptoms with ICD-9-CM. Application of principles of the Uniform Hospital Discharge Data Set (UHDDS), selection of the principle diagnosis, and sequencing. Prerequisite: HIM 0220L; corequisite: HIM 0228. Special fee. (60 contact hrs.)

HIM0230
ICD-9-CM Coding 3 1.50 credits

The relationship of diagnosis related groups (DRGs) and the Protective Payment System (PPS) to coding. The components of the DRG system and the Protective Payment regulations. Procedures for ensuring data quality. Special fee. (45 contact hrs.)

HIM0230L
ICD-9-CM Coding Applications Laboratory 3 2 credits

This course focuses on the application of the Prospective Payment Regulations for DRG validation assignment of the DRGs and procedures for ensuring data quality. Prerequisite: HIM 0228L; corequisite: HIM 0230. Special fee. (60 contact hrs.)

HIM0250**Current Procedural Terminology**

(CPT-4) Coding 1.50 credits
Current procedural terminology (CPT-4) coding principles are emphasized. The course will involve activities in which medical record professionals code and classify procedures in CPT for purposes in standardization, retrieval, and statistical analysis. Special fees. (45 contact hrs.)

HIM0250C**Ambulatory Care Coding Systems****2 credits**

This is an introductory course on coding using HCPCS/CPT systems in the ambulatory care environment. Students will learn ambulatory care coding of all body systems, coding guidelines and reporting requirements, using sample exercises to develop skill and accuracy. Prerequisites: HIM 0472, 0228C. corequisite: HIM 0285C. (60 contact hrs.)

HIM0271**Computerized Medical Insurance Billing****1.50 credits**

Computers in the medical office and their use in billing insurance are the focus of this course. Electronic claims transmission and how it affects cash flow in the medical office is explored. The advantages of a computer system versus a manual system are discussed. Special fee. (30 contact hrs.)

HIM0271L**Computerized Medical Insurance Billing Applications****1.50 credits**

This course addresses applications for automated medical insurance billing. The student will learn how to file medical insurance claims using one or more medical insurance billing software programs. Electronic claims transmission is explored. Emphasis is placed on understanding the insurance claim process from beginning to end. Corequisite: HIM 0271. Special fee. (45 contact hrs.)

HIM0274**Health Insurance Claims/Delinquent Claims and Problem Solving****1.50 credits**

This course reveals how insurance claims are developed and processed from the health care provider's office to the insurance company. Delinquent claims and solving common billing problems are explored. Various health plans are discussed. Prerequisites: HIM 0228, 0228L; corequisites: HIM 0230, 0230L. Special fee. (45 contact hrs.)

HIM0274C**Health Care Billing and Reimbursement****4 credits**

This is a foundation course in healthcare reimbursement. Students will learn the reimbursement methods and concepts related to healthcare and prospective payment system including DRGs, APCs and ASC groups, patient billing and accounting software in claims processing, compliance, the role HIM plays in the Charge master maintenance and revenue cycle. Prerequisite: HIM 0650. (120 contact hrs.)

HIM0280C**Physician Coding****2 credits**

This course will examine coding, data quality, and physician services billing. Students learn to read and interpret physician office documentation. Special emphasis is placed on assigning Evaluation and Management (E/M) codes, outpatient diagnostic coding guidelines, Current Procedural Terminology (CPT), Health Care Financing Administration Common Procedure Coding Systems (HCPCS) codes, and local codes. Prerequisite: HIM 0250; corequisites: HIM 0271, 0271L. Special fee. (60 contact hrs.)

HIM0290C**Advanced Coding Systems****3 credits**

This is an advanced course in ICD, CPT and HCPCS coding systems. Students will learn guidelines and applications to more complex case studies and health records according to current ethical standards of practice, Inpatient and Outpatient Prospective Payment Systems, encoding software and grouper practice applications. Prerequisite: HIM 0228C. Corequisite: HIM 0250C. (90 contact hrs.)

HIM0434**Basic Principles of Disease****2 credits**

This is a basic course in human disease. The student will learn all body systems diseases and conditions, including etiology, clinical features, therapy and prognosis; basic pharmacology by body systems including antivirals, antibiotics, vaccines, immunizations, and chemotherapy agents. Prerequisite: HIM 0450. (60 contact hrs.)

HIM0450**Human Anatomy & Physiology for Health Information Management****2 credits**

The structure and functions of the systems of the human body are emphasized. Includes the dynamics of physiology, terminology and physiological relationships of the systems. Special fee. (60 contact hrs.)

HIM0473**Medical Terminology****2.50 credits**

This is a foundation course in the structure of medical terms with emphasis on spelling, pronunciation and definition. Students will learn medical terms related to major disease processes diagnostic procedures, laboratory tests, abbreviations, drugs and treatment modalities. Corequisite: HIM 0228C. (75 contact hrs.)

HIM0615**Computer Operations****for Medical Applications****1 credit**

This course provides instruction in basic word-processing skills that are required to perform computer operations in health care facilities. Special fee. (30 contact hrs.)

HIM0650**eHealth Care Delivery Systems****3.70 credits**

This is an introductory course in basic computer software skills. Students will learn about commonly available software tools

used in healthcare, including introduction to encoding tools and computer assisted coding software, electronic health record processes and the unique computerized systems environment found in U.S. healthcare delivery systems. (60 contact hrs.)

HIM0801**Medical Record Transcription Clinical Practice****5 credits**

This course focuses on the clinical practice in various health care settings in the community. The student will utilize all types of medical transcription procedures in preparation for transition into the work place. Special fee. Prerequisites: HIM 0061, 0061L, 0062, 0062L. (150 contact hrs.)

HIM0817**Professional Practice****Experience****3.80 credits**

This course is an advanced coding/billing professional practice. Students will learn advanced coding and abstracting of actual inpatient and outpatient health records, with an emphasis on compliance and improving accuracy and productivity. Prerequisite: HIM 0228C, 0250C, 0285C. (120 contact hrs.)

Health Science

HIM0009**Introduction to Health****Information Technology****3 credits**

This course introduces students to health informatics and information management. Students will learn about the health care delivery system, communication skills, legal and ethical responsibilities, HIPAA and health records, and terminology related to health informatics. Other topics include developing leadership and teamwork skills and the application of critical thinking skills in a variety of presented scenarios. (90 contact hrs.)

HSC0003**Introduction to Health Care****3 credits**

An introduction to the health care environment, this course focuses on the health care team and delivery systems. Students will learn about legal responsibilities, ethical issues, safety, infection control, communication, interpersonal behaviors, wellness, and disease. Special fee. (90 contact hrs.)

Management

MAN0001**Introduction to Management****2.50****credits**

This course is designed to provide an introduction to Management and its basic functions. Tapes include human relations, entrepreneurship, goal setting and planning, decision making and motivation, and counseling in problem situations. Special fee. (75 contact hrs.)

MNA0789

Presentation Skills Business 1 credit

This course intends to make the participant aware of the specific steps necessary for making an oral or written communication. Special fee. (30 contact hrs.)

MNA0991

Selected Studies 1-5 credits

This course is designed to offer an in-depth treatment of special areas under the various occupational categories; it may be varied each term according to faculty and student planning. This offering is numbered 0991, with prefix of the subject area, in the department or discipline of study. Credits only apply to PSAV certificate. Prerequisite: Permission of the instructor and department chairperson. (30-150 contact hrs.)

Marketing

MKA0011

Survey of Marketing 2.50 credits

This course represents the key role of marketing in today's business-oriented society. The participant is required to apply the basic concepts of marketing to a local business enterprise, and hands-on application is the focus of the course. Special fee. (75 contact hrs.)

MKA0023

Effectiveness in Sales 1 credit

This course helps participants identify strengths and weaknesses in sales effectiveness, analyzes one's sales approach with a selected customer, helps improve negotiating skills, and review suggestions from experts in salesmanship. Special fee. (30 contact hrs.)

MKA0061

Strategic Marketing for the Small Business 2.50 credits

The course provides strategic and practical applications for the small business owner and entrepreneur. Topics to be covered are marketing mix, small business marketing, low cost media marketing strategies, recession planning, and the development of a marketing plan. Special fee. (75 contact hrs.)

MKA0242

Export/Import Marketing Introduction 2.50 credits

This is a practical course designed to assist the participant enter the field of importing and exporting in a metropolitan that is of the major international marketing areas in the world. A step-by-step application of procedures is followed. Special fee. (75 contact hrs.)

MKA0243

Introduction to Foreign Trade 1 credit

This course will serve as an overview of the international business environment and the institutions which affect business in the international arena. International economic, political, cultural, and trade business issues will be analyzed and international business theory

will be introduced within a practical application format. A broad view of the international economy will be included as well as the importance and impact of economic interdependence. Special fee. (30 contact hrs.)

MKA0244

Gathering Facts for International Marketing 1 credit

This course will help participants identify profitable international markets and business areas, as well as new product lines. Sources of information for successful international marketing will be identified and discussed. Special fee. (30 contact hrs.)

MKA0245

Import/Export 1 1 credit

This is a nuts and bolts class for the novice and the experienced importer or exporter. The student will learn how to start and maintain an import/export company, how to identify the market, find the supplies and customers, and buy and sell overseas. Special fee. (30 contact hrs.)

MKA0246

Import/Export 2 1 credit

This is a continuation of Import/Export 1. Previous topics will be reviewed and will continue with these topics; buying and selling overseas, how to ship and document correctly, maintaining business records, what taxes are to be paid, and to make a profit. Special fee. (30 contact hrs.)

MKA0516

Public Relations 2.50 credits

The goal of Public Relations, is for students to gain valuable skills and insights related to the Public Relations professional, which will enable them to become more productive employees and entrepreneurs. Students will gain insight into business problem analysis, and will receive practical experience in both written and oral communication skills. Special fee. (75 contact hrs.)

MKA0623

Food Store Sanitation 1.50 credits

This course provides food store personnel with a comprehensive understanding and basic knowledge needed to plan and implement a workable sanitation plan and to show how to keep it going while saving money too. Special fee. (45 contact hrs.)

MKA0624

Food Store Security 1 credit

This course provides food store personnel with a comprehensive procedures and policies to follow to prevent employee theft, vendor theft, front end losses, shoplifting, robberies, and burglaries, thereby reducing figures and increasing store profits. Special fee. (30 contact hrs.)

MKA0625

Food Merchandising: Principles and Practices 1.50 credits

This course provides food store personnel with a comprehensive understanding of the basic principles underlying food merchandising practices in the United States. Special fee. (45 contact hrs.)

MKA0626

Grocery Management Operations 1 credit

This course provides practical instruction in essential management areas such as inventory management, merchandising, operating for profit, as well presenting a product breakdown of the grocery department such as dairy, frozen foods, general merchandise, health and beauty aids. Special fee. (30 contact hrs.)

Massage Therapy

MSS0156

Anatomy and Physiology for Massage Therapy 2.50 credits

This course will focus on the relationship between the anatomical and physiological effects of massage therapy on the body. Students will focus on the structure of organs, muscles, bones and tissues. Primary focus will center on the musculo-skeletal system and innervations. Special fee. (75 contact hrs.)

MSS0156L

Anatomy and Physiology for Massage Therapy Laboratory 2.50 credits

This course will examine the practical application and physiological effects of massage therapy on the body. Students will focus on the structure of organs, muscles, bones and tissues. Primary focus will center on the musculo-skeletal systems and innervations as well as clinical pathologies related on those systems. Special fee. (75 contact hrs.)

MSS0215

History and Standards for Massage Therapy 1 credit

This course examines the history and development of massage therapy, basic legal concepts related to health care employment, and legal requirements for practice as a Massage Therapist in the State of Florida. Special fee. (30 contact hrs.)

MSS0250

Introduction to Massage Therapy 1 credit

This course focuses on the theories and principles of therapeutic massage. The Massage Therapist/Client Relationship, the effects on massage on the systems of the body, massage facilities, equipment/supplies, and furniture requirements will be discussed. Special fee. (30 contact hrs.)

MSS0250L

Introduction to Massage Therapy Laboratory 6 credits
Laboratory for MSS 0250. This course provides opportunities for the practical application of the theories and principles of therapeutic massage. Special fee. (180 contact hrs.)

MSS0281

Allied Modalities 3.50 credits
A study of the advanced theories and techniques for massage therapy. Content includes: oriental bodywork, reflexology, trigger approach, rolfing, cranio sacral therapy, infant massage, pregnancy massage and aromatherapy. Special fee. (105 contact hrs.)

MSS0300

Hydrotherapy Modalities 1 credit
This course focuses on the history and development of hydrotherapy, application in equipment used, and the associated standards. Special fee. (30 contact hrs.)

MSS0300L

Hydrotherapy Modalities Laboratory 1.50 credits
This course presents opportunity for the students to safely and effectively apply various types of hydrotherapy and evaluate their effectiveness. Special fee. (45 contact hrs.)

MSS0803C

Massage Therapy Clinical Practicum 3 credits
This course provides the student with the opportunity to practice and further develop an understanding of various massage techniques in a clinical placement setting under supervision of a licensed Massage Therapist. Special fee. (90 contact hrs.)

MSS0995

Massage Therapy - Accelerated 13.50 credits
This course is designed to provide PSAV credit for students with training and State of Florida licensure as a Physical Therapist or Physical Therapist Assistant. Students must provide documentation of a current state license and be a graduate of an accredited program. This course requires special permission and students must contact the program coordinator for registration approval. (240 contact hrs.)

MSS0996

Massage Therapy - Transitional 8 credits
This course is designed to provide PSAV credit for students with training and State of Florida licensure as an Allied Health Professional or Registered Nurse. Students must provide documentation of a current state license and be a graduate of an approved Associate Degree program. This course requires special permission and students must contact the program coordinator for registration approval. (240 contact hrs.)

Mathematics - Vocational Level

MTB0102

Business Mathematics 2.50 credits
This course is a review of basic mathematics: in business. Topics include but are not limited to the following: cash and trade discounts, commissions, mark-up, depreciation, interest and bank discounts, payroll records, taxes, analysis of financial statements, stocks and bonds, inventory calculations, notes and installment credit, bank records, annuities, and sinking funds. Special fee. (75 contact hrs.)

Medical Assisting

HIM0540

Electrocardiography/ Emergency Procedures 2 credits
The nature and purpose of the electrocardiograph (EKG); maintenance of equipment and materials needed; preparation of the patient and the procedure for taking and mounting the EKG record and monitoring the record for abnormal or erratic tracings. The maintenance of emergency equipment and implementing emergency procedures in the medical office. Special fee. (60 contact hrs.)

MEA0204

Theoretical Aspects of Clinical Skills 1 credit
This course is designed to develop and further support students' knowledge and ability to organize and work efficiently and effectively in both performing and assisting with clinical procedures performed in medical offices. Emphasis will be on the role and responsibility of the Medical Assistant. (30 contact hrs.)

MEA0204L

Application of Clinical Skills 2 credits
This course is designed to develop and support students' ability to perform and assist in basic clinical skills. Emphasis will be on the role and responsibility of the medical assistant in performing sterile techniques and the use of organization and efficiency in performing and assisting with patient examination, sterile procedures, and diagnostic procedures and treatment performed in medical offices. Special fee. (60 contact hrs.)

MEA0231

Anatomy and Physiology and Medical Terminology 2.30 credits
This course is designed to introduce the student to basic anatomy and physiology and to develop the ability to communicate verbally and in writing within the medical field. Special fee. (69 contact hrs.)

MEA0234

Pathophysiology & Disease for Medical Assistants 4 credits
This course is designed to introduce students to common diseases and medical conditions which affect patients who present themselves

to medical offices for diagnosis and treatment. Emphasis will be on the role and responsibility of the Medical Assistant in prevention, diagnosis, and treatment. (120 contact hrs.)

MEA0242

Pharmacology for the Medical Assistant 3 credits
This course is designed to introduce students to principles of pharmacology and provide a basis to comprehend the role and responsibility of Medical Assistants in administering medication. Emphasis will be placed on calculation of dosages, frequently used drugs, and classification of drugs as they relate to the body systems. Special fee. (90 contact hrs.)

MEA0254

Physician Office Laboratory Procedures 2 credits
Theoretical concepts of specimen collection and processing. This course focuses on the fundamentals of diagnostic tests, including urinalysis, basic office bacteriology, hematology, and blood chemistry. The principles of aseptic techniques, infection control, and safety procedures are discussed. Compliance with quality assurance practices are emphasized. (60 contact hrs.)

MEA0254L

Physician Office Laboratory Procedure Applications 2 credits
A clinical laboratory course designed for the Medical Assistant student to practice specimen collection, microscopy and urinalysis. Includes basic office bacteriology, hematology, and blood chemistry. The student will apply principles of aseptic techniques and infection control. Special fee. (60 contact hrs.)

MEA0258

Radiology for the Medical Assistant 3 credits
This course focuses on the basic principles of x-ray, film handling and processing, radiographic technique, and radiation biology. The course prepares the student to take the examination given by the Florida Department of Professional Regulations (DPR) for the Basic Radiographer License. Special fee. (90 contact hrs.)

MEA0322

Office Management and Professional Issues for the Medical Assistant 3 credits
Office management procedures, including planning and organization; financial and medical record keeping procedures; billing and collection; processing insurance claims using procedural and diagnostic coding. Legal and ethical responsibilities; credentialing and other professional issues of Medical Assisting. Special fee. (90 contact hrs.)

MEA0334C

Medical Coding/Insurance Billing with Collections 4 credits
Processing health insurance claims using procedural and diagnostic coding. The student will learn and apply current government reg-

ulations affecting third-party reimbursement. Billing, electronic claims transmission, and collection systems are emphasized. Special fee. (120 contact hrs.)

MEA0343

Computers in the Medical Office 3 credits
The application of computer concepts to medical office practices. The student will keyboard documents using word processing software. Emphasis will be on operating transcription equipment and transcribing medical records. The student will also be introduced to electronic spreadsheet and database applications. Special fee. (90 contact hrs.)

MEA0540

Electrocardiography/Emergency Procedures 2 credits
The nature and purpose of the electrocardiograph (EKG); maintenance of equipment and materials needed; preparation of the patient and the procedure for taking and mounting the EKG record and monitoring the record for abnormal or erratic tracings. The maintenance of emergency equipment and implementing emergency procedures in the medical office. Special fee. (60 contact hrs.)

MEA0802

Clinical Externship for the Medical Assistant 3 credits
This course is designed to provide students with experiences in the practice of the clinical aspect of medical assisting. Students will be assigned to physician's office or clinics where they will provide direct patient care under the guidance of an experienced Medical Assistant. Special fee (90 contact hrs.)

MEA0810

Administrative Externship for the Medical Assistant 3 credits
The student is assigned to a physician's office, clinic, laboratory, or other community health care facility. Emphasis is on integrating basic administrative skills demonstrated in previous courses. (90 contact hrs.)

MEA0832

Diagnostic Externship in Medical Assistant 3 credits
This course is designed to provide students with experiences in the diagnostic aspect of Medical Assisting. Students will be assigned to physician's office or clinics where they will perform diagnostic clinical laboratory procedures, electrocardiographic and basic x-ray procedures under the guidance of an experienced Medical Assistant. Special fee. (90 contact hrs.)

Medical Laboratory Technology

MLT0041

Phlebotomy Theory 0.50 credit
This course covers the theory of phlebotomy techniques by venipuncture and skin punc-

ture. This includes basic anatomy and physiology of the circulatory system, types of tubes to select for various blood tests, possible interfering substances, hospital hierarchy, professionalism, risk factors for Hepatitis, AIDS, and all sexually transmitted diseases, infection control guidelines, and employability skills. Special fee. (15 contact hrs.)

MLT0048

Phlebotomy Practicum 1.50 credits
This course is designed to prepare students to draw blood by venipuncture and capillary puncture and to prepare them for employment in a hospital laboratory, blood center, or other health care facility. Students are taught safe and efficient work practices in obtaining adequate and correct blood specimens, labeling specimens, and transporting specimens correctly to the appropriate laboratory sections. The Center for Disease Control (CDC) guidelines for HIV/AIDS, Hepatitis B and other diseases are stressed. (45 contact hrs.)

MLT0061

Practical Aspects of Phlebotomy 0.50 credit
This course covers the collection of blood by venipuncture, skin puncture and donor room techniques. This includes the handling, labeling, transporting, and logging-in of specimens as well as the demonstration of correct infection control techniques. Special fee. (15 contact hrs.)

Pharmacy Technician

PTN0003

Introduction to Pharmacy Practice & Medical Terminology 3 credits
This course is an orientation to the overall functions and services of a hospital pharmacy. Students will learn medical abbreviations, terminology, chemical symbols, formulas, and incompatibilities. Prerequisite: HSC 0003; corequisite: PTN 0006. (90 contact hrs.)

PTN0004

Pharmacy Practitioner Applications 3 credits
This course focuses on pharmacy practitioner applications. Students will learn to develop skills relating to the specific, technical, manipulative and clerical tasks involved with the preparation and distribution of medications under the supervision of Licensed Pharmacists. Prerequisite: HSC 0003; corequisite: PTN 0021. Special fee. (90 contact hrs.)

PTN0006

Pharmacy Calculations 3 credits
This is a course in Pharmacy Calculations. Students will learn to define systems of measurement, convert from one system to another, and calculate pharmacology problems. Prerequisite: HSC 0003; corequisite: PTN 0003. (90 contact hrs.)

PTN0021

Drug Classifications 3 credits
This course covers the major classifications of pharmaceuticals, standards for quality and purity of drugs, and authoritative information on dosage and administration. Students will learn about poisons, placebos, and the sources from which medications are produced. Prerequisites: HSC 0003, PTN 0003, 0006; corequisite: PTN 0004. (90 contact hrs.)

PTN0041

Pharmacy Technician Hospital Field Experience 10 credits
This course covers clinical hospital training to develop the student's knowledge and skills on the job. Students will learn how to properly prepare doses of medications and intravenous admixtures. Prerequisites: HSC 0003, PTN 0003, 0004, 0006, 0021; corequisite: PTN 0049. (300 contact hrs.)

PTN0049

Pharmacy Technician Retail Store Field Experience 10 credits
This course covers the clinical field experiences in a retail establishment. Students will learn about pharmaceutical chemistry, proper medication, and how to deliver medications correctly. Prerequisites: HSC 0003, PTN 0003, 0004, 0006, 0021; corequisite: PTN 0041. (300 contact hrs.)

Real Estate

REE0035

Mathematics for Real Estate 1.50 credits
This course is designed to help the individual become more proficient with basic mathematics as they are used in the real estate business. Topics include a review of basics, percent's in real estate, mortgage math, real estate taxes, legal descriptions and area problems, math in real estate appraising and prorating for closing statements. Special fee. (45 contact hrs.)

REE0044

Real Estate Sales 2.10 credits
Principles & Practices 1 is the beginning course for a student wishing to enter the Real Estate business and receive a Real Estate License. This is a survey course that looks into the legal relationship between salesman and client, salesman and customer, and salesman and broker. It is a study of many of the mechanical principles of the Real Estate business such as deeds, surveys, financing and appraising. Special fee. (63 contact hrs.)

REE0301

Real Estate Post-Licensing Brokers 2 1 credit
This course is the investment portion (part 2) of the State required Post-Licensing for Brokers. The objective of the course is to provide the licensee with advanced knowledge of Real Estate investment and finance. Prerequisite: REE 0801. Special fee. (30 contact hrs.)

REE0801**Real Estate Post-Licensing
Brokers 1****1 credit**

This is the management portion (Part 1) of the State required Post-Licensing course for Real Estate Brokers. The objective is to provide the licensed Brokers with advanced knowledge of the management and operation of a brokerage office. Special fee. (30 contact hrs.)

REE0802**Broker Estate Broker's****License Exam Preparation 2.50 credits**

The purpose of this course is to provide the licensed Real Estate Salesperson with the fundamental knowledge required by the Florida Real Estate Commission to successfully complete the State License Examination for the Real Estate brokers. The content includes appraising, finance, investment and much more. Special fee. (75 contact hrs.)

Student Life Skills

SLS0270**Practical Leadership Skills****1 credit**

This course employs a small-group approach to improve leadership skills of individuals training for supervisory positions. Students will improve in problem identification and resolution, planning, and effective methods of communication with subordinates and co-workers. Special fee. (30 contact hrs.)

SLS0341**Employability Skills****1 credit**

This course teaches the student the skills necessary to conduct a successful job search and to be successful in a job requiring positive human relation skills. Clothing, behavior, personal presentation and interpersonal relations are covered. Special fee. (30 contact hrs.)

Surveying

SUR0001**Construction Survey****4 credits**

This course focuses on the practice of surveying as related to the Building and Construction industry. This course includes a combination of classroom and practical field problems with the tape, level and transit. Lab time is required. Special fee. (120 contact hrs.)

Transportation and Traffic Management

TRA0701**Transportation/Geographical
Considerations****1 credit**

This course will address the logistics for import and export. Types of pallets, air and sea containers, railroad shipping and inland freight will be discussed. Cargo consolidation for air and sea transport will be addressed as well as types of insurance required. Evaluating service from brokers, forwarders, and steam lines will also be addressed. In addition, geographical concepts will be addressed with the relative location of regions and nations evaluated in terms of specific physical environments, political and economic trends, demography and utilization. Ports of entry and other geographical considerations related to trade will also be examined. Special fee. (30 contact hrs.)

Vocational Preparatory

VPI0111**Vocational Preparatory****Reading****1-6 credits**

This course is intended for the student who has tested in at a level on the Test for Adult Basic Education (TABE) that requires some work to improve basic reading skills. Individualized work on a computer is prescribed to enable the student to test out at an appropriate level to be successful in a Vocational program. (30-180 contact hrs.)

VPI0211**Vocational Preparatory****Mathematics****1-6 credits**

This course is intended for the student who has tested in at a level on the (TABE) test that requires some work to improve basic math skills. Individualized work in a computer is prescribed to enable the student to test out at an appropriate level to be successful in a Vocational program. (30-180 contact hrs.)

VPI0311**Vocational Preparatory****English****1-6 credits**

This course is intended for the student who has tested in at a level on the (TABE) test that requires some work to improve basic language skills. Individualized work on a computer is prescribed to enable the student to test out at an appropriate level to be successful in a Vocational program. (30-180 contact hrs.)

Selected Studies

###947**Co-op Work Experience 2****3 credits**

This course is designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisites: Co-op Department approval and completion of 0948 Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. (30-90 contact hrs.)

###991**Selected Studies****3 credits**

Designed to offer an in-depth treatment of special areas under the various occupational categories: it may be varied each term according to faculty and student planning. This offering is numbered 0991, with prefix of the subject area, in the department or discipline of study: Credits only apply to a Vocational Credit certificate. Prerequisite: Permission of the instructor and department chairperson. (30-150 contact hrs.)

###999**Diagnostic Medical Externship 3 credits**

This course provides experience in a variety of vocational disciplines. The externship will be provided in an approved establishment within the identified discipline area. May be repeated for credit. (90 contact hrs.)



Educator Preparation Institute

EPI0001

Classroom Management 3 credits

The student will learn how to plan, intervene, and evaluate behavior management strategies that create a positive P-12 learning environment that is requisite to increase student learning. The student will learn to apply the student code of conduct, as well as match disciplinary action to undesirable behaviors which impede the teaching and learning process. Ten hours of clinical experience are required. (3 hour lecture)

EPI0002

Instructional Strategies 3 credits

The student will learn to connect human developmental theories and current educational neuroscience research to the planning of instructional activities for students in P-12 settings. The student will learn to apply varied teaching strategies, develop questions that address all levels of the cognitive domain, create lesson plans to include objectives, anticipatory set, practice, and assessment, as well as to research professional literature to hone the craft of effective teaching. Pre-requisites: EPI0001, or an equivalent course. (3 hr. lecture)

EPI0003

Technology 3 credits

The student will learn about the historical, legal, and developmental implications of utilizing instructional technology to teach P-12 students. Students acquire knowledge regarding Assistive Technology and will integrate Assistive Technology to meet the needs of students with special educational needs. Students will select the best technology applications for the classroom. The student will apply current research to teaching and learning with technology when planning learning activities. Pre-requisites: EPI0002 (3 hr. lecture)

EPI0004

The Teaching & Learning Process 3 credits

The student will learn the philosophies of major educational theorists and the application to the P-12 teaching and learning process. The student will learn to develop lessons which include tier-based instruction, strategies for enrichment and differentiation, as well as differentiated and alternative assessments. The student will learn to develop his/her own philosophy of education. Ten hours of clinical experience are required. Pre-requisites: EPI0002 (3 hr. lecture)

EPI0010

Foundations of Research-Based Practices in Reading 3 credits

The student will learn about the reading process and reading instruction from P-12. In addition, the student will examine educational neuroscience research related to the reading process, as well as research-based approaches and theories related to all components of the reading process: phonemic awareness, phonics, vocabulary, fluency, oral language, and

comprehension. An assessment of the students teaching performance will be conducted. Content covers Competency 2 and 4 of the 2010 Reading Competencies. Fifteen hours in the clinical setting are required. Pre-requisites: EPI0001, and EPI0002, and EPI0004 (3 hr. lecture)

EPI0020

Professional Foundations 1 credit

The student will learn to evaluate his/her role as a productive member of the teaching profession. The student will learn to reflect on his/her development and mastery of the Pre-Professional Florida Educator Accomplished Practices during the completion of the Clinical Education experience in a P-12 classroom setting. Pre-requisites: EPI0002 (1 hr. lecture)

EPI0030

Diversity 2 credits

The student will learn the complexities surrounding the cultural, linguistic, and exceptional needs of P-12 learners. The student will learn about legal mandates, ethical issues, implications for classroom implementation, and best practices for instructional strategies and maintenance of safe, inclusive, and diverse learning environments. The student will learn to make researched-based decisions through designing and adapting the curriculum, as well as the learning environment to meet the needs

diverse student population. Pre-requisites: EPI0002 (2 hr. lecture)

EPI0940

Field Experience II 2 credits

The student will observe effective teaching/learning techniques in P-12 settings with diverse learners to collect and analyze observational data, and also plan/implement teaching strategies that meet the individual needs of all learners. A formal observation/assessment of the students teaching performance will be conducted. Thirty hours in a clinical setting is required. Pre-requisites: EPI0001, and EPI0002, and EPI0003, and EPI0010, and EPI0030 (2 hr. lecture)

EPI0945

Field Experience I 1 credit

The student will observe effective teaching/learning techniques in P-12 settings with diverse learners to collect and analyze observational data, and also plan/implement teaching strategies that meet the needs of all learners. A formal observation/assessment of the students teaching performance will be conducted. Fifteen hours in a clinical setting are required for successful completion of this course. Pre-requisites: EPI0001, and EPI0002, and EPI0004, and EPI0010, and EPI0030 (1 hr. lecture)





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ARMANDO J. BUCELO JR., Chair, Miami Dade College of Board of Trustees is a senior partner and statewide chair of the expanding Real Estate and Banking practices at Roig Lawyers in Coral Gables. For over fifteen years, he has served as Special Counsel to the Code Enforcement Board of the City of Miami, Special Advisor to the City of Miami, Trustee for the Cuban-American National Republican Senatorial Committee, and Committeeman for the Republican Party.

He was appointed by President George W. Bush to serve as Co-Chairman/Director of the Securities Investor Protection Corporation, one of the administration's highest appointments made to a Hispanic. He was also appointed as a member of the Board of Directors of the National Housing Development Corporation, one of the most prestigious national institutions dealing with affordable housing. Under former President George Bush, he was the first Hispanic and first Floridian selected as a member of the Board of

Directors of the Federal Home Loan Mortgage Corporation (Freddie Mac).

He has been involved in a myriad of community activities, including the Board of Directors of the YMCA International, the American Red Cross, as past President of the Downtown Miami Business Association, and as past President of the Cuban-American Bar Association. He has been honored as one of the 100 Most Influential Hispanics on numerous occasions and has received proclamations from the U.S. House and Senate, the Florida House and Senate, and the cities of Coral Gables, Miami, Hialeah, West Miami, Sweetwater, and Miami-Dade County.

Trustee Bucelo earned his Juris Doctor and Bachelor of Arts from the University of Miami and is an alumnus of Miami Dade College.

ARMANDO J. OLIVERA, Vice-Chair, Miami Dade College District Board of Trustees is the retired president and chief

executive officer (CEO) of Florida Power & Light Company (FPL), a subsidiary of NextEra Energy, Inc. and one of the largest investor-owned electric utilities in the nation. He was appointed president in 2003, CEO in 2008 and retired in 2012 after observing his 40th anniversary with the company.

Under Trustee Olivera's leadership, FPL grew its assets 79 percent to \$31.8 billion, its revenues by 28 percent to \$10.6 billion and its net income by 50 percent to \$1.1 billion. Trustee Olivera managed a multibillion dollar capital investment program that included expanded nuclear capacity, a new highly efficient, natural gas, combined-cycle power plant, and three new solar energy centers. FPL also has one of the nation's leading energy efficiency programs. Trustee Olivera is a director of AGL Resources Inc. and Fluor Corp., and previously served as a member of the Nicor Inc. board.

He is a member of the board and a past chairman of the Florida Reliability

Coordinating Council, as well as a member of the board of Enterprise Florida and the Florida Council of 100. Trustee Olivera is a member of the Cornell University Board of Trustees, where he received a bachelor's degree in electrical engineering, and he holds a Master of Business Administration from the University of Miami.

HELEN AGUIRRE FERRÉ, is a communications leader and media strategist with more than 25 years of experience in journalism, which includes television, radio and print, for both English and Spanish language audiences. She also has extensive experience in advocacy on behalf of public, private and non-profit institutions.

In the print media, Helen Aguirre Ferré had a weekly opinion column in *The Miami Herald* and *El Nuevo Herald* covering local and national news and was the Opinion Page Editor and a weekly columnist for *Diario Las Americas* newspaper.

Aside from her career in journalism, Aguirre Ferré is passionate about providing access to education for students of all ages and backgrounds. She is the first woman to chair the Board of Trustees of Miami Dade College, the largest campus-based institution of higher education in the country, and serves on the board of directors of the Association of Governing Boards of Universities and Colleges (AGB), where she is Vice Chair for Advocacy.

Most recently, Aguirre Ferré was inducted into the Florida Women's Hall of Fame for her work in higher education, civic engagement, philanthropy and volunteer service for underserved communities.

Civic engagement and volunteer service are also top priorities for Aguirre Ferré. She is a member of the Florida Chapter of the International Women's Forum; a national member of the Council on Foreign Relations, where she also serves on the Nominating Committee; a member of the InterAmerican Institute for Democracy, and an advisory board member of the New Hampshire Institute of Politics, Angels of Mercy of Mercy Hospital in Miami, the Mater Center in Miami and the American Nicaraguan Foundation. Previously, Aguirre Ferré served on the board of the Community Television Foundation of South Florida, the Florida Higher Education Task Force, Florida Energy Commission 2020 and Goodwill Industries of South Florida, among other respected organizations.

In addition, Aguirre Ferré co-founded two outstanding organizations:

CODELLA, an entrepreneurship/coding immersion program for middle school Hispanic girls in underserved communities and Operation Saving Lives which was a humanitarian task force responsible for sending significant relief supplies including medicine, food and clothing to the victims of Hurricane Mitch in Central America in 1998.

Aguirre Ferré holds a B.A. in Political Science from Barry University in Miami Shores, Florida and an M.A. in Inter-American Studies from the University of Miami in Coral Gables, Florida.

Although her family hails from Nicaragua, she was born and raised in Miami and resides in Miami Shores with her husband and family.

MARILI CANCIO is an attorney specializing in transactional matters involving corporate, international, real estate, trademarks, and financial affairs. She is the managing partner of Cancio Johnson & Echarte PL. Previously, she served as a shareholder at Fowler White Burnett PA and senior counsel at Holland & Knight LLP.

The daughter of Cuban exiles, Cancio is very involved in the community. She has served as chair of the Hispanic Affairs Advisory Board Miami-Dade County, as a member of the Community Relations Board of Miami-Dade County, trustee of Vizcaya Museum and Gardens, member of Orange County's Women's and Minority's Business Certification Board, member of the Republican Executive Committee for Miami-Dade County, member of the Florida Federation of Republican Women and in other important organizations. In addition, she has served as Pro Bono Counsel for La Liga Contra el Cancer and as a past member of other charity boards and committees.

Cancio was born in Miami Beach, but moved to Brazil as a young child attending Portuguese-speaking schools and graduating from high school in Rio de Janeiro. Marili moved back to the U.S. to attend Arizona State University. She later completed her bachelor's degree at Eastern College in Pennsylvania. She also completed classes at Miami Dade College. She obtained her law degree from Temple University. She most enjoys spending time with her family traveling, boating and playing tennis. She is married, has two adult children and a granddaughter.

DANIEL DIAZ LEYVA is an attorney with the global law firm of Foley & Lardner LLP. Admitted to practice law in Florida in 2004, Mr. Diaz Leyva has a broad range of general transactional experience

with a primary focus in the areas of real estate and finance representing investors in structuring, acquiring, financing, leasing and developing industrial, retail, office and residential properties and financial institutions in loan transactions. Additionally, he has ample public affairs experience having counseled clients with issues before governments. He has been selected by Super Lawyers as a Rising Star and is Martindale-Hubbell Peer Review rated AV Preeminent.

Mr. Diaz Leyva is actively engaged in the South Florida community and has been recognized by several organizations for his service including the Ruth Shack Leadership Award from The Miami Foundation in 2012. This award is given annually to an emerging leader who embodies the qualities of ethical leadership, dedication and service to Greater Miami. He was recently appointed by Florida Governor Rick Scott to the Board of Trustees of Miami Dade College, the Nation's largest and most diverse public institution of higher education. Appointed by the Speaker of the Florida House of Representatives, he serves on the Board of Directors of Florida Health Choices, a corporation charged with increasing access to affordable, quality care by creating a competitive market for purchasing health insurance. He also serves on the Board of Directors of Anthem Bank & Trust, a federally chartered savings association. He helped establish and serves as the executive director of the US chapter of the Consejo Empresarial de America Latina (CEAL), an organization consisting of some of the most prominent business leaders in Latin America to promote economic development in the region. He has also served on the Boards of the CHARLEE Homes for Children, Banyan Health Systems, Latin Builders Association, Hispanic Business Initiative Fund and the University of Miami Institute for Cuban and Cuban American Studies.

He graduated from the University of Miami with Honors with a Bachelor's in Business Administration (Finance) and St. Thomas University School of Law with a Juris Doctor. He resides in Coral Gables with his wife and their two children.

BENJAMIN LEÓN III is president and COO of Leon Medical Centers, a managed healthcare system offering superior comprehensive services to the residents of Miami-Dade County. Trustee León has served at the helm of the organization since 1996, guiding the delivery of primary care, outpatient services and various specialty services to Medicare members.

He began his career as a customer service representative for Clínica Cubana, which his family opened in the 1960s to satisfy the healthcare needs of South Florida's growing Hispanic population. León serves on the board of the Latin American Chamber of Commerce (CAMACOL) and is involved in numerous charitable causes, such as the American Diabetes Association and the American Cancer Society.

Trustee León holds a Bachelor of Arts in Organizational Leadership from St. Thomas University.

BERNIE NAVARRO is president of Benworth Capital Partners, a privately-held real estate investment company headquartered in South Miami. He founded the firm in 2008. Since then, he and his team have built one of the most successful alternative and traditional private lending entities in Florida, including a crowdfund platform.

Navarro has been serving on the Board of Trustees of Miami Dade College since 2014, providing leadership oversight for the College's Idea Center as a member of the entrepreneurial institute's board of directors. He also serves as Chairman of the LBA Construction and Business Management Academy, the first business charter high school founded by a business association in the United States. The nonprofit Academy has received recognition by Fortune 500 companies, national educators and U.S. government officials specializing in educational issues.

Navarro has also been active in the Latin Builders Association (LBA) including serving as Past President. He was a panelist to select candidates to participate in the President's Commission on White House Fellows, one of the nation's premier programs to provide young leaders with first-hand experience in Federal government.

He has held a number of trade missions on behalf of the South Florida business community, working with the U.S. Department of Commerce, the City of Miami Mayor's Office and the Greater Miami Chamber of Commerce. Throughout his career, Navarro has received numerous honors and awards, including recognition in South Florida Business Journal's "40 Under 40" issue as one of the region's best and brightest.

Navarro earned an A.L.M. degree in Government from Harvard University and a Bachelor's degree in Business Administration with a concentration in Finance from the University of Miami. He lives in South Miami with his wife and their three children.

An American by choice, **DR. EDUARDO PADRÓN** arrived in the United States as a refugee at the age of 15. Since 1995, he has served as President of Miami Dade College (MDC), the largest institution of higher education in America with more than 165,000 students. He is credited with elevating MDC into a position of national prominence among the best and most recognized U.S. colleges and universities. An economist by training, Dr. Padrón earned his Ph.D. from the University of Florida. In 2009, *TIME* magazine included him on the list of "The 10 Best College Presidents." In 2010, *Florida Trend* magazine placed him on the cover of its inaugural "Floridian of the Year" issue. In 2011, The Washington Post named him one of the eight most influential college presidents in the U.S. Also in 2011, he was awarded the prestigious 2011 Carnegie Corporation Centennial Academic Leadership Award. In 2012, he received the Citizen Service Award from Voices for National Service, the coveted TIAA-CREF Hesburgh Award for Leadership Excellence, and the Aspen Institute Ascend Fellowship. In 2015, he was inducted into the U.S. News & World Report STEM Hall of Fame. Dr. Padrón's energetic leadership extends to many of the nation's leading organizations. He is the past chair of the board of directors of the American Council on Education (ACE) and is a past chair of the board of the Association of American Colleges and Universities (AAC&U). He also served on the American Academy of Arts & Sciences' Commission on the Humanities & Social Sciences.

President Padrón is widely recognized as one of the top educational leaders in the world and is often invited to participate in educational policy forums in the United States and abroad. In 1993, President Bill Clinton recognized him as one of America's foremost educators. President George W. Bush nominated him to the National Institute for Literacy Advisory Board and the National Economic Summit. More recently, he represented the U.S. at UNESCO's World Conference on Higher Education at the invitation of the Obama administration, and President Obama appointed him Chairman of the White House Commission on Educational Excellence for Hispanic Americans. During his career, he has been selected to serve on posts of national prominence by six American presidents.

Internationally, President Padrón's accomplishments have been recognized by numerous nations and organizations including the Republic of France, which

named him Commandeur in the Ordre des Palmes Académiques; the Republic of Argentina, which awarded him the Order of San Martin; and Spain's King Juan Carlos II, who bestowed upon him the Order of Queen Isabella, and Spain's Prince and Princess of Asturias, Felipe and Letizia, who presented him with the Juan Ponce de Leon 500th Anniversary award.

President Padrón's transformational accomplishments at Miami Dade College have been acknowledged by the national media including *The New York Times*, *The Washington Post*, *NBC Nightly News*, *TIME* magazine, *Wall Street Journal*, *CNN*, and *The Chronicle of Higher Education*.

Under Dr. Padrón's leadership, Miami Dade College has received national recognition for its longstanding involvement with its urban community, its catalytic effect for social and economic change, and the marked difference the College has made in student access and success through pace-setting initiatives.

He is the recipient of numerous honorary doctorates and prestigious awards. He has been featured in *People* magazine as one of the world's most influential Hispanics, in *Hispanic* magazine's list of most powerful Latinos, and in *PODER* magazine's report on "Movers and Shakers."



District Administration - Executive

- PADRON, EDUARDO J., *Professor, College President, College President's Office, Wolfson*. B.A., Florida Atlantic University; M.A., Ph.D., University of Florida.
- MONTROYA, ROLANDO, *Professor, Provost for Operations, Office of the Provost for Operations, Wolfson*. B.S., Instituto Tecnológico de Estudios Superiores de Monterrey; M.S., Ed.D., Florida International University. The Sun Bank Endowed Teaching Chair 1995-1997. The Carlos Arboleya/Barnett Bank Endowed Teaching Chair 1998-2000.
- RODICIO, LENORE P., *Associate Professor, Provost for Aca. & Student Aff., College Presidents Office, Wolfson*. B.S., Barry University; Ph.D., Louisiana State University and A. & M.
- LEVERING, EUGENE H., *Senior Vice Provost/CFO, S.V.P. Business Affairs, Kendall*. B.S., Georgia Institute of Technology; M.B.A., Duke University.
- ALEXANDER, JULIE, *Vice Provost, Vice Provost for Academic Affairs, Wolfson*. B.E.A., University of North Texas; Ed.D., Florida State University.
- ANDREWS, GEORGE F., *Chief of Staff, College President's Office, Wolfson*. B.B.A., University of Central Florida; M.B.A., University of Miami.
- BALLA, RUTH A., *Executive Director, ERP, ERP Consultants & Backfill Stf, Kendall*. B.S., Wilkes University; M.S., North Carolina State University.
- CASTILLO-FRICK, O ILIANA, *Vice Provost, Human Resources, Division of Human Resources, Kendall*. B.A., B.S., Florida International University.
- CHANG, WENDY C., *Vice Provost, IT Information Technology, Kendall*. M.C.I.S., Cleveland State University; Ph.D., S.U.N.Y. College at Buffalo.
- COLE, MARK, *VP of Advancement & Exec Dir., MDC Foundation, Wolfson*. M.F.A., University of Minnesota.
- CUBARRUBIA, ARCHIEVAL P., *Vice Provost, Institutional Effectiveness, Wolfson*. B.S., M.Ed., Boston University; Ed.D., George Washington University.
- MAALOUF, KATHY J., *Vice Protost, Vice Provost Student Affair, Wolfson*. B.A., University of Central Florida; M.S., Christopher Newport College; Ph.D., Old Dominion University.
- OTERO, NEYDA S., *Interim, Vice Provost, Facilities Management, Kendall*. B.Arch., University of Miami.
- MENDIETA, JUAN C., *Director of Communications, College President's Office, Wolfson*. B.S.C., M.P.A., Florida International University.
- Miami Dade College; B.S., Florida International University.
- ALVAREZ, JORGE M., *Senior Research Analyst, Institutional Research & Effectiveness, Wolfson*. A.A., A.S., Miami Dade College; B.C.S., Florida International University; M.S., Barry University.
- AMAYA, MERCEDES, *Assoc. VP, Student Finan. Serv., Collegewide Financial Aid, Kendall*. A.A., Miami Dade College; B.S., Florida International University; M.A., University of Miami.
- ARENAS, JORGE A., *Manager, Database Systems, Telecommunications, Kendall*. A.A., Miami Dade College; B.S., M.S., Florida International University.
- ARIAS, JORGE, *Client System Administrator, Computer Operations, Kendall*. A.A., Miami Dade College.
- ARRIETA, MARTHA B., *Director, Comp., Benefits & Hris, Division of Human Resources, Kendall*. A.A., Palm Beach State College; B.B.A., Florida Atlantic University.
- AVILA-CASTILLO, JUAN A., *System Administrator, Computer Operations, Kendall*. A.A., Miami Dade College; B.S., Barry University; M.S., Nova Southeastern University.
- BAENA, ANDRES E., *Administrative Assistant III, Facilities Management, Kendall*. A.A., B.A.S., Miami Dade College.
- BAEZA DAGER, YAHEMN, *Senior Assessment & Plan Assoc, Assessment, Evaluation & Testing, Wolfson*. B.S., M.S., Universidad del Norte.
- BALDWIN, CHERYL A., *Executive Dir Work Edu & Parne, Workforce Education and Development, Wolfson*. M.S., Columbia University.
- BARBOZA, BARIKA L., *Director, Academic Affairs, Wolfson*. B.S., Bennett College; M.A., New York University.
- BARKER, CHRISTOPHER J., *Director, Fy 15-16 Implcompl By Design, Wolfson*. B.A., Grand Valley State University; M.A., Biola University.
- BARSONY, ILDIKO, *Academic Support Facilitator, Accreditation Activities, North*. B.S., Juhasz Gyula Tanarkepzo Foiskola; Ed.S., M.S., Florida International University.
- BAUDIN, SALLY S., *Assistant Director, Financial, Accounts Payable, Kendall*. B.S., Fordham University.
- BELTRAN, DULCE M., *Collegewide Director, Registrar, Collegewide Registration Srv, Kendall*. A.A., Miami Dade College; B.A., B.B.A., M.B.A., Florida International University.
- BENITEZ, ARMANDO, *Manager, Restricted Accounts, Kendall*. B.B.A., St. Thomas University.
- BERGER, RHONDA W., *Director Of Technology Training, College Training and Development, Kendall*. A.A., Miami Dade College; B.S., University of Florida; M.S., Florida International University.
- BLANCO, ORLANDO J., *Information Architect, Office of Communications, Kendall*. B.F.A., Florida State University.
- BLEEMER, RACHEL L., *Director, Miami International Film Festival, Wolfson*. B.A., Barry University.
- BRADLEY, ANA M., *Associate Dean, Academic, Faculty Initiatives, Wolfson*. A.A., Miami Dade College; B.A., M.A., Ph.D., University of Miami.
- BRIDGES, CLIVE R., *Employee Relations Admin., Division of Human Resources, Kendall*. B.A., Morehouse College; M.B.A., University of Miami.
- BRISTOL-CASTRILLON, RAMON S., *Assistant Director, Purchasing, Kendall*. M.A., Hawaii Pacific University.
- BRISTOL-SANCHEZ, MAUREEN C., *Manager, Restricted Accounts, Kendall*. A.A., B.A.S., Miami Dade College.
- BRITO, ALICIA, *Interim, Manager, Finance Coa & Security, Kendall*. B.A., Universidad de La Habana.
- BROOKS, TAMARA, *Assistant Controller, Central Accounting, Kendall*. B.Acc., M.Acc., Florida International University.
- BRYANT, GREGORY E., *Operations Manager, Aux Collegewide - Auxiliary Serv, Kendall Campus*. B.S., M.B.A., University Of Phoenix.
- BUTTRON, GABRIELA M., *Education Specialist, Office of the Provost for Operations, Wolfson*. A.A., A.S., Miami Dade College; B.S., Florida International University; M.S., St. Thomas University.
- BURNEIKIS, ALEXA V., *Manager, Cultural Affairs, Wolfson*.
- BURTON, HANNIBAL N., *Director, Auxiliary Services, Kendall*. B.S., Florida A. & M. University.
- BURY, KARYNE G., *Manager, Idea Center, Wolfson*. M.B.A., Florida International University.
- BYRD, GREGORY S., *Senior Assessment & Plan Assoc, 15/17 10k Small Busn. Training, Wolfson*. A.A., Miami Dade College; B.B.A., Florida International University.
- CALDWELL, JACQUELYN A., *Manager, Facilities Operations, Facilities Management, Kendall*. M.A., University of Missouri-Columbia.
- CALIXTO, RICHARD, *Senior Network Administrator, Telecommunications, Kendall*. A.A., B.A.S., Miami Dade College.
- CAMPRUBI, JENNIFER M., *Senior Group Manager, Computer Services, Kendall*. B.B.A., University of Miami; M.B.A., Florida International University.
- CAMPS, ZERAIDA M., *Information Security Analyst, Information Assurance, Kendall*. B.S.B.A., Seton Hall University.
- CAMUS, IVAN A., *Manager, Restricted Accounts, Wolfson*. A.A., Miami Dade College; B.S., M.B.A., Florida International University.
- CANDALES, CHRISTIAN, *HRIS Support/Security Analyst, Human Resource Info Systems, Kendall Campus, A.A.*, Miami Dade College, B.B.A., M.B.A., Florida International University.
- CANTON, LUISA A., *Senior Research Associate, Planning and Policy, Wolfson*. A.A., Miami Dade College.
- CAPLAN, RONALD A., *Manager, Risk Management, Kendall*. B.S., Barry University.
- CAPPELLINI, CARLO L., *Senior Network Administrator, Telecommunications, Kendall*. A.A., Miami Dade College; B.S., Florida International University.
- CARABALLO, ERIKA M., *Manager, Facilities Operations, Facilities Management, Kendall*. B.S., Florida International University; M.B.A., Nova Southeastern University.
- CARBON, ANDREW, *Interim Campus Dir Registration, Collegewide Registration Srv, North*. A.A., Miami Dade College; B.B.A., M.S., Florida International University.
- CARDENAS, ARMIN, *Manager, Computer Operations, Kendall*. A.A., Miami Dade College; B.B.A., Florida International University.
- CARROLL, ANN M., *Senior Project Manager, Collegewide Technology, Kendall*. B.S., M.S., Barry University.
- CASSIDY, ANDREW G., *Director, Office of Communication, Wolfson*. A.A., Miami Dade College; B.S., Emerson College.
- CAVACO, MARIA A., *Development Officer, MDC Foundation, Wolfson*. B.A., Wheaton College.
- CEPERO, EDUARDO, *Assistant Vice Provost, Facilities Management, Kendall*. B.S., Elmhurst College.
- CHICUEN, MARIA C., *Assistant To College President, College President's Office, Wolfson*. B.A., Harvard University; M.S., University of London.
- CHOY, HON W., *Senior Systems Analyst, Computer Services, Kendall*. A.A., Miami Dade College.
- CIFFONI, ZULAY, *Interim, Director, Comp, Bene & emp, Division of Human Resources, Kendall*. A.A.S., San Jacinto College; B.A., University of Houston.

District Administration

- ABOHASEN, DESIREE, *Senior Systems Analyst, Application Development, Kendall*. A.A., Miami Dade College; B.B.A., University of Miami; M.S., Florida International University.
- ABRAMS, NAIROBI, *Senior Director, MDC Foundation, Wolfson*. B.B.A., Howard University.
- ADKINS, JENNY S., *Admin. Services Manager, IT, IT Information Technology, Kendall*. B.L.S.T., Barry University.
- ALFONSO, MAYRA E., *Director, Application Development, Kendall*. B.A., Florida International University.
- ALMEDA, DELILAH, *AVP, Acct. Serv/Controller, Controllers Office, Kendall*. B.Acc., M.B.A., Florida International University.
- ALONSO, PEDRO L., *Senior Group Manager, Application Development, Kendall*. A.A.,

- CODINA, YADIRA M., *Associate Campus Director, Financial Aid (West)*, West. A.A., Miami Dade College; B.A., M.P.A., Florida International University.
- COLLINS, ALEX E., *Manager, Spd Training/Development*, Kendall. B.A., University of Kansas; M.S., Barry University.
- COLLINS, RAYMOND P., *IT System Developer Analyst, Application Development*, Kendall. B.S., Massachusetts Institute of Technology; M.S., Florida International University.
- COLMENARES, ANTONIO, *Director, Collegewide Registration Srv*, Kendall. B.S., Wayland Baptist University; M.M.S.T., Association of Chartered Certified Accountants-Acca.
- COOPER, NORA L., *Director - Registration Srv, Admissions & Registration-K/C*, Kendall. B.A., M.S.C.J., Florida International University.
- CREARY, FERNE A., *Interim College Registrar, Collegewide Registration Srv*, Kendall. B.A., C.U.N.Y.Hunter College.
- CREUGERS, FREDERIK, *Associate Vice Provost, Computer Services*, Kendall. B.S., Manhattan College.
- CRUZ, CHRISTIE D., *Program Manager, College Training and Development*, North. B.A., Flagler College; M.A., Webster University.
- CRUZ, JUAN D., *Senior Network Analyst, Telecommunications*, Kendall. B.S., Westwood College-South Bay.
- DAPHNIS, JEAN M., *Director, Financial Aid, Financial Aid (Wolfson)*, Wolfson. B.A., Florida International University.
- DE LAOSA, MARY B., *Associate Vice Provost, Division of Human Resources*, Kendall. B.B.A., Florida International University; M.B.A., Nova Southeastern University.
- DE LEON, BERTA, *Interim Financial Aid Serv Man, Collegewide Financial Aid*, Kendall. A.A., Miami Dade College; B.Acc., Florida International University; M.Acc., Nova Southeastern University.
- DESCZ, MARIA, *Assistant Director, MDC Foundation*, Wolfson. A.A., Miami Dade College; B.A., Florida International University; M.B.A., University of Miami.
- DIAZ MOURINO, YANNET A., *Sr Client System Administrator, Computer Operations*, Kendall. B.S., Universidad de la Habana; M.S., Instituto Superior Politecnico "Jose Antonio Echaverria".
- DIAZ, DENISE, *HRIS Support/Security Analyst, Human Resource Info Systems*, Kendall Campus, A.A., Miami Dade College, B.S., M.P.A., Nova Southeastern University.
- DIAZ, ENRIQUE, *Senior Group Manager, Telecommunications*, Kendall.
- DIAZ, JULIO, *Maintenance Supervisor, Plant Maintenance*, Wolfson. B.A., St. Thomas University.
- DIAZ, MAYTE E., *Senior Systems Analyst, Computer Services*, Kendall. B.S., Instituto Superior Politecnico "Jose Antonio Echaverria".
- DICKEY, PHILIP L., *Resource Development Officer, Grants Development*, Wolfson. B.S., Edinboro University of Pennsylvania; M.B.A., Western Governors University.
- DOMINGUEZ, CARMEN, *Legal Counsel, Legal Affairs*, Wolfson. B.A., University of Miami; J.D., University of Florida.
- DOUGE, MARCEL, *Facilities Project Manager, Salary Account*, Kendall Campus, B.Arch., Pratt Institute.
- DUMORNAY, BARBARA E., *Grant Director, Vita - Single Stop, North*. B.S., Florida A. & M. University; M.P.A., Nova Southeastern University.
- EDWARDS, SHELDON, *Minority Small Bus. Ent. Mngr, Equal Opportunity Program*, Kendall. B.B.A., University of The District of Columbia.
- ENGLISH-VIGUERA, MAISONNETTE I., *Asst Dean Student Srv, Student Services IAC, InterAmerican Campus*, A.A., B.A.S., Miami Dade College.
- ESTALELLA, VIVIAN, *Assistant To College President, College President's Office*, Wolfson. B.A., University of Florida.
- ETIENNE, ANNA L., *Manager, 15/17 10k Small Busn. Training*, Wolfson. B.B.A., M.S., Florida International University.
- FATEMIAN, MOHAMMAD S., *Director, Plant Maintenance, Facilities Management*, Kendall. B.S.E., University of Arizona.
- FERNANDEZ DE CUETO, HESSELIN, *Director, Office of Communications*, Wolfson. B.A., Florida International University.
- FERNANDEZ, YAKIR, *Director, Emergency Preparedness Fund I*, Wolfson. B.S., American Intercontinental University.
- FIELDS, CHERYL LYNN, *Facilities Project Manager, Salary Account*, Kendall Campus, B.S., M.S., Florida International University.
- FIGUEROA CASIANO, ANGELICA M., *Manager, Accounts Services, Restricted Accounts*, Kendall. B.S., Universidad Metropolitana.
- FINOL, LEANDRO J., *Executive Director, Idea Center*, Wolfson. M.B.A., Thunderbird School of Global Management.
- FORBES, TRUDY ANN E., *Resource Development Officer, Grants Development*, Wolfson. B.S., Florida International University; M.P.A., Syracuse University.
- FREEMAN, ELIZABETH G., *Manager, Miami International Film Festival*, Wolfson. B.A., Georgetown University.
- FRENCH, DONNA L., *Manager, Human Resources, Division of Human Resources*, Kendall. B.S.B.A., University of Florida.
- GADDIKERI, VIJAYLAXMI, *Sr. Systems Data Analyst, Business Solutions*, Kendall Campus, B.S., Visveswaraiah Tech University, M.S., Nova Southeastern University.
- GARCIA, ADLAR, *Dir Acad/Stu Srv/Inst GEN 17, MDC Foundation*, Wolfson Campus, B.A., Columbia University.
- GARCIA, KATHRYN S., *Executive Director, Cultural Affairs*, Wolfson. B.A., Florida International University.
- GARCIA, STEPHANIE, *HRIS Support/Security Analyst, Human Resource Info Systems*, Kendall Campus, B.S., University of Central Florida, M.B.A., C.U.N.Y. Baruch College.
- GARRISON, CHIMENE N., *Director, Financial Aid, Financial Aid (North)*, North. A.A., Miami Dade College; B.A., M.S., St. Thomas University.
- GARZON, GLORIA I., *Manager, Facilities Operations, Facilities Management*, Kendall. B.S., Florida International University.
- GLORIA, JESSICA, *Manager, Cult.Affairs-Koubek-Operations*, Wolfson. B.F.A., M.A., Florida International University.
- GOMEZ RAVELO, MADAY, *Senior Analyst, Telecommunications*, Kendall. B.S., Russian University of Chemical Technology; M.S., D. I. Mendeleev University of Moscow.
- GONZALEZ, CARLOS E., *Interim Director Of Compliance, Collegewide Registration Srv*, Kendall. A.A., A.S., Miami Dade College; B.A., M.A., University of Miami; Ed.D., Florida International University.
- GONZALEZ, JUDY A., *Manager, Facilities Operations, Facilities Management*, Kendall. B.A., Universidad de la Habana.
- GRANDAL, TERESA L., *Resource Development Officer, Grants Development*, Wolfson. B.A., Florida International University.
- GRAY, MAURICE E., *Director, 15/17 10k Small Busn.Training*, Wolfson. B.A., Davidson College; M.B.A., Case Western Reserve University.
- HALISI, HAKI, *Director, MDC Foundation*, Wolfson. B.A., B.S., Howard University.
- HALL, JOHN A., *Executive Director, 15/17 10k Small Busn.Training*, Wolfson. B.A., Howard University; M.B.A., Harvard University.
- HENRY, NIGEL J., *Sr Client System Administrator, Computer Operations*, Kendall. A.A., B.A.S., Miami Dade College.
- HERNANDEZ MARTINEZ, IVON, *Director, Collegewide Financial Aid*, Kendall. B.S., Universidad de la Habana.
- HERNANDEZ, JORGE, *Manager, Federal Work Study*, Kendall. B.A., Florida International University.
- HERNANDEZ, VICTORIA, *Director, Governmental Affairs*, Wolfson. B.A., Hampshire College; M.Ed., University of Massachusetts.
- HERRERA, PROSPERO G., *Assistant Vice Provost, Facilities Management*, Kendall. A.A., Miami Dade College; B.B.A., M.P.A., Florida International University.
- HILL, JACQUELINE A., *Associate Provost, Academic Affairs*, Wolfson. B.S., M.A., The University of Memphis; Ed.D., Vanderbilt University.
- HONG, TERENCE, *Senior Group Manager, Application Development*, Kendall. A.S., Miami Dade College.
- HOUSHOLDER, CHARLES R., *Director, Risk Management, Risk Management*, Kendall. B.S.B.A., University of Florida; M.P.A., Florida International University.
- HUNG, JEFFREY G., *HRIS Support/Security Manager, Human Resource Info Systems*, Kendall Campus, B.B.A., Florida International University.
- IVEY, ABBEY E., *Program Manager, School and College Relations/Articulation*, Wolfson. B.S., University of Florida; M.S., Florida State University.
- KAISER, DAVID M., *Director, Institutional Research & Effectiveness*, Wolfson. A.S., Miami Dade College; B.S., M.S., Ph.D., Florida International University.
- KRAFT, E. HENRY, *Facilities Project Manager, Salary Account*, Kendall Campus, B.Arch., Florida Atlantic University.
- KREBS, BRENDA L., *Director, Office of Communication*, Wolfson. B.A., University of South Carolina-Columbia; M.A., M.S., Ph.D., University of Kansas.
- KRUGER, ERIKA, *Senior Systems Analyst, Application Development*, Kendall.
- KULTHM, SARI, *Manager, The Idea Center At MDC*, Wolfson. M.S., Florida International University.
- KYER, TONYA J., *Administrative Assistant III, MDC Foundation*, Wolfson. B.B., University of Phoenix.
- LANDAUER, JAIME, *Senior Programmer Analyst, Application Development*, Kendall. A.S., Miami Dade College.
- LAPLANTE, JAIE M., *Executive Director, Miff Miami International Film Festival*, Wolfson. B.E.A., York University.
- LATSON-DONALDSON, ANGEL, *Interim Director Financial Aid, Financial Aid (Medical), Medical*. A.A., Miami Dade College; B.B.A., St. Thomas University; M.B.A., American Intercontinental University.
- LAU EVANS, CINDY J., *Manager, Equal Opportunity, Equal Opportunity Program*, Kendall. B.A., M.S.E., University of Miami.
- LAURENCEAU, FRITZ L., *Manager, Collegewide Technology*, Kendall. B.S., Florida Institute of Technology; M.A., St. John's University.
- LAVERDE, LUZ D., *Campus Bursar, Bursar (WC/MC/IAC)*, Wolfson. A.A., Miami Dade College; B.Acc., Florida International University; M.Acc., Nova Southeastern University.
- LEON, ANDRES, *Manager, Facilities Operations, Facilities Management*, Kendall. B.Arch., Universidad de la Habana.
- LEON, GLORIA, *Assistant Professor, Associate Provost, Faculty Initiatives*, Wolfson. B.A., Regis College; Ed.S., M.S., Nova Southeastern University.

- LEZPONA, PATRICIA, *Director, Application Development, Kendall*. A.A., Miami Dade College; B.S., Florida International University.
- LIGONDE, BEPPI WOLFF GIU, *Director Of Support Services, Facilities Management, Kendall*. B.S., University of Quebec.
- LIMA LOPEZ, AYERIM, *IT Analyst, Information Assurance, Kendall*. B.S., Instituto Superior Politecnico "Jose Antonio Echaverria".
- LINDO, LILY A., *Director, Financial Aid, Financial Aid (Medical), Medical*. A.A., Miami Dade College; B.P.S., Barry University; M.B.A., Nova Southeastern University.
- LIRIANO, CARMEN M., *Interim Dr. Budget Operations, Budget, Kendall*. A.A., Miami Dade College; B.P.S., Barry University.
- LLARENA, CARLOS M., *Senior Assessment & Plan Assoc, 15/17 10k Small Busn. Training, Wolfson*. M.S., University of Miami.
- LLOYD, PAMELA A., *Sr. Development Officer, Grants Development, Wolfson*. B.A., Manhattan College.
- LOPEZ, ALAN J., *Curriculum Coordinator, Curricunet, Wolfson*. B.B.A., M.S., Florida International University.
- LOPEZ-GOMEZ CELIS, ELOISA E., *Director, Miami International Film Festival, Wolfson*. B.B.A., Faculdade Sao Luis; M.A., Florida International University.
- LUGO MARTINEZ, ELIZABETH, *Manager, Communities of Interes, Accreditation Activities, North*. B.A., Florida International University; M.S., Nova Southeastern University.
- LYNN, KATRAVIA R., *Manager, Accounts Services, MDC Foundation, Wolfson*.
- MACKLIFF, TATIANA V., *Executive Director For International Education, International Education, Wolfson*. B.S., Foreign Country; M.S., Florida International University.
- MADEJA, ALEXANDER I., *Manager, Office of Communication, Wolfson*. B.A., State University of New York-S.U.N.Y.; M.B.A., Argosy University, Sarasota.
- MALVIN, TIFFANI, *Director, Prior Learning Asses, Academic Affairs, Wolfson*. B.S., Emmanuel College; M.A., Governors State University.
- MARAIS, CATHARINA E., *Interim Director, Student Financial Services, Kendall*. A.S., Technikon Pretoria; B.B.A., University of South Africa, Tshwane, South Africa.
- MARAIS, EWERHARDUS L., *Director, Enterprise Application, IT Information Technology, Kendall*. M.S., Florida International University.
- MARIN, DAVID G., *Government Affairs Officer, Governmental Affairs, Wolfson*. B.A., Florida International University; M.S., St. Thomas University.
- MARION, LISA L., *Director, MDC Foundation, Wolfson*. B.B.A., M.Acc., University of Miami.
- MARKS, LAURA A., *Director, Employee Relations/Ed, Division of Human Resources, Kendall*. B.A., St. Thomas University; M.S., Florida International University.
- MARQUEZ REYES, LAURA, *Project Analyst, Application Development, Kendall*. B.S., M.S., Florida International University.
- MARRO, RITA M., *Administrative Assistant III, College President's Office, Wolfson*. B.S., Barry University.
- MARTINEZ, ANA C., *Director, MDC Foundation, Wolfson*. A.A., Miami Dade College; B.S., Florida International University.
- MARTINEZ, EDUARDO A., *Instructional Designer/Technology Trainer, College Training and Development, Wolfson*. A.A., Miami Dade College; B.B.A., Florida International University.
- MARTINEZ, FRANCISCO J., *Analyst, Information Assurance, Kendall*.
- MARTINEZ, MICHAEL, *IT Analyst, Network and Telecommunications Services, Kendall*. A.A., B.A.S., Miami Dade College; M.S., Nova Southeastern University.
- MARTINEZ, ROMAN, *Director, Purchasing, Purchasing, Kendall*. B.P.A., Barry University; M.P.A., Nova Southeastern University.
- MARTINEZ, ROY D., *Associate Vice Provost, Facilities Management, Kendall*. A.A., Miami Dade College; B.A., University of Miami.
- MATUS, MARTIN A., *Senior Network Analyst, Telecommunications, Kendall*. A.A., Miami Dade College; B.S., Barry University.
- MAYTIN BEXON, ELIZABETH, *Senior Research Associate, Institutional Research & Effectiveness, Wolfson*. A.A., Miami Dade College; B.A., Florida International University.
- MCASKILL, KENNETH C., *Senior Analyst, Telecommunications, Kendall*. A.A., Miami Dade College.
- MCCLAIN, SEAN N., *Campus Bursar, Bursar KC, Kendall*. B.A., Florida International University; M.B.A., Nova Southeastern University.
- MCMEEKING, STUART E., *Resource Development Officer, Grants Development, Wolfson*. B.A., Florida State University; M.S., Florida A. & M. University.
- MEDINA, DAVID L., *Director, Collegewide Financial Aid, Kendall*. B.A., M.S.E., University of Miami.
- MENA, JOSH J., *Senior Network Security Admin., Telecommunications, Kendall*. A.S., Miami Dade College; B.S., Barry University; M.S., Nova Southeastern University.
- MENENDEZ, RITA M., *Senior Research Analyst, Institutional Research & Effectiveness, Wolfson*. B.S., Florida International University; M.S.Ed., C.U.N.Y.Hunter College; Ph.D., University of Miami.
- MILIAN FERNANDEZ, ERNESTO, *Senior Network Administrator, Telecommunications, Kendall*. B.S., M.S., Florida International University.
- MIRABAL, DAVID, *IT System Developer Analyst, Application Development, Kendall*. B.M., University of Miami.
- MITCHELL, TOSHIBA LATOSOA, *Sr. Instructional Designer VC, Academic Services Vrt, Virtual School, M.S., Ed.D., St. Thomas University.*
- MITZENMACHER, MARTA J., *Group Director, SVP Business Affairs, Kendall*. A.A., Miami Dade College; B.S., Barry University.
- MOLINERY HERNANDEZ, MARIA DEL MAR, *Director, Vice Provost for Academic Affairs, Wolfson*. B.B.A., George Washington University.
- MONTENEGRO, ANDRES U., *Lead Systems Programmer, Telecommunications, Kendall*. B.S., Barry University.
- MORALES, JAMY A., *IT Analyst, Computer Operations, Kendall*. A.A., Miami Dade College; B.B.A., Florida International University.
- MORENO, DAVID R., *Manager, Communications Systems, Network and Telecommunications Services, Kendall*. A.A., Miami Dade College; B.S., M.B.A., Florida International University.
- MOREY, OLGA L., *Director, Budget Operations, Budget, Kendall*. A.A., Miami Dade College; B.B.A., Florida International University.
- MUMFORD, RACHEL B., *Director, Payroll & Benefits Acct, Payroll, Kendall*. B.B.A., Kent State University; M.B.A., University of Florida.
- MUNOZ, IRENE G., *Director Of Marketing and Publications, Office of Communication, Wolfson*. B.S., University of Florida; M.S., Florida International University.
- MUNOZ, JAVIER, *Associate Vice Provost, Systems & Infrastructure, Telecom & Operation, Kendall*. A.A., Miami Dade College; B.S., B.Acc., M. Acc., Florida International University.
- NARANJO, GILBERTO, *Sr. Facilities Fiscal Manager, Restricted Accounts, Kendall*. B.A., Rutgers University-Newark.
- NARCIANDI, ARTURO D., *ERP Security Administrator, Information Security & Policy, Kendall Campus, A.A., A.S., Miami Dade College, B.S., Florida International University.*
- NEGRETTE, ALEXANDER, *Web CSS Javascript Developer, Web Services, Wolfson Campus, A.A., B.S., Miami Dade College.*
- NELLIS, PATRICK, *District Director, Cld, College Training and Development, Wolfson*. B.A., San Diego State University; M.A., University of California-Irvine.
- NICHOLSON, ANDREA R., *Interim Financial Aid Manager, Collegewide Financial Aid, Kendall*. A.A., Miami Dade College; B.S., Barry University; M.A., Golden West College.
- NOSSE, JAMES J., *Campus Bursar, Bursars Office North, North*. B.B.A., University of Toledo.
- NWANKWO, VICTOR, *Program Manager, College Training and Development, Wolfson*. B.S., M.P.A., Texas A & M University; Ed.D., Florida International University.
- OJEDA, MARIA C., *Administrative Assistant III, SVP Business Affairs, Kendall*.
- ORTEGA, DANIELA, *Manager, Controllers Office, Kendall*. B.A., Belmont Abbey College; M.B.A., Nova Southeastern University.
- PARGA, MONICA, *Manager, Facilities Operations, Facilities Management, Kendall*. M.S., Florida International University.
- PATRON, ILIANA M., *Interim, Dr. Mdc Information, MDC Information Center, Wolfson*. B.A., M.A., Kean University; Ed.D., Capella University.
- PAZ, RUBEN E., *Manager, Accounts Services, Property Management, North*. A.A.S., C.U.N.Y. Queensborough Community College.
- PENA, JOSEPH, *Director, College President's Office, Wolfson*. B.A., University of Florida.
- PEREZ-MENDEZ, ENEIDA, *Senior Project Manager, Facilities Management, Kendall*. B.Arch., Universidad de la Habana.
- PERSON, JENNIFER L., *Manager, Cultural Affairs, Wolfson*. B.A., Bennington College; M.F.A., Goddard College.
- PINILLOS, JUAN M., *Sr Client System Administrator, Computer Operations, Kendall*. B.B.A., Florida International University.
- POEY, FEDERICO M., *Manager, Network and Telecommunications Services, Kendall*. M.B.A., Keller Graduate Scho.
- PORRO, ADAM F., *Director, Fy 15-16 Impl: compl By Design, Wolfson*. B.S., M.S., Florida International University.
- PORTELA, ODALYS, *Associate Campus Director, Financial Aid (Hialeah), Hialeah*. B.S., University of Phoenix.
- PORTUONDO, ALEXIS J., *Manager, Communities Of Interes, Accreditation Activities, Kendall*. M.S., State University of Ny Health Science Center at Stony Brook.
- PUCCHINI, MARIA C., *Director - Registration Serv, Collegewide Registration Srv, North*. B.A., University of South Florida; M.A., College of William and Mary.
- PUGA PADRON, JULIO M., *Project Analyst, Computer Services, Kendall*. B.S., Polytechnic University of Valencia.
- PULIDO JR., HANIEL, *Senior Software Engineer, Office of Communications, Kendall*. B.S., M.S., Florida International University.
- RACKLEY, LETITIA O., *Manager, Human Resources, Division of Human Resources, Kendall*. A.A., Miami Dade College; B.A., Trinity International University, South Florida Campus.
- RAMBERRAN, VARUN, *Grant Compliance Officer, Grants Development, Wolfson*. B.B.A., Florida International University; M.B.A., University of Miami.
- RAMOS, RENE, *College Archivist, College Archives, Wolfson*. B.A., Florida International University; M.S., Nova Southeastern University.
- RAMSAY, JENNIS B., *Administrative Assistant III, Division of Human Resources, Kendall*. A.A., Miami Dade College; B.P.A., Barry University.
- REDDINGTON, MELISSA B., *Manager, MDC Foundation, Wolfson*. B.A., University of Rhode Island.

REYES, CAROL M., *Director, International Education, Wolfson*. B.S., University of Florida; A.M., New York University.

RICELLI, IVETTE, *Director, Erp Training, Erp Consultants & Backfill Stf, Kendall*. B.A., Trinity International University, South Florida Campus; M.S., Florida International University.

RICHARDSON, CAITLIN C., *Academic Support Facilitator, Accreditation Activities, Hialeah*. B.S., Le Moyne College.

RODRIGUEZ LOPEZ, ALEJANDRO R., *Senior Network Administrator, Telecommunications, Kendall*. B.S., Barry University.

RODRIGUEZ, JOSE A., *Director, Ctd, College Training and Development, Kendall*. B.A., Florida International University; M.S., St. Thomas University.

RODRIGUEZ, SILVIO, *Director, Test Adm&program Eval, Testing, Wolfson*. B.S., University of Wisconsin-River Falls; M.B.A., Barry University.

ROJAS, GUILLERMO O., *Manager, Tower Theater, Wolfson*. B.A., Universidad de la Habana.

ROLDAN, ANA MARY, *Chief Information Security Off, IT Information Technology, Kendall*. B.S., M.B.A., Nova Southeastern University.

ROMERO, ALEJANDRO, *Senior Network Administrator, Telecommunications, Kendall*. A.A., A.S., Miami Dade College; B.S., University of Central Florida.

ROSA SANTANA, JUAN MIGUEL, *IT Analyst, Telecommunications, Kendall*. B.S., Instituto Superior Politecnico "Jose Antonio Echaverrria".

ROSENBAUM, MARCY S., *Senior Assessment & Plan Assoc, 15/17 10k Small Busn. Training, Wolfson*. M.A., American University.

RUFF, JOY C., *Director, Eop/Ada, Equal Opportunity Program, Kendall*. A.A., B.A., University of South Florida; Ph.D., Florida International University.

RUIZ ROPERO, ORIEL, *Senior Network Administrator, Computer Operations, Kendall*. B.S., Florida International University.

SALAZAR, CARMEN D., *Student Financial Services, Student Financial Services, Kendall*. B.B.A., M.S.E., Florida International University.

SALEH, HANADI K., *Assistant Professor, Interim Director Administrativ, Fy 15-16 Impl: compl By Design, Wolfson*. Ed.D., Nova Southeastern University.

SANCHEZ, BERTHA I., *Interim, Instructional Designer, College Training and Development, Kendall*. A.A., Miami Dade College; B.A., Florida International University; Ed.S., M.S., Nova Southeastern University.

SANCHEZ, JUAN C., *Manager, Telecommunications, Kendall*. A.A., Miami Dade College; B.S., M.S., Florida International University.

SEAGA, ANDREW M., *College Webmaster, Office of Communications, Wolfson*. B.A., M.S., Barry University.

SENRA GUTIERREZ, JOSE A., *IT System Developer Analyst, Computer Services, Kendall*. B.S., Instituto Superior Politecnico "Jose Antonio Echaverrria"; M.I.S., Universidad Central "Marta Abreu".

SOLARES, ODALYS S., *Manager, Accounts Services, Restricted Accounts, Kendall*. A.A., B.A.S., Miami Dade College.

SPENCE, ELAINE, *Compensation & Benefits Mngr., Division of Human Resources, Kendall*. B.P.A., Florida International University.

STAEHLE, SELENE H., *IT System Developer Analyst, Application Development, Kendall*. B.A., University of South Florida.

STARLING, CHRISTOPHER F., *Associate Vice Provost - Business Services, S.V.P. Business Affairs, Kendall*. B.S., University of Florida; M.A., Florida International University.

STONE, CHARMAINE R., *Assistant Director, Purchasing, Kendall*. A.A., Miami Dade College; B.S., Barry University.

TACORONTE, ARNALDO, *Director, Collegewide Financial Aid, Kendall*. B.S.M.E., Instituto Superior Politecnico "Jose Antonio Echaverrria"; M.S., Universidad Autonoma Metropolitana.

TAGUE, KENNETH D., *Director, Financial Aid, Financial Aid (Interamerican), InterAmerican*. B.B.A., J.D., University of Texas-Austin.

TAVERAS, SILVIA M., *Assistant Director, Finance Coa & Security, Kendall*. B.B.A., Florida International University.

TYBOR, RITA M., *Director, Vice Provost Student Affair; Wolfson*. B.S., Loyola University of Chicago; M.A., Governors State University.

VALDES, ANA M., *Acad/Stu Srvc/Inst GEN 16, Communications, Wolfson Campus*, B.S., University of Miami.

VALDES, JANET C., *Interim Director Registration, Admissions & Registration-K/C, Kendall*. A.A., Miami Dade College; B.S., M.P.H., Florida International University.

VEGA, ANA MARIA, *Assistant Controller, Restricted Accounts, Kendall*. M.Acc., Nova Southeastern University.

VELASQUEZ, ANDRES F., *Senior Network Administrator, Computer Operations, Kendall*. B.B.A., M.S., Florida International University.

VELOSO, ROGER, *Associate Campus Director, Financial Aid (Homestead), Homestead*. B.S., M.B.A., Florida International University.

VIERA, CARLOS A., *Director, Planning and Policy, Wolfson*. B.A., Florida International University; M.Ed., University of Miami; Ph.D., Capella University.

VIZOSO, ELISABET, *Interim Associate College Re, Collegewide Registration Srvc, Kendall*. B.A., Florida International University; M.S., Barry University.

WALSH, KIMBERLY, *Resource Development Officer, Grants Development, Wolfson*. B.A., Florida International University.

WARNER, MICHAEL A., *Senior Systems Programmer, Telecommunications, Kendall*. B.E.E., Florida Atlantic University; M.S., University of New Haven.

WILLIN, SYLVIA, *Manager, Human Resources, Division of Human Resources, Kendall*. B.P.S., Barry University.

YU, XUEJUN, *Director, International Education, Wolfson*. M.A., University of Hawaii-Manoa; Ph.D., University of Florida.

ZAYAS, KARINA P., *Coordinator, Office of Communications, Kendall*. B.A., Florida International University; M.B.A., University of Miami.

Hialeah Campus Administration - Executive

MARTINEZ, JOAQUIN G., *Campus President, Office of the President, Hialeah*. B.A., Middlebury College; M.S., Nova Southeastern University, Ed.D., Florida Atlantic University.

Hialeah Campus Administration

ATTIS, APRIL N., *Associate Dir. Learning Resour, Computer Courtyard Hialeah, Hialeah*. B.A., Mississippi State University; M.S., Florida International University.

CASTRO, CARIDAD, *Department Chairperson, Liberal Chair Arts & Science, Hialeah*. A.A., Miami Dade College; B.A., Barry University; J.D., Boston University.

FERNANDEZ, STEPHANIE M., *Chief, Public*

Safety, Public Safety, Hialeah. B.S., American Intercontinental University.

FORERO, ANDREA M., *Director, Campus Administration, Administrative Services, Hialeah*. A.A., Miami Dade College; B.B.A., Florida International University; M.B.A., DeVry University.

IGLESIAS, LAURA, *Director, Title V-Sci.Std.Acc. & Succ. Prj, Hialeah*. B.S., Barry University; M.S.Ed., University of Miami.

MAGANA, NELSON R., *Director, Student Services, Hialeah*. A.A., A.S., Miami Dade College; B.S., M.S., Florida International University.

MANICKSINGH, PRAVEEN L., *Campus Net& Media Serv Manager, Network and Media Services, Hialeah*. B.S., M.S., Barry University.

MARACHE, DAWN A., *Assistant Dean Of Student Serv, Office of the Dean, Hialeah*. A.S., Miami Dade College; B.L.S., M.A., Barry University.

MARGOLIN, CAROLYN, *Grants Coordinator, Title V-Sci.Std.Acc. & Succ. Prj, North*. B.S., Cornell University; Ph.D., University of Miami.

MCGLONE, JON V., *Department Chairperson, World Languages, Hialeah*. B.A., Marshall University; Ed.S., M.A., Ph.D., University of Florida.

MEJIA MONTOYA, DORA, *Director, Testing, Testing, Hialeah*. B.A., Universidad Cooperativa de Colombia; M.S., Nova Southeastern University.

OKUBO-DAMAS, ALEXANDRA, *Director, Campus Services, Hialeah*. B.S., Florida International University; M.B.A., St. Thomas University.

TUPY, KIMBERLY K., *Director, Student Life, Hialeah*. B.A., University of Northern Iowa.

VILLEGAS, JUAN F., *Director, Network and Media Services, Hialeah*. A.A., Miami Dade College; B.S., M.S., Florida International University.

Homestead Campus Administration - Executive

JACOBS, JEANNE E., *Campus President, Campus President's Office, Homestead*. B.A., Fisk University; M.Ed., Alabama A&M University; Ph.D., University of Alabama

SPEZZA II, NICHOLAS J., *Dean, Academic Affairs, Campus President's Office, Homestead*. B.S., S.U.N.Y. at Stony Brook; M.B.A., University of New Mexico; D.M.G.T., Case Western Reserve University.

Homestead Campus Administration

ACOSTA, TANIA M., *Director, Campus Administration, Campus President's Office, Homestead*. A.A., Miami Dade College; B.P.A., Florida International University; M.B.A., American Intercontinental University.

ARCHBOLD, CARLOS A., *Grant Director, 15/16 Titv-Proj. Stra. Impr. Stem, Homestead*. M.S., University of Puerto Rico-Mayaguez; Ph.D., Andrews University.

BARIMO, JOHN F., *Department Chairperson, Mathematics/Science, Homestead*. M.S., Virginia Commonwealth University; Ph.D., University of Miami.

BRYANT, NICOLE D., *Director, Student Life, Homestead*. B.A., M.A., University of Miami; Ed.D., Nova Southeastern University.

COPOCK JR., EDWARD T., *Manager, Campus Network Serv, Campus Network Services,*

- Homestead. A.A., Miami Dade College.
- GARIP, ALBERT, *Program Manager, Audio-Visual, Homestead*. B.A., C.U.N.Y. City College.
- GWALTNEY, NEHEMIAH T., *Grant Director, Trio-Hmstd St. Supp Svs 2015-20, Homestead*. M.A., Regent University.
- HOSANG, SEAN M., *Manager, Campus Network Serv, Campus Network Services, Homestead*. A.A., Miami Dade College; B.S., Florida International University.
- KAUFMAN, RANDALL H., *Department Chairperson, Humanities/Social Sciences, Homestead*. M.A., University of Florida.
- MANN, LEROY A., *Director, Campus Network Services, Homestead*. A.A., Miami Dade College.
- MARIN, ILIANA C., *Administrative Assistant IV, Campus President's Office, Homestead*. B.B.A., Florida International University; M.S., Nova Southeastern University.
- MOORE, KEVIN L., *Academic Support Facilitator, New Student Center, Homestead*. B.A., University of Florida.
- RAMOS, ANAELI D., *Dir, Advise ment & Career Serv, New Student Center, Homestead*. M.S., Ph.D., Nova Southeastern University.
- ROKOVICH, IVO A., *Director, Testing, Testing, Homestead*. B.S., Florida International University.
- SANCHEZ, ISRAEL, *Associate Dir. Learning Resour, Library Services/Homestead, Homestead*. A.A., Miami Dade College; B.A., University of Massachusetts-Boston; M.A., University of Miami.
- SCHRIFTMAN, LINDSAY L., *Campus Dir. Learning Resources, Library Services/Homestead, Homestead*. B.A., Oberlin College; M.L.I.S., University of Pittsburgh.
- TUSKEY, SARAH E., *Department Chairperson, Business and Entec, Homestead*. B.S., University of Central Florida; M.B.A., Florida International University.
- VELA, SUSANA M., *Director, School of Cont Ed/Prof Development, Homestead*. B.S., Florida International University; M.A.E., University of Florida.
- WATSON, JAMES A., *Director, New Student Center, Homestead*. B.D.E.S., M.Ed., Ph.D., University of Florida.
- B.B.A., Florida International University.
- ANDERS JR., WALTER C., *Director, Access Services, InterAmerican*. M.S., St. Thomas University.
- ANDERSON, COLIN, *Director, BS-School of Education, InterAmerican*. M.A., Ph.D., Washington State University.
- ATTIS, APRIL N., *Associate Dir. Learning Resour, Computer Courtyard Hialeab, Hialeab*. B.A., Mississippi State University; M.S., Florida International University.
- AVILA, SHADIA, *Services Supervisor III, Campus Services, InterAmerican*. A.A., Miami Dade College; B.S., M.M.G.T., University of Phoenix.
- BLANCO, AMARILYS B., *Manager, Library Services/Iac, InterAmerican*. A.A., Miami Dade College; B.B.A., Florida International University.
- BORROTO, YOLANDA, *Director, Pre-School Lab, Education, North*. B.A., M.S., Florida International University.
- BROWN, JERMAINE I., *Department Chairperson, Mathematics, InterAmerican*. A.A., B.S., University of South Florida; Ed.S., M.S., Ed.D., Nova Southeastern University.
- CASTINEYRA, MAGDA J., *Director, The Honors College, InterAmerican*. B.A., St. Thomas University; M.Ed., Harvard University.
- CONTEH, CYNTHIA Z., *Department Chairperson, CIS/Business, InterAmerican*. B.A., M.B.A., University of North Florida.
- DE YURRE FATEMIAN, ZOILA, *Campus Dir. Learning Resources, Library Services W/C, Wolfson*. M.L.S., University of Arizona.
- DIAS, PAULA R., *Director, Student Life, InterAmerican*. B.A., M.A., Boston College.
- DIPTTE, JENNIFER S., *Campus Dir. Learning Resources, Library Services/Kendall, Kendall*. B.S.Ed., Ed.S., M.S.Ed., University of Miami.
- DOMINICIS, ERICK J., *Associate Professor, College Dir. Learning Resource, Learning Resources, InterAmerican*. B.A., Florida International University; M.A., University of South Florida.
- DUQUE, ISABEL M., *Professional, Library Services/Iac, InterAmerican*. B.A., Florida International University; M.A., University of South Florida.
- FERNANDEZ DE CUETO, JULIO, *Director, New Student Center, InterAmerican*. B.A., M.S., Ph.D., Florida International University.
- FERNANDEZ, JANELLE, *Director, Campus Administration, Campus Admin Services, InterAmerican*. B.B.A., M.B.A., Florida International University.
- GARCIA, LIZETH T., *Professional, Library Services/Homestead, InterAmerican*. M.A., University of South Florida.
- GARCIA, SANDRA M., *Director, BS-School of Education, InterAmerican*. A.A., Miami Dade College; B.A., M.S., Florida International University.
- HERNANDEZ, ALEXANDER, *Interim Campus Dir. Learn Reso, Library Services/Hialeab, InterAmerican*. B.A., Florida International University; M.A., University of South Florida.
- HERNANDEZ, KELLY, *Manager, Recruitment, InterAmerican*. B.S., Georgetown University; M.A., Michigan State University; Ed.D., University of Miami.
- IGLESIAS, ESTRELLA M., *Campus Dir. Learning Resources, Library Services/North, North*. B.A., Barry University; M.L.S., Louisiana State University.
- JEAN-CHARLES, CARL A., *Administrative Assistant III, Academic Affairs, InterAmerican*. A.A., Miami Dade College; B.P.S., Barry University; M.B.A., Nova Southeastern University.
- JOSEPH, RONY, *Director, Trio Eoc Grant, MDC Ed Opportunity Center, InterAmerican*. A.B., University of Illinois-Chicago; M.S., Depaul University.
- KARANTHALIS, THEODORE D., *Associate Dir. Learning Resour, Library Services/Meek Center, InterAmerican*. B.S., Excelsior College; M.S., Florida State University; M.A., University of Miami.
- KARIM, SHAMSHA, *Professional, Library Services/Kendall, Kendall*. A.A., Miami Dade College; M.S., University of North Texas; B.B.A., M.B.A., Florida International University.
- LANIER, KIMBERLY S., *Director, Title V-Inst. Of Teaching & Learn, InterAmerican*. B.S., Florida Memorial University; M.S., Nova Southeastern University; Ph.D., Florida State University.
- LEWIS, CRYSTEL D., *Dir, Advise ment & Career Serv, Academic Advise ment, InterAmerican*. B.A., University of South Florida; M.S., Florida International University.
- LORENZO, MANUEL C., *Associate Dean, Academic, Academic Affairs, InterAmerican*. B.S., M.S., Florida State University; M.P.A., Florida International University.
- MARIN, ARMANDO, *Director, Campus Network Services, InterAmerican*. A.A., Miami Dade College; M.S., Florida International University.
- MONTEQUIN, RAQUEL, *Enrollment Manager, Education, InterAmerican*. B.A., Florida International University; M.S., Barry University.
- MORALES, JUAN CARLOS, *Department Chairperson, E.S.L./World Languages, InterAmerican*. B.A., Amherst College; M.A., Middlebury College; M.A., Florida International University.
- MORALES, NORA, *Associate Dir. Learning Resour, Computer Courtyard K/C, Kendall*. B.A., Florida International University; M.S., University of Florida.
- MUELLER, CYNTHIA A., *E-Portfolio Coordinator, BS-School of Education, InterAmerican*. B.A., Buena Vista University; B.A., University of Northern Iowa; M.A.T., Morningside College.
- NEIMAND, SUSAN C., *School Director, Education, InterAmerican*. M.S., Ed.D., Florida International University.
- NUNEZ, KATIA, *Associate Dir. Learning Resour, Library Services W/C, Wolfson*. B.A., Florida International University; M.A., University of South Florida.
- OKAFOR, VICTOR, *Associate Professor Sr., Department Chairperson, Natural and Social Sciences, InterAmerican*. Ph.D., University of Witwatersrand.
- ONDARO, CHRISTINA G., *Manager, Education, Kendall*. B.A., M.S., Florida International University.
- PHIPPS, GLENDORA D., *Assistant Professor, Interim Department Chairperson, Communication, Arts & Philosophy, InterAmerican*. A.B., University of Georgia; M.A., University of South Florida; M.A., C.U.N.Y. City College.
- PRICE, REINE, *Department Chairperson, School of Cont Ed/Prof Development, InterAmerican*. B.S., Bowling Green State University; M.S.E., University of Central Arkansas; M.A.E., University of Arkansas-Little Rock.
- RAMSINGH, DEVIKA G., *Professional, Library Services/Kendall, Kendall*. B.A., M.B.A., M.L.I.S., University of West Indies.
- RIBERO, ALFONSO, *Director, Testing, Testing, InterAmerican*. B.A., Hanover College; M.Ed., University of Southern California.
- ROBAINA, MARTHA B., *Grants Coordinator, Title V-Inst. Of Teaching & Learn, InterAmerican*. B.A., Florida International University; M.S., Barry University; M.Ed., American College of Education.
- SANCHEZ, ISRAEL, *Associate Dir. Learning Resour, Library Services/Homestead, Homestead*. A.A., Miami Dade College; B.A., University of Massachusetts-Boston; M.A., University of Miami.
- SCHRIFTMAN, LINDSAY L., *Campus Dir. Learning Resources, Library Services/Homestead, Homestead*. B.A., Oberlin College; M.L.I.S., University of Pittsburgh.
- SONNENBURG, DERECK O., *Director, Campus Media Service, Media Services, InterAmerican*.

InterAmerican Campus Administration - Executive

BASHFORD, JOANNE, *Campus President, Campus President's Office, InterAmerican*. B.A., University of Florida; M.Ed., University of Pittsburgh; Ed.D., Florida International University.

InterAmerican Campus Administration

ABELLA, ELISA, *Assistant Professor, Campus Dir. Learning Resources, Library Services/Medical, Medical*. M.B.A., St. Thomas University; M.S., Florida State University.

ALEGRIA, SARA G., *Associate Dir. Learning Resour, Library Services/West, North*. A.A., Miami Dade College; B.S., Florida International University; M.S., Ed.D., Nova Southeastern University.

ALVAREZ, SEM J., *Manager, Campus Network Serv, Media Services & Campus Network, InterAmerican*. A.A., Miami Dade College;

B.S., University of Florida.
 STRACHAN, IRIS F., *Department Chairperson, Education, North*. B.S., Florida State University; M.S., Nova Southeastern University.
 TAYLOR, SHANIKA, *Director, Education, InterAmerican*. B.Acc., Florida International University; M.S., Ed.D., Nova Southeastern University.
 THOMAS, MICHELLE L., *Interim Associate Dean, Academic Affairs, InterAmerican*. B.A., University of Texas; M.S., Texas Tech University; Ph.D., University of North Dakota.
 TOLEDO, IVAN, *Associate Dir Learning Resour, Computer Courtyard M/C, InterAmerican*. B.S., M.S., Florida State University.
 VALME, MARIE J., *Associate Dir Learning Resour, Computer Courtyard Iac, InterAmerican*. B.A., C.U.N.Y.Hunter College; M.I.A., Columbia University.
 VASQUEZ, HERNANDO J., *Chief, Public Safety, Public Safety, InterAmerican*. B.B.A., M.B.A., Carlos Albizu University, Miami Campus.
 ZAPATA, MARA, *Department Chairperson, Education, InterAmerican*. B.S., M.S., Florida International University; Ph.D., Florida State University.

Kendall Campus Administration - Executive

MOORE-GARCIA, BEVERLY A., *Campus President, Campus President's Office, Kendall*. M.Ed., Southwest Texas State University; M.S., Ed.D., Florida International University.
 GIOVINAZZO, ALICIA M., *Dean, Academic Affairs, Academic Affairs, Kendall*. B.S., M.S., D.A., University of Miami.
 JOYNER, STEPHEN E., *Dean, Students, Student Services, Kendall*. B.A., M.P.A., Ph.D., Georgia State University.

Kendall Campus Administration

ADAMO, LAUREN N., *Director, Student Life, Kendall*. B.A., M.A., University of Central Florida; Ph.D., Florida Atlantic University.
 ADKINS, JOHN H., *Associate Dean, Academic, Arts & Letters, Kendall*. B.F.A., Northern Illinois University; M.F.A., Memphis College of Art.
 ALFONSO, BARBARA, *Department Chairperson, School of Cont Ed/Prof Development, North*. B.A., Leeds Polytechnic; M.S., Florida International University; Ed.D., Nova Southeastern University.
 ARGUELLES, LYNNE B., *Manager, School of Business, Kendall*. B.B.A., Valdosta State University; M.B.A., Nova Southeastern University.
 BENOIT, ORIGENES, *Head Coach, Athletics, College Women's Volleyball, Kendall*. A.A., Miami Dade College; B.A., Columbia College Chicago.
 BRANDON, RODESTER, *Department Chairperson, Music, Kendall*. B.M., University of Miami; M.M., University of Michigan-Ann Arbor.
 BRINGUEZ, JANET, *Manager, 2015 Susan Hardwood Trng Grant, North*. M.A.E., Grand Canyon University.
 CANASI, LAURA, *Services Supervisor III, Campus Services, Kendall*. A.A., B.A.S., Miami Dade College.
 CLARK, ADRIANNA D., *Program Manager, Fy 15/16 Small Bus Trnsp-Sbtrc, North*. B.A., Florida International University; M.I.B., Nova Southeastern University.

COLE, DAVID L., *Director, School of Cont Ed/Prof Development, Medical*. B.A., M.S., Florida International University.
 CROSS, GODFREY O., *Program Manager, School of Cont Ed/Prof Development, North*. B.A., M.A., University of West Indies; Ph.D., University of Southern Mississippi.
 CRUZ, ANA M., *Professor, Department Chairperson, Business, Wolfson*. A.A., Miami Dade College; B.B.A., Florida International University; M.B.A., St. Thomas University; D.B.A., Nova Southeastern University. The Southeast Banking Corporation Foundation Endowed Teaching Chair 1998-2000. The Wolfson Senior Foundation Endowed Teaching Chair 2002-2004.
 CUELLAR, JORGE M., *Director, Title V Stem(Top)2015-2020, Kendall*. A.A., Miami Dade College; B.S., Florida International University; M.S., Capella University.
 DE ARAZOZA, ELIZABETH T., *Director, School of Cont Ed/Prof Development, Kendall*. A.A., Miami Dade College; B.S., Florida International University; M.A., Barry University.
 DEAGUERO, GINA M., *Head Coach, Athletics, College Women's Softball, Kendall*. B.A., St. Thomas University.
 DIPTEE, JENNIFER S., *Campus Dir Learning Resources, Library Services/Kendall, Kendall*. B.S.Ed., Ed.S., M.S.Ed., University of Miami.
 DURAN, DAVID H., *Manager, Media Services, Kendall*. B.F.A., Savannah College of Art and Design.
 DYER, ALYSIA E., *Assistant Director, Intercollegiate Athletics, Kendall*. B.S., University of Florida; M.S., St. Thomas University.
 FIORENZA, ANTHONY F., *Director Athletics & Stu Life, Intercollegiate Athletics, Kendall*. B.S., Florida International University; M.S., Nova Southeastern University.
 GARCIA, SANDRA R., *Program Manager, School of Cont Ed/Prof Development, North*. B.F.A., Instituto Superior de Arte.
 GARCIA-SALAZAR, NIURKA, *Program Manager, 15/16 Adult Ed & Family Lt Gn Ed, Kendall*. A.A., Miami Dade College; B.B.A., Florida International University.
 GONZALEZ, TERESA, *Grant Director, Taacct Grant, Kendall*. B.S., Western Carolina University; D.J., University of Miami.
 HERRERA-ALONZO, BIENELA, *Manager, Recruitment, Kendall*. A.A., Miami Dade College; B.F.A., University of Florida; M.S., Florida International University.
 HORTON, CORAL L., *Program Manager, School of Cont Ed/Prof Development, Kendall*. B.A., S.U.N.Y. College at Cortland; M.S., Penn State University; Ed.D., Florida International University.
 INFANZON, ENRIQUE, *Program Manager, School of Cont Ed/Prof Development, Kendall*. A.A., B.A.S., Miami Dade College.
 JARIC, PETAR, *Manager, Campus Network Serv, Campus Network Services, Kendall*. B.B.A., B.S., Florida Atlantic University; M.B.A., University of Florida.
 JOSEPH, SHERRY R., *Director, School of Cont Ed/Prof Development, Kendall*. B.Ed., California University of Pennsylvania.
 KARIM, SHAMSHA, *Professional, Library Services/Kendall, Kendall*. A.A., Miami Dade College; M.S., University of North Texas; B.B.A., M.B.A., Florida International University.
 KAUFMAN, RUSSELL E., *Manager, Campus Network Serv, Campus Network Services, Kendall*. B.A., Florida Atlantic University; M.S., Florida International University.
 KREITNER, WILLIAM J., *Associate Professor, Department Chairperson, School of Entertainment & Design Technologies, Kendall*. B.S., University of Maryland; M.M.,

University of Miami.
 LABAUVE, LAURA L., *Department Chairperson, World Languages, Kendall*. B.A., Loyola University New Orleans; M.S., Georgetown College.
 LAING, THEODORA, *Department Chairperson, Business, North*. A.A., Mercer County Community College; B.A., Rutgers University; M.A., Rider University.
 LICHTMAN, RANDY B., *Interim Program Manager, School of Cont Ed/Prof Development, Kendall*. B.M., Michigan State University; M.H.S.A., Florida International University.
 LIMA-SUAREZ, ENID M., *Manager, School of Cont Ed/Prof Development, Kendall*. A.A., Miami Dade College; B.A., M.S., Florida International University.
 LOTKER, DAVID, *Department Chairperson, School of Cont Ed/Prof Development, Wolfson*. B.A., S.U.N.Y. at Stony Brook; M.B.A., University of Miami.
 MACRINA, MERCY M., *Learning Disability Specialist, Access Services, Kendall*. B.S., Florida State University; M.S., Nova Southeastern University.
 MCGINNIS, CHARLES R., *School Director, School of Cont Ed/Prof Development, Kendall*. B.A., Lenoir-Rhyne College; M.S.H.S., Capella University.
 MCNAMEE, ANOUSH N., *Director New Student Center, New Student Center Kendall Campus, Kendall Campus, B.B.A., M.S., Florida International University*.
 MEDINA, KARLETTY R., *Director, The Honors College, Kendall*. B.A., Wheaton College; M.A., Lesley University.
 MEZA, JUAN C., *Director, Testing, Testing, Kendall*. B.S., B.S.E., M.S., Florida International University.
 MIRA, YODARIS, *Department Chairperson, School of Cont Ed/Prof Development, Kendall*. M.S., Barry University.
 MORALES, NORA, *Associate Dir Learning Resour, Computer Courtyard K/C, Kendall*. B.A., Florida International University; M.S., University of Florida.
 NORWOOD, MEL C., *Director, Student Development & Retention, Kendall*. B.S., M.A.E., Alabama State University; Ed.D., Auburn University.
 ONDARO, CHRISTINA G., *Manager, Education, Kendall*. B.A., M.S., Florida International University.
 PAVONE, KARINA, *Interim Department Chairperson, School of Cont Ed/Prof Development, Kendall*. B.A., Florida International University; M.S., Carlos Albizu University, Miami Campus.
 PINA, ERIC E., *Manager, Campus Network Serv, Campus Network Services, Kendall*. B.A., Universidad Nacional Pedro Henriquez Urena.
 PITTMAN, FLOYD E., *Assistant Professor, Campus Chief Inform. Officer, Technology Support/Production Services, Kendall*. A.A., Miami Dade College; B.S., M.S., Barry University.
 PORTELA, ODALYS, *Campus Director, Financial Aid, Financial Aid Kendall Campus, Kendall Campus*. B.S., University of Phoenix.
 PRICE, DANNY C., *Head Coach, Athletics, College Men's Baseball, Kendall*. B.S., M.S., Florida International University.
 PRICE, REINE, *Department Chairperson, School of Cont Ed/Prof Development, InterAmerican*. B.S., Bowling Green State University; M.S.E., University of Central Arkansas; M.A.E., University of Arkansas-Little Rock.
 RAMSINGH, DEVIKA G., *Professional, Library Services/Kendall, Kendall*. B.A., M.B.A., M.L.I.S., University of West Indies.
 RASSI, LOURDES C., *Department Chairperson, Social Science, Kendall*. A.A., Miami Dade

College; B.P.A., M.P.A., Florida International University; Ph.D., University of Miami.

RIOS MALDONADO, BERTA, *Program Manager, School of Cont Ed/Prof Development, West B.A.*, University of Rochester; M.H.M., Duke University; Ph.D., Boston College.

RIOS, THANIA, *Instructor, Associate Dean, Academic, School of Business, Kendall B.B.A.*, University of Miami; M.A., Florida International University.

RIVERA ROYSTON, IRENE, *Manager, School of Cont Ed/Prof Development, Wolfson. A.A.S., S.U.N.Y. College at Farmingdale; B.S., Rochester Institute of Technology; M.S.W., Syracuse University.*

RODDY, CHRISTOPHER J., *Department Chairperson, Chemistry/Physics, Kendall B.S.*, University of North Carolina-Wilmington; M.S., North Carolina State University.

RODRIGUEZ, JAVIER J., *Director, Campus Media Service, Media Services, Kendall B.S.*, Florida International University.

RODRIGUEZ, LUIS M., *Interim Director, School of Cont Ed/Prof Development, Kendall A.A.*, Miami Dade College; B.A., Northeastern Illinois University; B.S., M.S.L.E., Florida International University; Ed.D., Walden University.

ROMERO, CELINA M., *Program Manager, School of Cont Ed/Prof Development, North B.A.*, Universidad Central de Venezuela.

ROSELL, MAGDALENA S., *Manager, Biology, Health & Wellness, Kendall A.A.*, Miami Dade College; B.S., M.S., Florida International University.

SANCHEZ, ROGER I., *Administrative Assistant III, Academic Affairs, Kendall B.S.*, University of Florida.

SCHUR, NICHOLAS P., *Associate Professor, Department Chairperson, Mathematics, Kendall B.S.*, M.S., Florida International University.

SEEMAN, BONNIE S., *Department Chairperson, Arts & Philosophy, Kendall B.F.A.*, University of Miami; M.F.A., University of Massachusetts-Dartmouth.

SHAPERO, LAURIE, *Director, School of Cont Ed/Prof Development, Kendall B.A.*, S.U.N.Y. at Buffalo; M.S., Florida International University.

SHILTS, JACOB P., *Assistant Director, Advisement & Counseling, Kendall B.S.*, M.S., Nova Southeastern University.

STARKS, ROBIN R., *Chief, Public Safety, Public Safety, Kendall B.A.*, M.P.S., St. Thomas University.

STOKES, BRIAN A., *Senior Director Of Campus Admi, Campus Admin Services, Kendall B.A.*, S.U.N.Y. College at Geneseo; M.P.P.M., University of Southern Maine.

SUAREZ, DANIEL W., *Manager, Media Services, Kendall B.F.A.*, Florida International University.

TUSKEY, SARAH E., *Department Chairperson, Business and Entec, Homestead B.S.*, University of Central Florida; M.B.A., Florida International University.

URREGO, JOSE A., *Sign Language Interpreter III, Access Services, Kendall A.S.*, Miami Dade College; B.A.S., Siena Heights College.

VALDIVIA, DIANNE F., *Administrative Assistant IV, Campus President's Office, Kendall B.B.A.*, M.S., Florida International University.

VELA, SUSANA M., *Director, School of Cont Ed/Prof Development, Homestead B.S.*, Florida International University; M.A.E., University of Florida.

VENSEL, MICHAEL D., *Assistant Professor, Department Chairperson, College Prep, Kendall B.A.*, Georgia State University; M.S., Florida International University.

VIERA, ALEJANDRO, *Department Chairperson, Biology, Health & Wellness, Kendall B.S.*, Spring Hill College; M.S., Seton Hall University; Ph.D., University of Medicine and Dentistry of New Jersey.

Medical Campus Administration - Executive

EVERETT, MARK A., *Campus President, Campus President's Office, Medical B.B.A.*, M.B.A., University of Texas San Antonio; D.H.A., University of Phoenix.

LEE, KENNETH, *Associate Professor, Dean, Health Sciences, Allied Health, Medical B.S.*, Florida International University; M.A., D.P.T., Nova Southeastern University. The Robert Russell Memorial Foundation Endowed Teaching Chair. 3rd Year 2008-2010.

PETTIGREW, AMY, *Dean, School Of Nursing, Nursing, Medical B.S.N.*, Vanderbilt University; M.S.N., University of Cincinnati; Ph.D., Indiana University.

Medical Campus Administration

ABELLA, ELISA, *Assistant Professor, Campus Dir. Learning Resources, Library Services/Medical, Medical M.B.A.*, St. Thomas University; M.S., Florida State University.

ABREU, ALICIA, *Clinical Supervisor, Dental Hygiene, Medical D.S.D.*, Universidad Centro de Estudios Tecnicos-Cetec.

ALONSO, DAYNE, *Director, Physician Assistant, Physician Assistant, Medical B.S.*, M.M.S., Nova Southeastern University.

BAKER, PATRICIA L., *Administrative Assistant III, Academic Affairs, Medical A.A.*, A.S., Miami Dade College; B.P.A., M.S., Florida International University.

BERNARDIN, MARIE F., *Dir, Advisement & Career Serv, New Student Center, Medical B.S.*, Florida State University; M.S., Florida International University.

BROWN, SANTARVIS, *Manager, Communities of Interes, Fy 14/15 Titulu- Proj Comunidad, Medical B.A.*, Florida Memorial University; M.A., Liberty University.

BROWNE, VALERIE A., *Department Chairperson, Nursing, Medical B.S.*, Boston University; M.A., New York University; Ed.D., Florida International University.

CABRERA-RODRIGUEZ, MARISELLA, *Director, Student & Administrative Services, Medical B.S.*, M.S., Florida International University.

COFER, SHEMEKA A., *Clinical Supervisor, Vision Care, Medical B.S.*, University of Florida; O.D., Nova Southeastern University.

COLE, DAVID L., *Director, School of Cont Ed/Prof Development, Medical B.A.*, M.S., Florida International University.

DE LA TORRE, ROSA, *Administrative Assistant III, Campus President's Office, Medical M.S.*, McGill University; B.S., D.S., Universidad de La Habana.

DOCUMET, PAOLA F., *Director, Student & Administrative Services, Medical A.A.*, Delaware County Community College; B.S., University of Florida; M.S., West Chester University of Pennsylvania.

ECHAZABAL, ELOISA M., *Administrative Assistant IV, Campus President's Office, Medical A.A.*, Miami Dade College; B.A., Florida International University; M.B.A., Seattle University.

EDGINGTON, DANIEL T., *Director, Technology Support/Production Services, Medical A.A.*, Miami Dade College.

EDWARDS, RAMONA L., *Director, Campus Administration, Student & Administrative Services, Medical A.A.*, Miami Dade College;

B.S., M.B.A., University of Phoenix.

FISHKIN, DONNA E., *Assistant Professor, Department Chairperson, Emergency Medical Services, Medical B.A.*, University of Maryland-Baltimore County; M.S., American University.

FOSTER, STEADLEY S., *Director, Nursing, Medical A.S.*, Nassau Community College; B.S., State University of New York-S.U.N.Y.; M.S.N., Florida International University.

GARCIA, REBECA M., *Assistant Director, Advisement Services, Medical B.A.*, Florida International University.

HIDALGO, SAMUEL, *Manager, Campus Network Serv, Computer Management, Medical B.A.S.*, Miami Dade College; M.S., Florida International University.

JOHNSON, REGINA Y., *Director, Testing, Test Banking, Medical B.S.*, Florida A. & M. University.

MATHIEU, MARY N., *Manager, Campus Network Serv, Computer Management, Medical.*

MERA, MARIA D., *Administrative Assistant III, Student & Administrative Services, Medical A.A.*, Florida Keys Community College; B.B.A., Florida International University; M.B.A., Trident University International.

MERCADO, DARIO, *Campus Chief Inform. Officer, Technology Support/Production Services, Medical A.A.*, Miami Dade College; B.S., M.P.A., Florida International University.

NASCIMENTO, FABIO, *Department Chairperson, Health Sciences and Related Studies, Medical A.A.*, Miami Dade College; B.S., Florida International University; M.S., Barry University.

NAVARRO, ANTONIO, *Director, Technology Support/Production Services, Medical A.A.*, Miami Dade College; B.S.N., Barry University; M.S.N., Florida International University.

REDMAN, ERICA L., *Manager, Student & Administrative Services, Medical B.S.*, Florida A. & M. University; M.S., Florida International University.

SHANNON, DEBRA A., *Department Chairperson, Allied Health, Medical A.A.*, Miami Dade College; B.A., Trinity International University; South Florida Campus; M.S., Barry University; Ed.D., Florida International University.

SMITH, SHARON A., *Chief, Public Safety, Security Services, Medical A.S.*, Miami Dade College; B.P.A., Barry University.

VILLORO, GONZALO V., *Director, Campus Media Service, Technology Support/Production Services, Medical B.E.A.*, M.F.A., Miami International University of Art & Design.

WEBB, CARLENE V., *Grant Director, MDC Medical Campus Screening, Medical B.S.*, M.P.H., Eastern Kentucky University.

YATES, LENORA, *Professor, Department Chairperson, Nursing, Medical B.S.N.*, Chicago State University; M.B.A., M.S.N., Barry University; Ed.D., Florida International University. Columbia/Hca Healthcare Corporation Endowed Teaching Chair. 3rd Year 2011-2013.

New World School of the Arts Administration - Executive

HODGSON, JEFFREY S., *Associate Professor, Provost, NWSA, NWSA Admin Svcs, NWSA B.M.*, University of Hartford; M.M., University of Florida; D.M.A., University of Miami.

ANDAI, DANIEL A., *Dean, NWSA, Fine & Apld Artmusic, NWSA B.M.*, Lynn University; M.M., Manhattan School of Music; D.M., University of Miami.

BAILEY, PATRICE M., *Associate Professor Sr, Dean,*

NWSA, *Fine & Appld Art Theatre*, NWSA. M.F.A., Florida State University; B.S., M.A., Indiana State University.

BURNS, MARY LISA P., *Dean*, NWSA, *Fine & Appld Artdance*, NWSA. M.F.A., New York University.

CUESTA, MAGGY, *Associate Professor Sr, Dean*, NWSA, *Fine & Appld Visual Arts*, NWSA. B.F.A., Texas Tech University; M.F.A., California Institute of The Arts.

New World School of the Arts Administration

FIDALGO, RITA M., *Director*, NWSA *Admin Svcs*, NWSA. A.A., Miami Dade College; B.Acc., M.S.T.X., Florida International University.

FLORES, MARIA M., *Director*, NWSA *Admin Svcs*, NWSA. B.S., Depaul University; M.S., Florida International University.

PINERA, JUAN M., *IT Analyst*, NWSA *Info Tech*, NWSA. B.F.A., St. John's University.

WILSON, LESLIE R., *Director*, NWSA *Student Affairs*, NWSA. M.A., Michigan State University.

North Campus Administration - Executive

HARRISON, MALOU C., *Campus President*, *Campus President's Office*, North. B.S., S.U.N.Y. College at Buffalo; M.S., Florida International University; Ph.D., Walden University.

PENA, JACQUELINE, *Dean*, *Academic Affairs*, *Academic Affairs*, North. B.A., C.U.N.Y. Herbert H. Lehman College; M.A., Boston College; Ph.D., Florida International University.

PEREZ, GEORGETTE T., *Interim, Dean Students*, *Student Services*, North. B.S., M.A., University of Florida.

North Campus Administration

ALEGRIA, SARA G., *Associate Dir. Learning Resour*, *Library Services/West*, North. A.A., Miami Dade College; B.S., Florida International University; M.S., Ed.D., Nova Southeastern University.

ALFONSO, BARBARA, *Department Chairperson*, *School of Cont Ed/Prof Development*, North. B.A., Leeds Polytechnic; M.S., Florida International University; Ed.D., Nova Southeastern University.

ALVAREZ, ALEJANDRO R., *Director*, *School of Science*, North. B.A., University of Florida; M.S.W., Florida International University.

ANGEL, JOHN, *Manager*, *Media Services*, North. B.S., Devry University.

BARCO, MANOLO M., *Manager*, *Student Services*, North. B.A., Florida International University.

BATES, VINCENT M., *Department Chairperson*, *Mathematics*, North. M.S., University of Iowa; Ed.D., Morgan State University.

BELMONT, HEATHER J., *Dean*, *School Of Science*, *Academic Support Sch Science*, North. B.A., Ithaca College; Ph.D., University of Miami.

BORROTO, YOLANDA, *Director*, *Pre-School Lab*, *Education*, North. B.A., M.S., Florida International University.

BRINGUEZ, JANET, *Manager*, *2015 Susan Hardwood Trng Grant*, North. M.A.E., Grand Canyon University.

BURTON, VERONE R., *Administrative Coordinator*, *Fire Science Program*, North. A.S., Miami Dade College; B.S., Barry University; M.P.A., Nova Southeastern University.

CARR, RANDEL K., *Director*, *Campus Services*, North. B.S., Florida Memorial University; M.B.A., St. Thomas University.

CATAMBAY, JESSICA D., *Director*, *Student Life*, North. B.A., Florida State University.

CLARK, ADRIANNA D., *Program Manager*, *Fy 15/16 Small Bus Trnsp-Sbtrc*, North. B.A., Florida International University; M.I.B., Nova Southeastern University.

CROSS, GODFREY O., *Program Manager*, *School of Cont Ed/Prof Development*, North. B.A., M.A., University of West Indies; Ph.D., University of Southern Mississippi.

CUESTA, ZORAYA M., *Director*, *New Student Center*, North. A.A., Miami Dade College; B.A., St. Thomas University; M.P.A., Ed.D., Florida International University.

DALEY, CARLTON L., *Director*, *Trio-Stu.Sup.Srv*, *Prg 2015-2020*, North. B.A., University of West Indies; M.A., Florida International University.

DUKES, LOLEATHA, *Administrative Assistant III*, *Academic Support Sch Science*, North. A.S., Miami Dade College; B.B.A., Florida International University; M.S., St. Thomas University.

FERNANDEZ ROMERO, YENISLEIDY, *Manager*, *Campus Network Serv*, *Campus Network Services*, North. B.S., M.S., Instituto Superior Politecnico "Jose Antonio Echaverria".

FROSS, SHAWNEE L., *Program Manager*, *School of Justice*, North.

GARCIA, SANDRA R., *Program Manager*, *School of Cont Ed/Prof Development*, North. B.F.A., Instituto Superior de Arte.

GAYMER, MARISEL M., *Director*, *Testing*, *New Student Center*, North. B.S.A., Barry University; M.B.A., Florida International University.

GEORGES, WILSON, *Services Supervisor III*, *Campus Services*, North. B.S., Florida International University.

GONDAR JR., JOSE, *Director*, *Campus Media Service*, *Media Services*, North. A.A., Miami Dade College; B.S., Florida International University.

GRAFF, ELISSA R., *Department Chairperson*, *Arts & Philosophy*, North. B.F.A., Miami University; M.F.A., University of Kansas; Ed.D., Lincoln Memorial University.

GUINOVART, LISA M., *Associate Director*, *School of Justice*, North. B.A., Manhattan College; M.S., Carlos Albizu University, Miami Campus.

HANUS-ZANK, CATHERINE S., *Professor*, *Department Chairperson*, *World Languages*, North. B.A., Mundelein College; M.A., University of Illinois. The Bell South Endowed Teaching Chair in Communications 1999-2001.

IGLESIAS, ESTRELLA M., *Campus Dir. Learning Resources*, *Library Services/North*, North. B.A., Barry University; M.L.S., Louisiana State University.

JOHNSON, SHANE A., *Director*, *The Honors College*, North. B.S., M.B.A., Nova Southeastern University.

KILEY, PAUL J., *Director*, *School of Justice*, North. M.S., St. Thomas University.

KREITNER, WILLIAM J., *Associate Professor*, *Department Chairperson*, *School of Entertainment & Design Technologies*, Kendall. B.S., University of Maryland; M.M., University of Miami.

KROSS, JENNIFER J., *Dir*, *Advisement & Career Serv*, *Academic Advisement*, North. B.A., Drake University; M.S., Florida International University.

LAING, THEODORA, *Department Chairperson*, *Business*, North. A.A., Mercer County Community College; B.A., Rutgers University;

M.A., Rider University.

LYNCH, ROBERT T., *Program Manager*, *School of Justice*, North. A.S., Miami Dade College.

MARGOLIN, CAROLYN, *Grants Coordinator*, *Title VSci. Std. Acc. & Succ. Prj*, North. B.S., Cornell University; Ph.D., University of Miami.

MASON, MICHAEL E., *Manager*, *Entrepreneurial Education Center*, North. B.A., Olivet College; M.S., Barry University.

MAXWELL, SHANTELE L., *Manager*, *Recruitment*, North. M.S., Nova Southeastern University.

MONTES DE OCA, DANAY, *Grants Coordinator*, *School of Science*, North. A.A., Miami Dade College; B.A., M.A., Florida International University.

MOREIRA, OLIVER A., *Interim Grant Coordinator*, *Stem Ladder To St Success Prj*, North. A.A., Miami Dade College; B.S., Nova Southeastern University.

MORENO, VICTOR D., *Chief*, *Public Safety*, *Campus Services*, North. A.A., Miami Dade College; B.B.A., Florida International University; M.S., Nova Southeastern University.

MUNI, JAQUELYN, *Department Chairperson*, *Social Science*, North. A.A., Miami Dade College; B.A., Trinity International University; M.A., Trinity International University, South Florida Campus.

PARODI, SILVIO L., *Program Manager*, *Stem Ladder To St Success Prj*, North. B.S., University of Phoenix.

PARRONDO, ROBERT A., *Campus Chief Inform. Officer*, *Technology Support/Production Services*, North. B.F.A., Miami International University of Art & Design; M.P.S., St. Thomas University.

PATINO, JESENIA I., *Administrative Assistant III*, *Campus Administration*, North. B.A., Florida International University.

PAUL-NOEL, KARLS, *Program Manager*, *Fire Science Program*, North. A.S., Miami Dade College; B.P.A., Barry University.

PLUNKETT, ANDREA L., *Director*, *Access Services*, North. B.A., Quinnipiac College; M.S., Columbia University.

RODRIGUEZ, EVELYN, *Director*, *Title V Malls-Mltl Acad Lrng L*, North. A.A., Miami Dade College; B.A., Florida Atlantic University; M.S., Florida International University.

ROMERO, CELINA M., *Program Manager*, *School of Cont Ed/Prof Development*, North. B.A., Universidad Central de Venezuela.

RUBALCAVA, ARIEL, *Director*, *Senior Producer Mdcvt*, *MDC Cable Tv*, North. B.A., University of Houston.

SACASA, PABLO R., *Department Chairperson*, *Chemistry/Physics/Earth Science*, North. B.A., M.S., Ph.D., Florida International University.

SALAS, IRIS Z., *Administrative Assistant IV*, *Campus President's Office*, North. B.A., University of Puerto Rico-Rio Piedras.

SANCHEZ FUENTES, JOSE A., *Director*, *Campus Network Services*, North. B.S., M.S., Instituto Superior Politecnico "Jose Antonio Echaverria".

SANDINO, CESAR A., *Manager*, *Campus Network Serv*, *Campus Network Services*, North. A.A., A.S., Miami Dade College; B.S., Florida International University.

SANTOS ACOSTA, PEDRO A., *Campus Net & Media Serv Manager*, *Network Services*, North. B.S., Instituto Pedagogico.

SIMON, BEATRIZ C., *Manager*, *Accounts Services*, *School of Justice*, North. B.S., Florida Atlantic University.

SOCORRO, RAIMUNDO J., *School Director*, *School of Justice*, North. B.A., M.S., St. Thomas University; Ph.D., Barry University.

STAAB, KENNETH, *Department Chairperson*, *School of Justice*, North. M.S., St. Thomas University.

STRACHAN, IRIS F., *Department Chairperson*, *Education*, North. B.S., Florida State University;

M.S., Nova Southeastern University.
 TOMOVA, MICHAELA M., *Department Chairperson, English and Communications, North*. B.A., M.A., Sofia University-Saint Kliment Ohridski.
 TONEY, FREDRIC M., *Assistant Director, Academic Advisement, North*. B.S., Tuskegee University; M.B.A., Virginia Polytechnic Institute & State University.
 TONEY, HILDA L., *Executive Director, Entrepreneurial Education Center, North*. B.A., University of Miami; M.P.A., Clark Atlanta University.
 VAZQUEZ, FERMIN, *Senior Director of Campus Adm, Campus Administration, North*. A.A., Miami Dade College; B.B.A., Florida International University; M.B.A., Nova Southeastern University.
 VENEZUELA, EFRAIN J., *Associate Dean, Academic, Mathematics, North*. B.S., S.U.N.Y. at Stony Brook; M.S., Middle Tennessee State University; Ed.D., Nova Southeastern University.
 WHITE-PERSON, LYNN, *Assistant Dean of Student Serv, Student Services, North*. A.A., Miami Dade College; B.B.A., M.P.A., Florida International University.
 WOHL, MATTHEW D., *Department Chairperson, School of Entertainment & Design Technologies, North*. B.A., Bradford College; M.F.A., Spalding University.
 ZAHARIA, NOEMI I., *Manager, Aquatic & Fitness Ctr Support, North*. B.A., Florida Atlantic University; M.S., Florida International University.
 ZHANG, ZHIQI, *Grant Director, Science Peer & Research (Sparc), North*. Ph.D., Florida International University. West Campus Administration - Executive
 RAMSAMMY, ROGER A., *Campus President, Campus Presidents Office, West*. West Campus Administration
 ABREU, PABLO E., *Chief, Public Safety, Public Safety, West*. A.A., B.A.S., Miami Dade College.
 CASTRO PINO, MAYTE, *Director, Testing, Testing, West*. B.A., Instituto Superior Pedagógico "Felix Varela"; M.S., Nova Southeastern University.
 DEMAHY, ANA M., *Executive Director, Campus Services Admin, West*. A.A., A.S., Miami Dade College; B.A., Florida International University; M.S., Nova Southeastern University.
 MACPHEE, CHANTELE L., *Department Chairperson, Natural & Social Sci Chair, West*. B.A., M.A., University of Prince Edward Island (Canada); Ph.D., University of Glasgow.
 MCFADDEN, SHAMONA R., *Director, Student Services, West*. B.A., Bethune Cookman College; M.S., Barry University.
 RIOS MALDONADO, BERTA, *Program Manager, School of Cont Ed/Prof Development, West*. B.A., University of Rochester; M.H.M., Duke University; Ph.D., Boston College.
 SANTOS ACOSTA, PEDRO A., *Campus Net & Media Serv Manager, Network Services, North*. B.S., Instituto Pedagógico.
 SHERAN, YVETTE T., *Dir, Advisement & Career Serv, Advisement & Career Svcs, West*. A.A., Miami Dade College; B.B.A., Florida International University; M.S., Nova Southeastern University.

Wolfson Campus Administration - Executive

SORIA, RICHARD A., *Campus President, Campus President's Office, Wolfson*.
 LARSON, JEFFREY B., *Executive Director, Campus Admin Services-Virtual, Wolfson*. B.A., University of Wyoming; M.A., Coe College; M.S., University of Wisconsin-Madison; Ph.D., Capella University.

ANZALOTTA, JAIME M., *Instructor, Interim, Dean of Student Serv, Student Services, Wolfson*. A.A., Miami Dade College; B.S.W., M.S.W., Florida International University.
 BIEN AIME, DIANA A., *Assistant Professor, Interim Dean Academic Affairs, Academic Affairs, Wolfson*. M.S., Barry University.

Wolfson Campus Administration

AGUIAR, JUAN C., *Manager, Campus Network Serv, Academic Network, Wolfson*. A.A., Miami Dade College; B.P.S., Barry University.
 AHERN-HETTICH, COLLEEN, *Director, Earth Ethics Institute, Wolfson*. B.F.A., University of Colorado Denver/Anschutz Medical Campus.
 ALPHONSE-PRESCOTT, ALTHEA, *Senior Instructional Designer, Academic Affairs-Virtual, Wolfson*. M.A.E., Texas Tech University.
 BABIC, DJURADJ, *Assistant Professor, School Director, School of Engineering and Technology Entec, Wolfson*. B.S., M.S., Ph.D., Florida International University.
 BALZARETTI, ROLANDO G., *Manager, Campus Network Serv, Academic Network, Wolfson*. A.A., Miami Dade College; B.P.S., Barry University.
 BOLANOS, LESTER A., *Senior Systems Analyst, Ccio Tech Supp & Prd.Svs-Virtual, Wolfson*. B.S., Barry University; M.S., Florida International University.
 BRAUN, JEROME R., *Interim Director Of Technology, Ccio Tech Supp & Prd.Svs-Virtual, Wolfson*. B.S., Minnesota State University-Mankato; M.S., New York Institute of Technology.
 BURT III, ERNEST, *Director, Academic Affairs-Virtual, Wolfson*. B.A., Ohio State University; M.C.J., Tiffin University; Ph.D.E., Keiser University-Fort Lauderdale.
 CARROLL, JAMES J., *Manager, Distribtu-Culinary Arts, Wolfson*.
 CASTINEYRA, MAGDA J., *Director, The Honors College, InterAmerican*. B.A., St. Thomas University; M.Ed., Harvard University.
 CHARLOT, PASCALE, *Dean, Honors College, The Honors College, Wolfson*. B.A., Duke University; J.D., University of Michigan-Ann Arbor.
 CHAVEZ, EDUARDO, *Director, Revest 2015-2016 #1, Wolfson*. B.A., M.A., Florida International University.
 CHIN, JOHN Q., *Program Manager, Computer Information Systems, Wolfson*. B.S., University of Florida; J.D., University of Miami.
 CONTEH, CYNTHIA Z., *Department Chairperson, CIS/Business, InterAmerican*. B.A., M.B.A., University of North Florida.
 CROWLEY-GONSOLIN, AMY C., *Director, Ccio Tech Supp & Prd.Svs-Virtual, Wolfson*. B.A., University of Texas-Austin; M.A., Boston College.
 CRUZ, ANA M., *Professor, Department Chairperson, Business, Wolfson*. A.A., Miami Dade College; B.B.A., Florida International University; M.B.A., St. Thomas University; D.B.A., Nova Southeastern University. The Southeast Banking Corporation Foundation Endowed Teaching Chair 1998-2000. The Wolfson Senior Foundation Endowed Teaching Chair 2002-2004.
 DE LOS REYES, GLORIA E., *Assistant Dean Of Student Serv, Student Services, Wolfson*. A.A., Miami Dade College; B.P.A., M.P.A., Florida International University.
 DE YURRE FATEMIAN, ZOILA, *Campus Dir, Learning Resources, Library Services W/C, Wolfson*. M.L.S., University of Arizona.
 DELGADO, LOURDES M., *Dir, Advisement & Career Serv, Advisement & Counseling, Wolfson*. B.A., University of Miami; M.S., Florida International University.
 DESSE, MAXIME G., *Grants Coordinator, Title*

Varcos, Wolfson. B.S., University of New Haven.
 ENGLE, COLLEEN T., *Assistant Professor, Department Chairperson, Business Mgmt-Hospital-Dir, Wolfson*. A.S., Sullivan University; B.S., University of New Hampshire; M.S., University of Bridgeport; M.B.A., Boston University.
 ESTAPE, DANIEL A., *Manager, Health & Wellness, Wolfson*. B.S., M.P.H., Florida International University.
 FANO, ESTHER S., *Department Chairperson, Hospitality Management, Wolfson*. A.A., Miami Dade College; B.A., M.S., Florida International University.
 FAROKHNI, STEPHANIE G., *Manager, Miami Book Fair International, Wolfson*. A.A., Miami Dade College; B.A., B.F.A., Florida International University.
 FERNANDEZ RANA, PAOLA, *Manager, The Center for Writing and Lit @mdc, Wolfson*. B.A., University of New Hampshire.
 FERRAZZA, MAURICIO, *Department Chairperson, Offcop-Gaming & Anm-Chair-W/C, Wolfson*. M.F.A., Miami International University of Art & Design.
 FERRER TEODORO, CHANDRA M., *Administrative Assistant III, Administrative Services, Wolfson*. B.A., Florida International University; M.B.A., Nova Southeastern University.
 FLOREZ, CRISTINA A., *Director, Student Services, Wolfson*. B.S., M.S., Florida International University.
 FRASSETTO, DAVID, *Director, Lynn & Louis Wolfson II Fmia, Wolfson*. B.A., Edinboro University of Pennsylvania; M.F.A., State University of Ny Health Science Center at Stony Brook.
 FULLERAT, VIRGINIA I., *Director, The Honors College, Wolfson*. A.A., Miami Dade College; B.A., Florida Atlantic University; M.S., Florida International University.
 FULLANA, YAREMIS P., *Interim Sr. Director Campus, Administrative Services, Wolfson*. A.A., Miami Dade College; B.A., M.B.A., Florida International University.
 GUARCH, GERARD J., *Director, Campus Services, Wolfson*. B.S., Fordham University; M.S., Barry University.
 HERNANDEZ, ANA C., *Sign Language Interpreter III, Access (Disability Services), Wolfson*. B.P.S., Barry University.
 HOFFMAN, REBECA, *Administrative Assistant III, Academic Affairs, Wolfson*. A.A., Miami Dade College; B.S., M.S., Barry University.
 IMAM, SAHIR, *Director, Academic Network, Wolfson*. D.P., Concordia University; M.S., St. Thomas University.
 JAMES, MICHELLE P., *Senior Instructional Designer, Academic Affairs-Virtual, Wolfson*. B.S., M.S., Florida International University.
 JENNINGS, DONNA L., *Director, Virtual College, Academic Affairs-Virtual, Wolfson*. B.S., M.A., University of South Florida; Ph.D., Vanderbilt University.
 JOHNSON, SHANE A., *Director, The Honors College, North*. B.S., M.B.A., Nova Southeastern University.
 KNIGHTS, ANSELM J., *Interim, Department Chairperson, School of Engineering and Technology Entec, Wolfson*. B.S., M.S., Florida International University.
 KRAMER, LOU E., *Manager, Lynn & Louis Wolfson II Fmia, Wolfson*. M.A., California State University-Northridge.
 KRAUS, MARK L., *Department Chairperson, Natural Science, Health & Wellness, Wolfson*. B.S., Catholic University of America; M.S., Ph.D., Rutgers University-New Brunswick.
 LE, UYEN T., *Project Coordinator, Title V-Arcos, Wolfson*. B.S., M.S., Florida A. & M. University.
 LEWIS, COREY A., *Corporate Relations Manager, Miami Book Fair Int.Center for Writing&Lit, Wolfson*. B.A., Michigan State University; M.B.A.,

- George Washington University.
- LOPEZ, DELIA, *Director, Miami Book Fair Int. Center for Writing & Lit, Wolfson*. A.A., Miami Dade College; B.A., Florida International University.
- LOPEZ, VIVIAM M., *Administrative Assistant IV, Campus President's Office, Wolfson*. B.A., University of Puerto Rico-Rio Piedras.
- LOTKER, DAVID, *Department Chairperson, School of Cont Ed/Prof Development, Wolfson*. B.A., S.U.N.Y. at Stony Brook; M.B.A., University of Miami.
- MADURO, MARIANNE, *Administrative Assistant III, The Honors College, Wolfson*. A.A., Miami Dade College; B.A., Florida International University.
- MARTINEZ, MICHAEL A., *Director, Campus Media Service, Media Services, Wolfson*. B.S., M.B.A., DeVry University.
- MARTINEZ, OSCAR, *Program Manager, Academic Network, Wolfson*.
- MARTINEZ, SANDRA M., *Director, New Student Center, Wolfson*. B.S., Florida International University; M.S., Nova Southeastern University.
- MAYORGA, ROSA M., *Department Chairperson, Arts & Philosophy, Wolfson*. B.A., M.A., Ph.D., University of Miami.
- MCINTYRE-HALL, MARVELLE A., *Director, The Law Center, Wolfson*. B.A., M.A.T., J.D., Howard University.
- MEDINA, KARLETTY R., *Director, The Honors College, Kendall*. B.A., Wheaton College; M.A., Lesley University.
- MENDEZ, LISSETTE, *Director, The Center for Writing and Lit @mdc, Wolfson*. B.A., M.F.A., Florida International University.
- MILLER, JEFFERSON K., *Administrative Coordinator, Engineering, Wolfson*. A.A., Miami Dade College; B.S., M.S., Florida International University.
- MINCHALA, MONICA, *Director, Title V Arcos, Wolfson*. A.A., Valencia Community College; B.A., M.A., University of Central Florida.
- MUNIZ BERMUDEZ, HELEN G., *Director, Access (Disability Services), Wolfson*. B.A., M.S.W., Florida International University.
- MUNOZ, ARNOLD N., *Program Manager, Revest 2015-2016 #1, Wolfson*. B.A., M.A.E., University of Arizona; Ph.D., Michigan State University.
- NEWAY, ROBERTA, *Senior Instructional Designer, Academic Affairs-Virtual, Wolfson*. B.S., Florida State University; M.S., Florida International University.
- NUNEZ JR., ATILANO L., *Manager, Media Services, Wolfson*. B.A., Mississippi State University.
- NUNEZ, KATIA, *Associate Dir. Learning Resour; Library Services W/C, Wolfson*. B.A., Florida International University; M.A., University of South Florida.
- PERDUE-ATWELL, SHANNON R., *Director, Gaining Early Aurn & Read(Gear), Wolfson*. B.A., Converse College; M.P.A., West Virginia University.
- PEREZ, CONSUELO, *Assistant Director, Advise ment & Counseling, Wolfson*. A.A., Miami Dade College; B.P.S., Barry University; M.S., Florida International University.
- PEREZ, LUIS M., *Chief, Public Safety, Public Safety, Wolfson*. B.A., St. Thomas University.
- PEREZ, MANUEL A., *Associate Dean, Academic, Academic Affairs, Wolfson*. A.A., Miami Dade College; B.S., M.S., Florida International University.
- RIOS, MELISA, *Senior Instructional Designer, Academic Affairs-Virtual, Wolfson*. B.I.T., American Intercontinental University; M.S., Nova Southeastern University.
- RIVERA ROYSTON, IRENE, *Manager, School of Cont Ed/Prof Development, Wolfson*. A.A.S., S.U.N.Y. College at Farmingdale; B.S., Rochester Institute of Technology; M.S.W., Syracuse University.
- SHERIDAN-BRINKMAN, DEBRA J., *Director, Ccio Tech Supp & Prd.Svs-Virtual, Wolfson*. B.S., University of Florida; M.S., Florida International University.
- SMITLEY, BRUCE L., *Learning Disability Specialist, Access (Disability Services), Wolfson*. B.S., Huntington University; M.S.Ed., Indiana University; Ed.D., University of Miami.
- SOSA DIAZ, ANNIELYS D., *Director, Student Life, Wolfson*. A.A., A.S., Miami Dade College; B.S., University of Florida.
- SOTO, VIRGINIA M., *Manager, New Student Center, Wolfson*. B.S., M.B.A., University of Phoenix.
- SOTO, WILLIAM, *Department Chairperson, E.S.L./ Foreign Languages, Wolfson*. A.A., Miami Dade College; B.S., M.S., Nova Southeastern University.
- SWIFT, NICOLE, *Manager, Miami Book Fair International, Wolfson*. A.A., Miami Dade College; B.A., Emerson College.
- TAYLOR, KHALLAI, *Department Chairperson, Office Ocp-Chair Cis-Hia, Hialeah*.
- VAZQUEZ, KESIA, *Director, Retention & Transition Services, Wolfson*. B.S., M.S., Florida International University.
- VAZQUEZ, VICTOR, *Associate Professor Sr, Department Chairperson, Social Science, Wolfson*. M.A., University of Puerto Rico-Rio Piedras; Ph.D., Temple University.
- VILLALOBOS, SOFIA I., *Director, Student Services-Virtual, Wolfson*. B.A., Wright State University; M.S., University of Rhode Island.
- WALTON III, FRANK A., *Senior Systems Analyst, Ccio Tech Supp & Prd.Svs-Virtual, Wolfson*. B.S., Florida International University.
- WEBB, MARC A., *Director, Testing, Testing, Wolfson*. M.S., Nova Southeastern University.
- YARROW, JOANN M., *Director, Prometeo Theater @mdc, Wolfson*. B.F.A., Boston University.
- YOUNG, JOSHUA B., *Director, Inst for Civic Engagement/Democracy, Wolfson*. B.A., University of Virginia; M.P.A., M.S.W., Florida State University.
- ALEM, MARIO A., *Assistant Professor, Emergency Medical Services, Medical*. A.A., A.S., Miami Dade College.
- ALEXANDER, JOHN W., *Associate Professor, Mathematics, North*. B.S., Boston University; M.A., Bowling Green State University.
- ALFONSO, ANTONIO L., *Associate Professor Sr, Mathematics, Kendall*. B.S., Union Institute & University; M.S., Nova Southeastern University.
- ALLEN, PRESTON L., *Associate Professor, English & Communication, North*. B.A., University of Florida; M.F.A., Florida International University.
- ALLEYNE, NANCY M., *Instructor, Social Sci-Crim Just N/C, North*. B.A., S.U.N.Y. at Albany; M.S., Long Island University Brooklyn Campus; Ph.D., Capella University.
- ALLONCE, RUZ H., *Associate Professor Sr, Mathematics, North*. B.S., Bethune Cookman College; M.S., University of Miami.
- ALONSO, RAFAEL, *Instructor, Nursing, Medical*. A.A., A.S., Miami Dade College; B.S.N., M.S.N., Florida International University.
- ALPERN, AARON H., *Instructor, Music, Theater & Dance, Kendall*. M.F.A., California Institute of The Arts.
- ALVAREZ, LEANDRO, *Associate Professor, Mathematics, Kendall*. B.S., M.S., Florida International University.
- ALVAREZ, MARIA D., *Associate Professor Sr, Mathematics, Kendall*. A.A., Miami Dade College; B.S., M.S., Florida International University.
- ALPERN, ROSANY H., *Professor, Mathematics, InterAmerican*. A.A., Miami Dade College; M.A., M.S., University of Miami; B.S., Ph.D., Florida International University. Mary Pond Family and Friends Endowed Teaching Chair 2001-2003. Northern Trust Bank of Florida Endowed Teaching Chair. 3rd Year 2013-2015.
- ALVAREZ, YAMINA, *Associate Professor Sr, Nursing, Medical*. A.S., Colegio Universitario del Este; B.S., Inter American University of Puerto Rico-San German Campus; M.S.N., Barry University; D.N.P., University of Miami. Joan K. Stout, R.N. Endowed Teaching Chair in Nursing. 3rd Year 2012-2014.
- AMADOR, PORFIRIO E., *Instructor, Physical Therapy Assistant, Medical*. B.S., University of Florida; M.S., University of Miami.
- AMOLE, BABATUNDE O., *Professor, Biology, Health & Wellness, Kendall*. B.S., M.S., Long Island University Brooklyn Campus; Ph.D., New York University.
- ANDERSON, BAMBI L., *Associate Professor, Fine & Apld Art/dance, NWSA*. B.F.A., University of Florida.
- ANDERSON, JESSICA B., *Associate Professor Sr, Mathematics/Science, Homestead*. A.A., Miami Dade College; B.S., M.S., University of Michigan-Ann Arbor.
- ANDERSON, LISA H., *Professor, School of Entertainment & Design Technologies, North*. B.A., Brenau University; M.A., M.F.A., University of Miami.
- ANDREOLI, MICHAEL H., *Professor, Mathematics, North*. B.A., University of California-San Diego; M.A., M.S., University of California-Berkeley.
- ANDREWS JR., W. BARRY, *Assistant Professor, Computer Information Systems, Kendall*. B.A., North Carolina State University; M.S., Florida International University.
- ANGEE, ALEJANDRO, *Associate Professor, Social Science, Wolfson*. B.A., M.A., Ph.D., Florida International University.
- ANGLIN, MARCIA A., *Associate Professor Sr, Biology, Health & Wellness, North*. B.A., University of West Indies; M.S., Florida International University.
- ANTHAPPAN, PAUL C., *Professor, Mathematics, North*. M.S., University of Kerala; D.A., University of Miami.

Miami Dade College Faculty

A

- ABASCAL, JUAN R., *Professor, Social Science, Kendall*. B.A., Rutgers University; M.A., Ph.D., Kent State University. The Dade County Public School Employees' Federal Credit Union Endowed Teaching Chair 1996-1998.
- ABETY, MIRIAM FRANCES, *Professor, Natural & Social Sciences, InterAmerican*. B.A., Florida International University; M.S., D.Psy., Carlos Albizu University, Miami Campus. Andrew Blank Endowed Chair. 3rd Year 2011-2013.
- ADAMS, MARVA L., *Assistant Professor, Communications, Hialeah*. B.A., University of South Florida; M.A., Florida Atlantic University.
- ADEYIGA, VALDA J., *Associate Professor Sr, Library Science-Hial, Hialeah*. B.A., University of West Indies; M.A., University of South Florida.
- AGUADO JIMENEZ, ANDREINA, *Assistant Professor, Chemistry/Physics/Earth Science, North*. Ph.D., University of Miami.
- AGUILAR-FIGUEROA, VIOLETA B., *Professor, Nursing, Medical*. B.S.N., University of Santo Tomas; M.S.N., Virginia Commonwealth University; D.N.P., University of Miami.
- AHSAN, RAHNUMA B., *Assistant Professor, BAS-Supervision & Mgmt-K/C, Kendall*. M.B.A., Ph.D., Old Dominion University.
- ALBURY, THERESA A., *Associate Professor Sr, English & Communication, Wolfson*. B.L.S.T., M.A., Barry University.

- ARAGON, JOSE R., *Assistant Professor, Natural & Social Sciences, InterAmerican*. A.A., Miami Dade College; B.A., M.A., Florida International University.
- ARANA ROSAINZ, MANUEL D., *Assistant Professor, Biological Sci-Gen Ed, West*. D.O.C.T., Instituto Superior de Ciencias Medicas de la Habana.
- ARCA, KRISTOFER C., *Instructor, Arts & Philosophy, Kendall*. B.A., Florida International University; M.A., Catholic University of Leuven.
- ARGUELLES, TRINIDAD, *Instructor, Psychology-Social Science, West*. B.A., M.S., Florida International University.
- ARISTIZABAL, CATALINA, *Associate Professor Sr, Biology, Health & Wellness, Kendall*. Ph.D., University of Miami.
- ARTEAGA, ELIO L., *Instructor, School of Entertainment & Design Technologies, North*. A.A., A.S., Miami Dade College; B.S., Florida International University; M.F.A., Florida Atlantic University.
- AUBUCHON, JESSICA A., *Instructor, Social Science, North*. B.A., M.S., Nova Southeastern University.
- AUGUSTYN, BENJAMIN L., *Instructor, Social Science, Wolfson*. M.A., Florida International University; B.A., M.A., Ludwig-Maximilian University of Munich.
- AURICCHIO, BIAGIO, *Professor, World Languages, Kendall*. A.A., Miami Dade College; B.A., Florida International University; M.A., Florida State University.
- AVONDSTONDT, DOROTHY S., *Associate Professor Sr, E.S.L./Foreign Languages, Wolfson*. B.A., McDaniel College; M.S., Nova Southeastern University; Ed.S., University of Miami. Peter H. Clayton Endowed Teaching Chair. 3rd Year 2010-2012.
- BACA, XIMENA C., *Instructor, Massage Therapy, Medical*. M.S., New York Chiropractic; B.H.S.A., M.A.E., University of Phoenix.
- BAIN, ALONZO C., *Associate Professor Sr, Arts & Philosophy, Wolfson*. B.S., Fisk University; M.S., Florida International University. The Hank Meyer Endowed Teaching Chair 1997-1999.
- BALMORI, CHRISTINE, *Associate Professor, Business, Wolfson*. A.A., Miami Dade College; B.B.A., M.A., Florida International University.
- BARDO-PORTILLA, RICARDO, *Assistant Professor, Public Serv-Trans/Interpret, InterAmerican*. B.A., Ph.D., Universidad de La Habana.
- BARNET, RICARDO A., *Assistant Professor, Emergency Medical Services, Medical*. A.A., A.S., Miami Dade College; B.P.A., Barry University.
- BARON, EMILIA K., *Assistant Professor, Social Science, Kendall*. B.S., Barry University; M.S., Ph.D., Texas Tech University.
- BARRIENTOS, RENE W., *Associate Professor Sr, Mathematics, Hialeah*. A.A., Miami Dade College; B.S., M.S., University of Miami.
- BARROS, JOSE A., *Professor, Natural Science, Wolfson*. M.S., Ph.D., University of Miami.
- BARROW, RUTH, *Assistant Professor, Business, Wolfson*. B.B.A., University of Miami; M.B.A., Florida International University.
- BARRY, NAZIRA K., *Associate Professor, Psychology, Wolfson*. B.L.S.T., Barry University; M.S., St. Thomas University.
- BARUA, RATAN K., *Associate Professor Sr, Mathematics, North*. B.S., University of Dacca; M.S., Michigan State University.
- BASILE, JENNIFER A., *Professor, Arts & Philosophy, Kendall*. B.F.A., University of Miami; M.F.A., Southern Illinois University-Edwardsville.
- BEHAR, LILLIAM P., *Associate Professor Sr, Esl and World Languages, Hialeah*. A.A., Miami Dade College; B.Ed., University of Miami; M.S., Nova Southeastern University.
- BELOKON, IGOR E., *Professor, Psychology, Wolfson*. B.A., Florida International University; Ph.D., Carlos Albizu University, Miami Campus.
- BELTRAN, LUIS A., *Professor, Mathematics, Kendall*. B.A., St. Thomas University; M.A., University of Miami; Ph.D., University of Central Florida. The Dr. Stanley Sutnick Endowed Teaching Chair 2003-2005. The Adomo & Yoss Employee Charitable Foundation Endowed Teaching Chair. 3rd Year 2008-2010.
- BENITEZ, PILAR L., *Professor, School of Architecture/Interior Design, Wolfson*. B.A., University of Miami; M.S., Florida International University.
- BESTARD, JAIME, *Professor, Mathematics, Hialeah*. B.M.E., Instituto Superior Politecnico "Jose Antonio Echaverria"; Ph.D., Universidad Central de las Villas.
- BIACHE, KATHLEEN S., *Assistant Professor, World Languages, Kendall*. B.A., Rutgers University; M.A., C.U.N.Y.Hunter College.
- BIBBY, NANNETTE M., *Assistant Professor, Computer Information Systems, Kendall*. B.A., Florida International University; M.S., Barry University.
- BILLIONNIERE, ELODIE V., *Assistant Professor, Computer Information Systems, InterAmerican*. B.S., University of Montana; M.Ed., Ph.D., Arizona State University.
- BLANCHETTE, LORETTA J., *Associate Professor Sr, Mathematics, Hialeah*. A.A., Broward Community College; B.S., Florida Atlantic University; M.S., Florida Institute of Technology.
- BLANCO, JOSE M., *Associate Professor Sr, English, Homestead*. B.A., Florida International University; M.A., Southern Illinois University-Carbondale.
- BLANCO, LUCAS R., *Assistant Professor, Fine & Apld-Arts, Homestead*. B.F.A., Western Michigan University; M.F.A., University of Miami.
- BLANCO, YESENIA B., *Associate Professor, Nursing, Medical*. B.S., M.S., Florida International University.
- BOET, KEYSNER, *Assistant Professor, Mathematics, Kendall*. B.S., M.S., Ph.D., Universidad de Oriente.
- BOGNAR, SUZANNE H., *Professor, English, Kendall*. B.A., Stetson University; M.A., Duke University.
- BONAWITZ, PAULA, *Assistant Professor, Nursing, Medical*. B.S.N., University of Miami; M.S.N., Barry University.
- BONELLI, MATTHEW J., *Assistant Professor, Music, Theater & Dance, Kendall*. B.M., M.M., University of Miami.
- BOODHAI, ANSON N., *Instructor, Aviation, Homestead*. B.S., M.S., M.S.M., Embry-Riddle Aeronautical University.
- BOOS, KENNETH G., *Professor, Music, Theater & Dance, Kendall*. B.M., Heidelberg College; M.M., University of Cincinnati; D.M.A., University of Miami. The Andrew Blank Endowed Teaching Chair 1995-1997.
- BORGES, JULIO C., *Associate Professor Sr, Accounting/Busiadmin Off Ocp, North*. A.A., Miami Dade College; B.B.A., M.Ed., University of Miami; M.S.M., Florida International University.
- BORGWALD, KRISTIN E., *Associate Professor, Arts & Philosophy, Wolfson*. B.A., Webster University; M.A., Ph.D., University of Miami.
- BOVEE, BROOKE R., *Assistant Professor, English & Communication, North*. B.A., M.A., Central Michigan University.
- BRAIDE, UCHE M., *Instructor, Nursing, Medical*. B.S.N., M.S.N., Nova Southeastern University.
- BRAUN, JOSHUA I., *Associate Professor, Arts & Philosophy, Wolfson*. B.F.A., University of Florida; M.A., University of Illinois-Chicago.
- BRENES, FRANCISCO, *Instructor, Nursing, Medical*. A.A., A.S., Miami Dade College; B.S.N., M.S.N., Florida International University.
- BRENT, TIMOTHY J., *Assistant Professor, Music, Theater & Dance, Kendall*. B.M., M.M., Northwestern University; D.M.A., University of Miami.
- BRIBIESCA, ANGELO P., *Associate Professor, Esl and World Languages, Hialeah*. B.S., M.A., University of Wisconsin-Madison.
- BRITO-VILLANI, MARTA, *Associate Professor, Mathematics, North*. B.S., Universidad Catolica Andres Bello; M.S., Florida International University.
- BROWN RICHARD, DONNA T., *Instructor, Nursing, Medical*. A.S., Miami Dade College; B.S., Florida A. & M. University; B.S.N., M.S.N., Florida International University; D.N.P., University of Alabama.
- BROWN, ANNETTE C., *Assistant Professor, Nursing, Medical*. B.S., Bethune Cookman College; M.S.N., University of Phoenix.
- BRUBECK, DAVID W., *Professor, Music, Theater & Dance, Kendall*. B.M., M.M., Northwestern University; D.M.A., University of Miami.
- BRUCATO, DOMINIC, *Professor, Social Science, Kendall*. B.A., University of Notre Dame; M.A., Ph.D., Kent State University. The Hank Meyer Endowed Teaching Chair. 3rd Year 2005-2007.
- BUCHER, CARMEN A., *Assistant Professor, English & Communication, North*. A.A., Miami Dade College; B.A., Florida International University; M.S., Nova Southeastern University.
- BUCHHOLZ, ELIZABETH, *Associate Professor, School of Justice, North*. M.C.J., Boston University; B.S., M.S., Ed.D., Nova Southeastern University.
- BUEHLER, MELISSA J., *Assistant Professor, Social Science, Kendall*. B.A., Agnes Scott College; M.A., Florida Atlantic University; Ph.D., Purdue University.
- BUMPERS, KEVIN W., *Associate Professor Sr, Music, Theater & Dance, Kendall*. B.M., University of South Alabama; M.M., Florida State University. The Dr. Robert H. McCabe Endowed Teaching Chair 1999-2001.
- BURROWS, HOA N., *Associate Professor, Business Administration, Kendall*. A.A., Miami Dade College; B.B.A., M.P.A.C., University of Miami.
- BUSTAMANTE, SALMA B., *Professor, E.S.L./World Languages, InterAmerican*. A.A., B.A., Marymount University; M.Ed., George Mason University.
- BUTLER, SUZANNE K., *Associate Professor, Biology, Health & Wellness, North*. A.A., B.S., M.S., New Mexico State University.
- CABEZAS, ROBERTO J., *Associate Professor Sr, Mathematics, Kendall*. M.S., Odessa State University; Ph.D., Joint Institute of Nuclear Research.
- CAIAFFA, ANDRES A., *Associate Professor, Nursing, Medical*. B.S.N., M.S.N., Florida International University; D.N.P., University of Miami.
- CALAVIA, JOSE E., *Associate Professor Sr, Chemistry/Physics, Kendall*. B.S., Florida International University; M.S., Johns Hopkins University.
- CALDERIN, VICTOR, *Associate Professor, Communications, Hialeah*. B.A., M.A., University of North Carolina-Chapel Hill.
- CALLE, EDUARDO J., *Professor, School of Entertainment & Design Technologies, Kendall*. B.M., M.M., University of Miami; Ed.D., Nova Southeastern University.
- CANETE, JENNIE L., *Associate Professor Sr, English & Communication, North*. A.A., Miami Dade College; Ed.S., Florida Atlantic University; B.S., M.S., Florida International University.
- CANNON, CHERIE, *Associate Professor, English & Communication, North*. B.Ed., M.A., University of Miami.

- CARABALLO, RICKY, *Instructor, Business Mgt-North, North*. B.A., City University of New York; M.B.A., Baruch College/College University of New York.
- CARAMES, MANUEL J., *Associate Professor Sr., Mathematics, North*. B.S., M.E.N.G., Ph.D., Moscow State University of Communication.
- CARLO, JESSE J., *Instructor, Interdisciplinary, West*. M.S., Nova Southeastern University.
- CARLO, SAMANTHA L., *Associate Professor Sr., School of Justice, North*. B.A., Florida State University; M.S., University of Central Florida. Mitchell Wolfson, Jr. Endowed Teaching Chair. 2nd Year 2014-2016.
- CARMONA, AMARILYS, *Associate Professor Sr., Biology, Health & Wellness, Kendall*. M.D., Instituto Superior de Ciencias Medicas de Santiago.
- CARMONA, MARLENE, *Associate Professor Sr., Physical Therapy Assistant, Medical*. B.S., M.S., University of Miami; D.P.T., Nova Southeastern University.
- CARTER, KIMBERLY D., *Associate Professor Sr., Developmental Education, North*. B.S., Florida International University; M.S., Nova Southeastern University.
- CASADO, MARIA J., *Associate Professor Sr., Library Science-N/C, North*. B.A., M.A., University of South Florida.
- CASALS, JOSE E., *Assistant Professor, Distributive-Culinary Arts, Wolfson*. B.S., M.B.A., Lynn University.
- CASELL, RYAN T., *Assistant Professor, Natural Science, Wolfson*. Ph.D., Florida International University.
- CASTELLANOS NODA, JUSTINA, *Assistant Professor, Mathematics, Kendall*. B.S., Ph.D., Universidad de La Habana.
- CASTELLS, DIANA R., *Associate Professor Sr., E.S.L./Foreign Languages, Wolfson*. A.A., Miami Dade College; B.A., Florida International University; M.A., University of Texas-Austin.
- CASTELLS, VICTORIA D., *Associate Professor, Physical Science, Hialeah*. B.A., Universidad Central de Venezuela; Ph.D., Universite de Paris Xi-Sud.
- CASTILLO, SANDRA M., *Professor, Social Science, Kendall*. A.A., Miami Dade College; B.A., M.A., Florida State University.
- CASTRO, ROSA M., *Associate Professor, Medical Laboratory Technology, Medical*. B.S., Florida Atlantic University; M.H.S., Nova Southeastern University.
- CATALA, JUAN C., *Associate Professor, Chemistry/Physics/Earth Science, North*. B.S., M.I. Kalinin Polytechnic Institute of Leningrad; M.S., Florida International University.
- CAVALARIS, MARTHA E., *Professor, Accounting/Busiadmin Off Ocp, North*. B.B.A., Florida International University; M.A., St. Thomas University.
- CEDEÑO, LUIS R., *Instructor, Phlebotomy, Medical*. B.A., Universidad de La Habana.
- CENDON, MARIA J., *Associate Professor Sr., Biology, Health & Wellness, Kendall*. M.D., Universidad Central de Venezuela.
- CEPERO, ANA M., *Professor, E.S.L./World Languages, InterAmerican*. B.A., Georgia College & State University; M.A., Ph.D., Emory University.
- CHAPMAN, EDDIE N., *Assistant Professor, Psychology, Wolfson*. A.A., B.S., St. Thomas Aquinas College; M.S., Florida International University; M.S., Carlos Albizu University, Miami Campus.
- CHERNOFF, LAURENCE, *Professor, Mathematics, Kendall*. B.A., M.A., University of Hawaii.
- CHIAPPONE, MARK, *Assistant Professor, Biology, Homestead*. B.S., University of Miami; M.S., Nova Southeastern University.
- CHIRINOS, ANTONIO E., *Associate Professor Sr., Arts & Philosophy, Kendall*. A.A., Miami Dade College; B.E.A., Florida International University; M.F.A., Columbia University.
- CHORMANSKI, THERESA A., *Associate Professor, Biology, Health & Wellness, Kendall*. B.S., University of Notre Dame; M.S., Florida International University.
- CHOY, RENE, *Assistant Professor, Accounting/Busiadmin Off Ocp, North*. A.S., Miami Dade College; B.A., M.S., Florida Atlantic University.
- CHRAIBI, CHAKIB, *Assistant Professor, BS-Cis-Infom Syst Tech N/C, North*. Ph.D., State University of NY Health Science Center at Stony Brook.
- CHUNG, COLLEEN A., *Assistant Professor, Business Administration, Kendall*. A.A., Miami Dade College; B.A., M.B.A., Florida International University.
- CHURCHILL, JACLYN N., *Instructor, Bas In Health Science, Medical*. B.S., Loyola University of Chicago; M.C.M.S., M.P.H., Barry University.
- CLARK, CARLA M., *Associate Professor Sr., Library Science-M/C, Medical*. B.A., Florida Atlantic University; M.A., University of South Florida.
- CLARK, CHERYL M., *Professor, English & Communication, Wolfson*. B.A., C.U.N.Y. Herbert H. Lehman College; M.A., Ph.D., University of Miami.
- CLOUES, BETH L., *Associate Professor Sr., Library Science-IAC, InterAmerican*. B.A., Kentucky Wesleyan College; M.S., Florida State University.
- CLOVIS, MEGHAN, *Associate Professor, College Prep, Homestead*. B.S., M.A., University of Miami. Mardee S. Jenrette Endowed Teaching Chair of Excellence. 2nd Year 2014-2016.
- COBHAM, IAN P., *Professor, Mathematics, Homestead*. B.S., M.S., Ph.D., University of Miami. Pan Am International Flight Academy Endowed Teaching Chair 2001-2003. The Mary Pond Family and Friends Endowed Teaching Chair. 3rd Year 2005-2007. At&T Endowed Teaching Chair. 3rd Year 2010-2012.
- COBO, SERGIO, *Associate Professor Sr., Computer Information Systems, North*. B.S., University of Illinois-Chicago; M.S., DePaul University; Ph.D., Illinois Institute of Technology.
- COFFMAN, KIMBERLY A., *Associate Professor, Social Science, Kendall*. B.A., M.A., M.S., University of North Florida; Ph.D., Florida International University.
- COLEMAN, CHERYL Y., *Instructor, Nursing, Medical*. M.B.A., Barry University; B.S., M.S.N., Florida International University.
- COMO, VINCENT, *Instructor, School of Justice, North*. B.A., City University of New York.
- CONROY, PATRICIA D., *Associate Professor Sr., Business Administration, Kendall*. B.S., M.S., University of Florida.
- CONSIDINE, LINDA M., *Assistant Professor, Fine & Apld Artmusic, NWSA*. B.A., Central Michigan University; B.A., Youngstown State University; M.M., Florida International University.
- COOMBS, CLAUDETTE J., *Assistant Professor, Nursing, Medical*. B.S., M.S., Florida International University; D.N.P., Nova Southeastern University.
- COOPER, LENNIE A., *Associate Professor Sr., Computer Information Systems, North*. B.S., Lane College; M.S., Purdue University; M.S., Florida International University.
- CORBIN, CHRISTOPHER B., *Associate Professor Sr., Computer Information Systems, Wolfson*. B.S., M.B.A., Florida International University.
- CORDERO, YANELY C., *Assistant Professor, College Prep, Homestead*. A.A., Miami Dade College; B.S., Barry University; M.S., Florida International University.
- CORNISH, ERIC, *Assistant Professor, School of Entertainment & Design Technologies, North*. A.A., B.F.A., M.F.A., Miami International University of Art & Design.
- CORO, FRANCISCO, *Associate Professor Sr., Physical Sciences, InterAmerican*. B.S., Universidad de la Habana; Ph.D., Moscow State University-Moscow, Lomonosov. Demi Manieri/ Miami Jai-Alair Endowed Teaching Chair. 2nd Year 2014-2016.
- CORONEL, ALINA M., *Associate Professor Sr., Mathematics, Kendall*. B.S., M.S., Florida International University. South Florida Educational Federal Credit Union Endowed Teaching Chair. 3rd Year 2009-2011. Charles A & Carrie Mastronardi Endowed Teaching Chair. 3rd Year 2013-2015.
- CORRALES, ANA C., *Associate Professor Sr., Business, Wolfson*. B.A., Swarthmore College; M.A., Johns Hopkins University. Friends of The School of Business Endowed Teaching Chair. 2nd Year 2014-2016.
- COTE, ELLYN M., *Professor, E.S.L./World Languages, InterAmerican*. B.S., Bowling Green State University; M.A., Barry University.
- COUPER, JAMES M., *Assistant Professor, E.S.L./World Languages, InterAmerican*. A.A., Miami Dade College; B.A., Florida International University; M.S., Nova Southeastern University.
- CREELMAN, PATTIA J., *Assistant Professor, E.A.P./Foreign Languages, North*. B.A., M.S., Florida International University.
- CRUZ, RODOLFO, *Instructor, Office Ocp-Cis-Hia, Hialeah*. B.S., M.B.A., M.S., Florida International University.
- CRUZ, SUZANNE, *Instructor, BS-Education-Soe Ecep Iac, InterAmerican*. Ed.S., University of Florida; B.A., M.S., Florida International University.
- CUETO, MARLENE I., *Associate Professor, English & Communication, North*. A.A., Miami Dade College; B.A., Florida International University; M.S., Nova Southeastern University.
- CUEVAS, JENNY D., *Professor, The Law Center, Wolfson*. B.A., J.D., Rutgers University. The Wachovia Endowed Teaching Chair. 3rd Year 2007-2009.
- CULVER, LEE C., *Professor, E.S.L./Foreign Languages, Wolfson*. B.A., Gettysburg College; Ed.S., Nova Southeastern University; M.A., Middlebury College.
- CULVER, LYLE D., *Professor, School of Architecture/Interior Design, Kendall*. A.B., Washington University In Saint Louis; M.Arch., University of Tennessee; M.A., University of St. Andrews; M.S., Ed.D., Florida International University. Dr. Robert H. McCabe Endowed Teaching Chair. 3rd Year 2010-2012.
- CUSIDO, YANET, *Assistant Professor, Physical Sciences, InterAmerican*. A.A., Miami Dade College; B.S., M.S., University of Florida; Ph.D., University of Miami.
- DAMAS, JUAN R., *Associate Professor Sr., School of Architecture/Interior Design, Kendall*. A.A., Miami Dade College; B.D.E.S., University of Florida; M.Arch., Virginia Polytechnic Institute & State University.
- DANGLADE, LESLYE D., *Assistant Professor, Medical Management Sciences, Medical*. A.A., Miami Dade College; A.S., C.U.N.Y.-Kingsborough Community College; B.S., Florida International University; M.S., Nova Southeastern University.
- DANZIG, GEOFFREY H., *Associate Professor, Business Mgt-Hialeah, Hialeah*. B.A., M.B.A., Rutgers University-Newark.
- DAVIS BRANTLEY, MINCA T., *Professor, Social Science, North*. B.S., University of Florida; M.S., Ph.D., Nova Southeastern University. Hank Meyer Endowed Teaching Chair. 2nd Year 2014-2016.
- DAVIS, AMY I., *Associate Professor Sr., Arts & Philosophy, Wolfson*. B.M.Ed., Florida Southern College; M.M., Arizona State University.

- DAWKINS, NORA J., *Associate Professor Sr., E.A.P./Foreign Languages, North.* B.P.S., Barry University; M.S., Nova Southeastern University. Dade Community Foundation Endowed Teaching Chair. 3rd Year 2011-2013.
- DE ANGELIS, VALERIE, *Associate Professor Sr., Social Science, North.* B.A., M.Ed., The College of New Jersey. Esther T. Colliflower, Rn Endowed Teaching Chair. 3rd Year 2010-2012.
- DE ARAZOZA, RAPHAEL C., *Associate Professor, Computer Information Systems, Kendall.* B.A., M.S., Florida International University.
- DE BENEDICTIS, MICHEL A., *Professor, English, Kendall.* B.A., University of California-Los Angeles; M.A., University of Wisconsin-Madison. Hamilton Bank Foundation Endowed Teaching Chair 2004-2006.
- DE FALLA, MARY J., *Professor, Communication, Arts & Philosophy, InterAmerican.* B.A., Skidmore College; M.S.Ed., University of Miami.
- DE KLER, RANDY, *Assistant Professor, Respiratory Care, Medical.* A.A.S., Delaware Technical and Community College Stanton-Wilmington; B.S., Wilmington College; M.S., Florida International University.
- DE LA ROSA, NELSON, *Associate Professor Sr., Mathematics, Kendall.* B.S., Instituto Superior Politecnico "Jose Antonio Echaverría"; Ed.S., M.S., Florida International University.
- DE LAMA LI, ANUBIS, *Assistant Professor, Mathematics, Homestead.* B.S., University of Miami; M.S., S.U.N.Y. at Stony Brook.
- DE LLANO MONTANO, JUAN A., *Assistant Professor, Bas In Health Science, Medical.* M.S., Barry University; Ph.D., Universidad de la Habana.
- DELESSY, NELLY A., *Assistant Professor, Computer Information Systems, North.* Ph.D., Florida Atlantic University.
- DELGADO, MISAEEL, *Instructor, Mathematics, Kendall.* B.S., M.S., Florida International University.
- DELINE, TIMOTHY E., *Professor, Library Science-N/C, North.* B.S.M., Minnesota State University-Mankato; M.A., University of South Florida; D.P.M., Dr. William Scholl College of Podiatric Medicine.
- DEMOS, THOMAS N., *Instructor, BAS- Film Television & Dig Pro, North.* B.S., M.F.A., University of Miami.
- DEOCHAND, SUHAS, *Assistant Professor, Radiologic Sciences, Medical.* B.S., M.S., City University.
- DI LIDDO, MICHAEL J., *Professor, Arts & Philosophy, Wolfson.* B.F.A., Florida Atlantic University; M.M., D.M., University of Miami. Honorable Jack Gordon Endowed Teaching Chair 2004-2006. The Dr. Ruth Wolkowsky Greenfield Endowed Teaching Chair in Music. 3rd Year 2009-2011.
- DIAZ, DAILENIS, *Instructor, Diagnostic Medical Sonography, Medical.* A.A., Miami Dade College.
- DIAZ, EVELYN, *Associate Professor Sr., Psychology, Hialeah.* B.A., University of Puerto Rico-Rio Piedras; M.A., New York University; M.S., Ph.D., Carlos Albizu University, Miami Campus.
- DIAZ, JASMINE, *Assistant Professor, Education, InterAmerican.* B.S., M.S., Ph.D., Barry University.
- DIAZ-CONSUL, CELESTE M., *Associate Professor, Mathematics, Wolfson.* M.S., Ph.D., Universidade Estadual de Campinas.
- DIAZ-CONSUL, JULIA M., *Associate Professor, Chemistry/Physics, Kendall.* B.S., Universidad de Oriente; M.S., Ph.D., Universidade Federal Do Rio Grande Do Sul.
- DICKSON, DIONNE C., *Assistant Professor, Chemistry/Physics, Kendall.* B.S., Ph.D., Florida International University.
- DOMINGUEZ, ALVIO, *Professor, Mathematics, Wolfson.* B.A., Universidad de Oriente; M.S., Florida International University; Ph.D., University of Miami. The Miami Dade College Endowed Teaching Chair in Engineering, Mathematics, and Sciences. 3rd Year 2008-2010.
- DONIS, JOSE A., *Associate Professor, Fine & Apld-Arts, Hialeah.* B.A., M.M., Florida State University.
- DOUYON, MARCAISSE, *Associate Professor Sr., Arts & Philosophy, North.* A.A., Miami Dade College; B.M., Jackson State University; M.S., Indiana State University.
- DOWDING, JANET M., *Assistant Professor, Biology, Health & Wellness, Kendall.* B.S., Northern Illinois University; M.S., Illinois State University; M.S., Ph.D., University of Central Florida.
- DUASSO, MANUEL, *Associate Professor Sr., English, Kendall.* B.A., B.S., M.S., Florida International University.
- DUENAS, JAVIER, *Assistant Professor, Developmental Education, North.* B.A., M.A., Florida International University.
- DULCIO, PATRICK R., *Instructor, Business, Kendall.* M.B.A., Nova Southeastern University.
- DUNDAS, CHRISTINE A., *Assistant Professor, Medical Management Sciences, Medical.* A.A., A.S., Broward Community College; B.A., Florida Atlantic University; M.S., Florida State University.
- DURAND, OSWALD P., *Instructor, College Prep-Math, Hialeah.* B.S., Howard University; M.A.E., Cambridge College.
- EBITZ, GERARD L., *Associate Professor Sr., Fine & Apld Artdance, NWSA.* B.F.A., University of Florida.
- ECCLES, DENISE R., *Assistant Professor, Nursing, Medical.* A.S., Miami Dade College; B.S., Barry University; M.S.N., D.H.A., University of Phoenix.
- EL KHOLY, AMIRA E., *Instructor, Nursing, Medical.* B.S.N., M.S.N., University of Miami.
- ELLIOTT, DONA L., *Instructor, Nursing, Medical.* A.A., A.S., Miami Dade College; M.S.N., Barry University; B.S., M.S., Florida International University.
- ELLIS, JOSHUA D., *Assistant Professor, BAS- Film Television & Dig Pro, North.* B.A., Central Washington University; M.F.A., Florida State University.
- ELSEA, FRANKLIN C., *Associate Professor Sr., E.S.L./World Languages, InterAmerican.* B.A., Columbia University; M.S., Florida International University.
- EPSTEIN GARCIA, SUSAN H., *Professor, Fine & Apld Artmusic, NWSA.* B.M., Berklee College of Music; M.M., Ph.D., Boston College. Mary Pond Family and Friends Endowed Teaching Chair in Memory of Karl S.E. Pond. 1st Year 2015-2017.
- ESCARPIO, RAUL, *Associate Professor, BS-Education-Soe Tep N/C, North.* B.S., Nova Southeastern University; M.S., University of Miami; Ed.D., Florida International University.
- ESPANA, LOURDES M., *Associate Professor Sr., Mathematics, North.* A.A., Miami Dade College; B.S., M.S., Florida International University. The Wachovia Endowed Teaching Chair. 3rd Year 2006-2008. Rotary Club of Miami Endowed Teaching Chair. 3rd Year 2011-2013.
- ESPINAL, YANILDA R., *Associate Professor Sr., Mathematics, Kendall.* A.A., Miami Dade College; B.S., M.S., University of Miami.
- ESPINOSA, JESSICA, *Assistant Professor, BS-Education-Soe Ecep Iac, InterAmerican.* B.S., M.S., Florida International University; Ph.D., Barry University.
- ETIENNE, MARIE O., *Professor, Nursing, Medical.* B.S.N., M.S.N., Florida International University; D.N.P., University of Miami. The Stanley G. Tate & Family Endowed Teaching Chair. 3rd Year 2007-2009.
- FALCO-LESHIN, JOANN M., *Professor, English & Communication, Wolfson.* B.A., M.A., Barry University; Ed.D., University of Miami. The Blockbuster Entertainment Corporation Endowed Teaching Chair 1994-1996.
- FALLON, MARIA L., *Associate Professor Sr., World Languages, Kendall.* B.A., M.S., Florida International University.
- FAOYE, OLUBISI, *Associate Professor, Dietetic Technology & Nutrition, Wolfson.* M.S., New York University.
- FATEYEVA, NATALYA, *Associate Professor Sr., World Languages, Kendall.* M.S., Nova Southeastern University; B.A., M.S., Florida International University.
- FENNELL, LAUREL E., *Associate Professor, Library Science-N/C, North.* B.S., Barry University; M.S., Florida State University.
- FERNANDEZ, CARLOS G., *Associate Professor Sr., Physical Sciences, InterAmerican.* B.S., Ph.D., University of Miami.
- FERNANDEZ, CLEMENTE V., *Professor, Biology, Health & Wellness, North.* B.A., Universidad de la Habana; Ph.D., The Hungarian Committee of Scientific Qualifications.
- FERNANDEZ, ELISA B., *Assistant Professor, Business, InterAmerican.* B.S., M.S.T.X., Florida International University.
- FERNANDEZ, IRASEMA L., *Professor, E.A.P./ Foreign Languages, North.* A.A., Miami Dade College; B.S., Florida International University; M.A., University of Florida.
- FERNANDEZ, ROSA M., *Associate Professor Sr., Chemistry/Physics/Earth Science, North.* A.A., Miami Dade College; B.S., University of Miami; M.S., Florida Atlantic University.
- FERNANDEZ, TUSHNELDA C., *Associate Professor Sr., Computer Information Systems, Kendall.* A.A., Miami Dade College; B.S., Florida International University; M.S., Barry University.
- FERNANDEZ, VICTOR M., *Instructor, Aviation, Homestead.* B.S., Florida International University.
- FERNANDEZ-STERLING, RITA MARIA, *Assistant Professor, English, Kendall.* A.A., Miami International University of Art & Design; B.A., St. Thomas University; M.A., Barry University.
- FERRELL, THOMAS A., *Associate Professor, College Prep, Homestead.* B.A., Columbia University; M.S., University of Miami.
- FERRER, LAZARA, *Assistant Professor, Mathematics, North.* M.S.E., Kiev Polytechnic Institute In Ukraine.
- FINK, CHARLES K., *Professor, Arts & Philosophy, Kendall.* B.A., Florida International University; Ph.D., University of Miami.
- FINNERAN, DAVID W., *Assistant Professor, Natural Science, Wolfson.* B.S., M.S., University of Delaware; Ph.D., Texas A & M University.
- FINOCCHIARO, JOSEPH R., *Instructor, Funeral Service Education, North.* A.A., A.S., St. Petersburg Junior College; B.M., M.M., University of South Florida.
- FLEISCHMAN, RICHARD A., *Associate Professor Sr., Fine & Apld Artmusic, NWSA.* B.M., M.M., The Juilliard School.
- FORAN, ROBERT J., *Professor, Business, Wolfson.* A.A., Chipola Junior College; B.A., University of Florida; M.A., University of Essex; Ed.D., Florida International University.
- FORDE, FRANCES M., *Instructor, Nursing, Medical.* A.S., Miami Dade College; B.S., M.S.N., Barry University.
- FRADOS, ANDREW B., *Associate Professor Sr., Nursing, Medical.* B.S.A., University of Arizona; B.S.N., Florida Atlantic University; M.S., Nova Southeastern University; M.S.N., Florida International University; D.N.P., Chatham

- University.
- FRANK, PRADEL R., *Professor, E.S.L./Foreign Languages, Wolfson*. B.A., M.S., Florida International University; Ph.D., Florida Atlantic University.
- FRAZIER, JOHN F., *Assistant Professor, Arts & Philosophy, Kendall*. B.A., Colgate University; M.A., Indiana University-Bloomington.
- FREEMAN, MARIA A., *Instructor, Hlth Ocp-Generc Nurse-H/C, Medical*. A.S., Miami Dade College; B.S.N., M.S.N., University of Phoenix.
- FRESQUET, ALENA, *Instructor, Arts & Philosophy, North*. B.F.A., University of Miami; M.F.A., Vermont College of Fine Arts.
- FROLICH, LARRY M., *Associate Professor, Natural Sciences, Wolfson*. B.A., University of California-Berkeley; Ph.D., University of Chicago.
- FRYDMAN, MARTA S., *Associate Professor, Library Science-W/C, Wolfson*. B.L.S.T., Barry University; M.A., University of South Florida.
- FUNDORA, RAQUEL M., *Associate Professor, E.S.L./World Languages, InterAmerican*. B.A., Duke University; M.S.Ed., University of Miami.
- GABB, GEORGE M., *Assistant Professor, Computer Information Systems, North*. A.A., Broward Community College; B.S., M.S., J.D., Nova Southeastern University.
- GACH, LAUREN, *Professor, Education, Kendall*. M.S., Florida State University; B.S., Ed.D., Florida International University. Jeanne-Marie and Dante Fascell Endowed Teaching. 3rd Year 2012-2014.
- GALEAS BONILLA, ILLICH V., *Assistant Professor, Physician Assistant, Medical*. M.D., Universidad Nacional Autonomo de Honduras.
- GANCEDO, ALEX, *Professor, Social Sciences, Hialeab*. A.A., Miami Dade College; B.S., J.D., Florida State University. The Peters Maiko Jr/ Miami Jai Alai Endowed Teaching Chair. 3rd Year 2009-2011. Honorable Jack Gordon Endowed Teaching Chair. 3rd Year 2013-2015.
- GARCÉS MEJIA, DADILLA, *Assistant Professor, Physician Assistant, Medical*. B.S., Universidad Jose Maria Vargas; M.S., M.D., Universidad del Zulia.
- GARCIA JR., PEDRO I., *Assistant Professor, Chemistry/Physics/Earth Science, North*. B.A., M.S., Florida International University.
- GARCIA LARA, EDGAR, *Assistant Professor, Nursing, Medical*. B.S.N., M.S.N., University of Miami; D.N.P., University of Alabama.
- GARCIA, ADRIAN M., *Instructor, BAS- Film Television & Dig Pro, North*. B.S.C., M.F.A., University of Miami.
- GARCIA, ARLEN J., *Associate Professor Sr, Student Services, North*. B.A., M.S., Ph.D., Florida International University.
- GARCIA, FELIX L., *Professor, Mathematics, North*. M.S., Ph.D., University of Miami.
- GARCIA, JUDITH, *Associate Professor, World Languages, Homestead*. B.A., University of The Pacific; M.A., University of California-Davis. The Dr. Robert H. McCabe Endowed Teaching Chair 1998-2000.
- GARCIA, MANOLO, *Professor, Natural & Social Sciencs, InterAmerican*. A.A., Miami Dade College; B.A., Florida International University; M.S., Nova Southeastern University; D.Psy., Carlos Albizu University, Miami Campus.
- GARCIA, MARIA A., *Associate Professor Sr, Communications, Hialeab*. B.S.E.E., M.S., Florida International University.
- GARCIA, SERGIO R., *Professor, Mathematics, InterAmerican*. A.A., Miami Dade College; B.E.E., M.S., Georgia Institute of Technology.
- GARMAN, SARAH, *Associate Professor Sr, Arts & Philosophy, North*. B.S., M.A., Florida State University. Andrew Blank Endowed Teaching Chair 2004-2006. Dr. Stanley Sutnick Endowed Teaching Chair. 3rd Year 2013-2015.
- GARRIGA, IRMA J., *Instructor, Hlth Ocp-Generc Nurse-H/C, Medical*. A.A., A.S., Miami Dade College; B.S.N., M.S.N., Barry University.
- GASIOR, JAMES S., *Associate Professor, Fine & Apld Artmusic, NWSA*. B.M., M.M., University of Miami.
- GEHY-ANDRE, PASCALE, *Assistant Professor, Physician Assistant, Medical*. B.S., C.U.N.Y. York College; M.P.A.S., University of Nebraska Medical Center.
- GEORGE, PAUL S., *Professor, Social Science, Wolfson*. B.A., University of Miami; M.A., Ph.D., Florida State University. The Arthur Hertz Endowed Teaching Chair 1997-1999.
- GERKEN, DONNA, *Professor, Mathematics, Kendall*. B.S., M.S., University of Miami.
- GERSHFELD, ALFRED, *Associate Professor Sr, Fine & Apld Artmusic, NWSA*. B.S., Gnesiny State Musical Pedagogical Institute; M.M., G. Muzicescu State Arts Institute.
- GIBERT, JORGE C., *Assistant Professor, Natural Science, Wolfson*. B.S., Universidad de Oriente; M.S., Ph.D., Florida International University.
- GIL, CARLOS I., *Associate Professor, Mathematics, North*. A.A., Miami Dade College; B.S., M.S., University of Miami.
- GILLES, DAPHNEE R., *Associate Professor Sr, E.S.L./Foreign Languages, Wolfson*. B.S., University of Florida; M.S., Florida International University.
- GINES-CANDELARIA, EDWIN A., *Professor, Natural Sciences, Wolfson*. B.S., University of Puerto Rico-Rio Piedras; M.A., Ph.D., University of Texas-Austin. The Miami Dade College Endowed Teaching Chair. 3rd Year 2007-2009.
- GITTINGS-WHEELER, TAURIE D., *Instructor, Arts & Science, InterAmerican*. B.S., Florida A. & M. University; M.S., Nova Southeastern University.
- GLENN, EDWARD J., *Associate Professor Sr, English & Communication, North*. B.A., M.A., Florida International University.
- GLUSKOTER, CARA R., *Associate Professor, Social Science, North*. B.A., Arizona State University; M.A., University of Miami.
- GOENAGA, NIURKA, *Instructor, Mathematics, Homestead*. B.A., Washington College; M.S., Florida Institute of Technology.
- GOICOECHEA-PAPPAS, MARTA E., *Professor, Chemistry/Physics, Kendall*. A.A., Miami Dade College; B.S., Florida International University; D.A., University of Miami.
- GOMEZ, VICTOR J., *Assistant Professor, Arts & Philosophy, North*. B.F.A., Temple University; M.F.A., C.U.N.Y.-Hunter College.
- GONZALEZ LLANOS, MARIA D., *Instructor, Social Science, Wolfson*. B.A., University of Central Florida; M.A., St. John's University.
- GONZALEZ SR., BELARMINO, *Professor, Mathematics, Wolfson*. B.S., Universidad de Oriente; Ph.D., Academy of Sciences of The Azerbaijan.
- GONZALEZ, AGUSTIN A., *Instructor, School of Entertainment & Design Technologies, North*. B.A., George Washington University; M.E.A., University of Southern California.
- GONZALEZ, ARIEL P., *Associate Professor Sr, English & Communication, Wolfson*. A.A., Miami Dade College; B.A., University of Florida; M.A., Barry University.
- GONZALEZ, BELARMINO, *Associate Professor, Mathematics, InterAmerican*. B.S., M.S., Florida International University.
- GONZALEZ, CARLOS, *Associate Professor Sr, English, Kendall*. B.S., Florida International University; M.A., University of Miami. Miami Dade College Alumni Association Endowed Teaching Chair 2004-2006.
- GONZALEZ, DAVID R., *Assistant Professor, Massage Therapy, Medical*. B.S., Florida International University; M.S., California University of Pennsylvania.
- GONZALEZ, FRANCISCO J., *Instructor, Emergency Medical Services, Medical*. A.S., Broward Community College; B.A., M.S., St. Thomas University.
- GONZALEZ, LOURDES M., *Professor, Mathematics, Kendall*. B.S., Jozsef Attila Univ.; Ph.D., University of Miskolc.
- GONZALEZ, SERGIO, *Associate Professor Sr, Fine & Apld-Arts, Hialeab*. M.M., Ph.D., University of Miami.
- GOODWIN, WENDY J., *Associate Professor, College Prep, Homestead*. A.A., Miami Dade College; B.A., Florida International University; M.A., University of North Carolina-Wilmington.
- GORDON, JURIST M., *Assistant Professor, Biology, Health, Wellness, North*. B.S., Florida International University; M.S., University of West Indies.
- GRANT-MURRAY, MICHELLE, *Assistant Professor, Music, Theater & Dance, Kendall*. B.S., Jacksonville University; M.A., Florida International University.
- GRAZIOTTI, ANN L., *Instructor, Nursing, Medical*. B.S.N., Northern Michigan University; M.S.N., University of Miami.
- GRECO, EUGENE, *Professor, Music, Kendall*. B.A., Union College; M.M., Ithaca College; M.S., S.U.N.Y. at Albany; Ph.D., University of Miami. The Spillis Candela & Partners Endowed Teaching Chair. 3rd Year 2009-2011.
- GREENBERG, LIZA A., *Associate Professor, College Prep, InterAmerican*. B.A., Southern Illinois University-Carbondale; M.A., University of New Mexico.
- GRIFFITHS, ROBERT E., *Associate Professor, Mathematics, Kendall*. B.S., M.A., University of Miami.
- GRIMES, VELLISSE P., *Associate Professor Sr, Social Science, Kendall*. B.S., Florida State University; M.S., Nova Southeastern University.
- GUERRERO, MARIA A., *Professor, Biological Sci-Arts & Sci, InterAmerican*. B.S., Universidad de Guayaquil; M.S., Ph.D., Florida International University.
- GUILLEN, GUILLERMO J., *Assistant Professor, Mathematics, Wolfson*. B.S., M.S., Florida International University.
- GUNTIN JR., JOSE A., *Associate Professor, Social Science, Kendall*. B.A., M.S., Florida International University.
- GUTIERREZ, CARIDAD I., *Associate Professor, Health Occupation/Histotechnology, Medical*. A.A., A.S., Miami Dade College; B.S., Barry University; M.A., University of Phoenix.
- GUZMAN, ANA M., *Associate Professor, BS-Engineering W/C, Wolfson*. B.S., Southern Methodist University; M.S., Ph.D., Florida International University.
- HAMMACK, BONNIE, *Professor, Nursing, Medical*. A.A., Broward Community College; B.S.N., M.S.N., University of Florida. Robert Russell Memorial Foundation Endowed Teaching Chair 2001-2003. The Jane and Van Myers Endowed Teaching Chair. 3rd Year 2005-2007.
- HAMMOND, PEGGY, *Assistant Professor, Nursing, Medical*. A.S., Miami Dade College; B.S., University of Miami; M.S., Barry University.
- HANNA, STEPHANIE, *Professor, Nursing, Medical*. B.S.N., M.S.N., Ph.D., Barry University.
- HARRIS, KISKA J., *Instructor, Funeral Service Education, North*. A.S., Miami Dade College; B.S., Florida A. & M. University; M.S., Nova Southeastern University.
- HARRIS, PATTI K., *Assistant Professor, Social Science, North*. B.A., M.H.R., University of Oklahoma-Norman.

- HART, GEORGINA C., *Professor, Chemistry/Physics, Kendall*. B.S., Inter American University of Puerto Rico-San German Campus; Ph.D., University of Miami.
- HARTMAN, SHERYL M., *Professor, Social Science, North*. B.A., S.U.N.Y. at Stony Brook; M.A., S.U.N.Y. College at Plattsburgh; Ph.D., University of Miami. The Ruth B. & Jack Kasewitz Endowed Teaching Chair 1995-1997. The Peter Masiko Endowed Teaching Chair 2000-2002. The Dr. Eduardo Padron Endowed Teaching Chair. 3rd year 2006-2008. Freedom Tower Endowed Teaching Chair. 3rd Year 2012-2014.
- HAWKINS, KAREN H., *Professor, Business Administration, Kendall*. A.A., B.S., M.B.A., Florida State University; Ph.D., University of Miami. Friends of Kendall Campus School of Business Endowed Teaching Chair 2001-2003.
- HENRIQUEZ, FEDERICO A., *Assistant Professor, Nursing, Medical*. B.S., M.S., C.U.N.Y.-Herbert H. Lehman College.
- HEREDIA, DAVID, *Associate Professor, College Prep, Kendall*. B.S., M.S., Florida International University; Ed.D., Nova Southeastern University.
- HERNANDEZ, ANA B., *Associate Professor, English & Communication, Wolfson*. A.A., Miami Dade College; B.S., M.S., Florida State University. The Kiwanis of Little Havana Foundation Endowed Teaching Chair. 3rd Year 2006-2008.
- HERNANDEZ, ERIC O., *Instructor, Mathematics, Kendall*. B.S., Simon Bolivar University; Ed.S., M.S., Florida International University.
- HESS, JEFFREY S., *Associate Professor Sr., Fine & Apld Art Theatre, NWSA*. B.M., M.M., Butler University.
- HETTICH, MICHAEL F., *Professor, English & Communication, Wolfson*. B.A., Hobart & William Smith Colleges; M.A., University of Denver; Ph.D., University of Miami. The Mac Smith Endowed Teaching Chair 1996-1998.
- HIGGS, VOLTRICK W., *Instructor, Communication, Arts & Philosophy, InterAmerican*. A.A., Broward Community College; B.A., M.A., Florida Atlantic University.
- HIPPLE, DENNIS L., *Professor, Chemistry/Physics, Kendall*. B.S., Kent State University; M.S., Miami University-Oxford.
- HOLLINGSWORTH, HAL, *Assistant Professor, Mathematics/Science, Homestead*. B.S., Ph.D., University of Leeds.
- HOLLOMAN, TORRIE L., *Instructor, Nursing, Medical*. A.S., University of Florida; B.S.N., Florida State University; M.S.N., Florida International University.
- HORTENSI, JOSE L., *Associate Professor Sr., Business, Homestead*. B.Acc., M.Acc., Florida International University.
- HORWITZ, CARYN B., *Associate Professor, BAS-Intracplnry-Public Safety, North*. B.A., University of Pennsylvania; M.A., S.U.N.Y. at Albany; M.S., University of Cambridge; Ph.D., University of Delaware.
- HOSPITAL, MARIA C., *Professor, English, Kendall*. A.A., B.A., M.A., University of Florida. The Gerrits Construction Company Endowed Teaching Chair 1996-1998. The Northern Trust Bank of Florida Endowed Teaching Chair 2003-2005.
- HUDSON HOLNESS, DAVIA T., *Associate Professor Sr., Natural Science, Wolfson*. B.S., University of West Indies; Ph.D., Florida International University.
- IBARRA, ALICIA Y., *Assistant Professor, Office Ocp-Cis-Hia, Hialeab*. B.S., Florida International University; M.S., Nova Southeastern University.
- ILES, DELMA A., *Instructor, Arts & Philosophy, Wolfson*. M.F.A., New York University.
- INSUA-AUAIS, MAYTE, *Professor, Social Science, North*. B.A., University of Miami; M.S., D.Psy., Carlos Albizu University, Miami Campus. Espirito Santo Bank Endowed Teaching Chair. 3rd Year 2012-2014.
- ISAAC, PAULETTE V., *Instructor, Health Sciences and Related Studies, Medical*. A.A., Miami Dade College; B.H.S., M.H.S., Nova Southeastern University.
- ISERN, KELLY J., *Associate Professor, E.A.P./Foreign Languages, North*. B.A., University of Alabama - Birmingham; M.S., Auburn University.
- ITTAH, AVNER, *Assistant Professor, Biology, Health & Wellness, Kendall*. Ph.D., Florida International University.
- JAMIL, SABRINA B., *Associate Professor, Arts & Philosophy, Wolfson*. B.A., M.A., Florida State University.
- JOFRE, MARIA W., *Associate Professor, E.S.L./Foreign Languages, Wolfson*. A.A., Miami Dade College; B.A., Florida State University; M.A., Bowling Green State University.
- JOHNSON, STEPHEN R., *Assistant Professor, World Languages, Kendall*. B.A., Jacksonville State University; M.A., University of Alabama; Ph.D., Florida Atlantic University.
- JORGE, MARILYN, *Associate Professor Sr., E.S.L./World Languages, InterAmerican*. B.S., M.F.A., University of Miami; M.A., New York University.
- JORGE, ROBERT M., *Assistant Professor, Emergency Medical Services, Medical*. A.S., Miami Dade College.
- KALAM, ZULFIKAR D., *Associate Professor, School of Justice, North*. M.B.A., M.S., Nova Southeastern University; Ph.D., Lynn University.
- KARAYALCIN, ECE F., *Professor, School of Entertainment & Design Technologies, North*. B.A., C.U.N.Y.-Herbert H. Lehman College; M.A., University of Miami. The Southeast Banking Corporation Foundation Endowed Teaching Chair 2003-2005. Women in Business Endowed Teaching Chair. 3rd Year 2011-2013.
- KASS, SUSAN H., *Professor, Dental Hygiene, Medical*. B.S., University of North Carolina; M.Ed., University of Miami; Ed.D., Florida International University. The Robert Russell Memorial Foundation Endowed Teaching Chair 1992-1994. The John O'Neil, Jr. Endowed Teaching Chair 1997-1999. The John O'Neil Jr. Endowed Teaching Chair. 3rd Year 2006-2008.
- KEANE, ELIANE, *Professor, Mathematics, North*. Ph.D., New York University.
- KEELER, DEBORAH J., *Professor, Library Science-Hial, Hialeab*. B.A., University of North Carolina-Greensboro; M.S., Florida State University; M.S., Simmons College; Ed.D., Florida International University.
- KENNEDY-EVERETT, KELLY A., *Professor, Communications, Hialeab*. A.A., Miami Dade College; B.A., Florida International University; M.S., Nova Southeastern University; Ed.D., University of Phoenix. Peter Masiko, Jr./Miami Jai Alai Endowed Teaching Chair 2001-2003.
- KENNY, EMILIO A., *Professor, Biology, Health & Wellness, North*. B.S., Universidad de Panama; M.S., Northeastern University; Ph.D., University of Puerto Rico-Rio Piedras.
- KERR, PAULINE A., *Associate Professor Sr., Nursing, Medical*. A.A., A.S., Miami Dade College; B.S.N., M.S.N., Florida International University.
- KINNAIRD, EUGENE C., *Assistant Professor, Computer Information Systems, Wolfson*. B.A., Southern Methodist University; M.S., Florida International University.
- KNAPP, MORRIS, *Professor, Business Administration, Kendall*. B.A., Yale University; M.B.A., Columbia University; M.A., University of Pennsylvania; D.B.A., Nova Southeastern University. The Republic National Bank of Miami Endowed Teaching Chair. 3rd Year 2006-2008.
- KNEPPER, MARIE L., *Associate Professor, English & Communications, Kendall*. B.A., University of Denver; M.A., University of Illinois-Chicago.
- KOFFLER, DOROTHY M., *Instructor, BS-Education-Soe Ecep Iac, InterAmerican*. B.S., West Chester University of Pennsylvania; M.S., University of Miami.
- KOLESAR, ROSALIE M., *Associate Professor Sr., E.S.L./World Languages, InterAmerican*. B.S., M.A., Penn State University.
- KOZLOSKI, WALTER H., *Associate Professor Sr., E.A.P./Foreign Languages, North*. B.A., Lehigh University; Ed.M., Temple University.
- KRECH, CAROL D., *Professor, E.S.L./Foreign Languages, Wolfson*. B.A., Eckerd College; M.S., University of Miami; M.A., Florida International University.
- KREIDER, ANTHONY J., *Professor, English, Homestead*. M.A., Ph.D., University of Miami.
- KRONEN, STEVE, *Associate Professor, Library Science-West/Campus, West*. M.A., University of South Florida; M.F.A., Warren Wilson College.
- KWIAT, DAVID M., *Professor, Fine & Apld Art Theatre, NWSA*. B.A., University of Minnesota-Duluth; M.F.A., Florida State University. The Peter Masiko/Miami Jai Alai Endowed Teaching Chair 1996-1998.
- LABISTE, LUIS A., *Associate Professor Sr., Biology, Health & Wellness, North*. Ph.D., Universidad Central del Este.
- LAGUE, VICTORIA C., *Associate Professor Sr., English, Kendall*. A.A., Community College of Rhode Island; B.A., Brown University; M.A., Rhode Island College. The Rosenberg, McIntosh, Leigh Endowed Teaching Chair 2002-2004.
- LAGUERRE, JOSELLE L., *Professor, English, Homestead*. B.A., Atlantic Union College; M.A., Andrews University.
- LAMAZARES, IVONNE M., *Associate Professor Sr., Communications, Hialeab*. B.A., Barry University; M.S., Florida International University; Ed.D., University of Miami. The Janet Reno Endowed Teaching Chair 1995-1997.
- LAMBERT, DONALD L., *Instructor, Fine & Apld Visual Arts, NWSA*. B.F.A., University of Cincinnati; M.F.A., School of The Art Institute of Chicago.
- LAMMEY, MELISSA B., *Associate Professor Sr., Letters-Arts/Philosophy, Hialeab*. B.A., University of Mississippi; M.A., Ph.D., Florida State University.
- LARES, HENRY E., *Associate Professor, School of Architecture/Interior Design, North*. B.A., Florida International University; M.A., Texas A & M University.
- LARIN, JORGE, *Assistant Professor, Veterinary Technology, Medical*. D.V.M., Ross University.
- LASSITER, PATRICIA F., *Professor, Health Sciences and Related Studies, Medical*. B.F.A., Michigan State University; M.B.A., St. Thomas University; Ed.S., University of Miami; Ph.D., Barry University.
- LAWRENCE, LASHAWN R., *Instructor, Medical Management Sciences, Medical*. A.S., Miami Dade College; B.P.S., Barry University; M.S., Strayer University.
- LEAL, ADRIA B., *Associate Professor, Library Science-W/C, Wolfson*. B.A., St. Thomas University; M.A., University of South Florida.

- LEBRON, DAVID, *Instructor, Computer Information Systems, Wolfson*. B.S., University of The Sacred Heart (Univ. del Sagrado Corazon); M.S., Nova Southeastern University.
- LEE, JOAN M., *Assistant Professor, Chemistry/Physics, Kendall*. B.S., M.S., University of West Indies.
- LEE, MICHELLE R., *Instructor, Respiratory Care, Medical*. B.S., Northwest Arkansas Community College; M.P.S., Canisius College.
- LEE, MISSIA S., *Instructor, Hltb Ocp-Generice Nurse-H/C, Medical*. B.S.N., M.S.N., University of Phoenix.
- LEFF, BENNETT, *Associate Professor, E.S.L./World Languages, InterAmerican*. A.A., San Francisco Community College; B.A., San Francisco State University; M.S., Florida International University.
- LEIBA, ALWYN J., *Assistant Professor, Dental Hygiene, Medical*. A.A., A.S., Miami Dade College; B.A.S., St. Petersburg Junior College; M.B.A., American Intercontinental University; Ph.D.E., Northcentral University.
- LEITCH, PATRICK, *Assistant Professor, English, Kendall*. B.A., Olivet College; M.A., Middlebury College.
- LENAGHAN, MICHAEL J., *Professor, Social Science, North*. B.S.E.S., M.A., Georgetown University; Ed.D., Virginia Polytechnic Institute & State University. The Anastasios and Maria Kyriakides Endowed Teaching Chair 2002-2004. The Mardee Jenrette Endowed Teaching Chair. 3rd Year 2006-2008.
- LENEL, ALBERT W., *Associate Professor, Philosophy, InterAmerican*. B.A., Syracuse University; M.A., University of Miami.
- LEON, ALFREDO J., *Instructor, Biology, Health & Wellness, North*. A.A., Broward Community College; B.A., Florida International University; B.S., M.S., University of Puerto Rico-Rio Piedras.
- LEY, JAMES J., *Associate Professor Sr., Mathematics/Science, Homestead*. M.S.Ed., Canisius College; Ph.D., Florida International University.
- LIANG, KAIYANG, *Professor, Computer Information Systems, Kendall*. M.S., Ph.D., University of Miami.
- LICHTMAN, ERIC T., *Professor, English, Kendall*. B.A., M.A.T., University of California-Berkeley. The Mac Smith Chair in Environmental Ethics Endowed Teaching Chair 2002-2004.
- LICHTMAN, SUSAN G., *Instructor, English, Homestead*. B.A., Clark University; M.A., Michigan State University.
- LIU, NANCY H., *Associate Professor Sr., Mathematics, Kendall*. A.A., Miami Dade College; B.S., M.S., Florida International University.
- LIVINSKI, VICTORIA, *Instructor, Mathematics, Kendall*. B.S.B.A., Coastal Carolina University; M.S., University of North Carolina-Wilmington.
- LOCKSHIN, LINDA F., *Associate Professor Sr., Nursing, Medical*. B.S.N., M.S.N., Florida International University.
- LOFTUS, JACQUELYN C., *Assistant Professor, Arts & Science, InterAmerican*. B.A., M.A., Florida State University.
- LOMBARD, TIINA A., *Associate Professor Sr., English & Communication, North*. B.A., M.A., Florida Atlantic University.
- LONDON, PETER S., *Professor, Fine & Apld Artdance, NWSA*. D.P., The Juilliard School; B.F.A., University of Florida.
- LOPES DE MELLO, MARCIA M., *Associate Professor Sr., School of Architecture/Interior Design, Kendall*. B.Arch., Universidade MacKenzie; M.Arch., University of Miami.
- LOPEZ, CARMEN, *Assistant Professor, Social Science, Wolfson*. B.H.I.S., M.H.I.S., Florida International University; Ph.D., University of Miami.
- LOPEZ, FELIX A., *Assistant Professor, Computer Information Systems, InterAmerican*. B.B.A., M.S., Florida International University.
- LOPEZ, MARTA E., *Assistant Professor, Vc-Hltb Ocp-Med Asstg, Medical*. M.D., Universidad Central del Este.
- LOPEZ-BAENA, AIMEE, *Instructor, Nursing, Medical*. A.A., Miami Dade College; B.S.N., University of Miami; M.S.N., Walden University.
- LOPEZ-CALLEJA, JOSE A., *Associate Professor, Business, Kendall*. B.S., University of Miami; M.A., Florida International University.
- LORENZO, DAGOBERTO, *Associate Professor, Developmental Education, North*. A.A., Miami Dade College; B.A., Florida International University; M.S., Nova Southeastern University.
- LOUBEAU, MARIE M., *Assistant Professor, BAS-Supervision & Mgmt-K/C, Kendall*. M.B.A., Nova Southeastern University; D.B.A., University of Phoenix.
- LOVE DUBE, LINDA L., *Assistant Professor, Mathematics, Wolfson*. B.S., Louisiana State University and A. & M.; M.S., Purdue University.
- LUERA, JON-CARLO, *Instructor, Funeral Service Education, North*. B.S., University of Texas San Antonio; M.A.E., Grand Canyon University; M.S., University of Florida.
- LUIS, AGDANAMAI, *Instructor, Hltb Ocp-Nucl Med Tech-Htb, Medical*. B.S., Barry University; M.S.Ed., Keiser University-Melbourne.
- LUJAN, YVETTE L., *Associate Professor Sr., Communication, Arts & Philosophy, InterAmerican*. B.A., M.A., Emerson College.
- LUND, AMY K., *Professor, Arts & Philosophy, Kendall*. B.A., Trinity University; M.A., Ph.D., University of New Mexico.
- MADAN, NILIA M., *Professor, Medical Laboratory Technology, Medical*. A.A., Miami Dade College; M.B.A., Nova Southeastern University; B.S., Ed.D., Florida International University.
- MADISON, MARISA N., *Assistant Professor, Biology, Homestead*. B.S., East Texas Baptist University; Ph.D., Meharry Medical College.
- MAGELLAN, MARC G., *Instructor, Music, Kendall*. B.M., University of Miami; M.M., Florida State University.
- MAGELLAN, MARTA E., *Professor, English, Kendall*. A.A., Miami Dade College; B.A., M.A., University of Florida. Bonnie McCabe Endowed Teaching Chair 2001-2003. The Blockbuster Entertainment Endowed Teaching Chair. 3rd Year 2005-2007. Manuel Medina Endowed Teaching Chair. 3rd Year 2012-2014.
- MAHON, DAVID M., *Instructor, Business, InterAmerican*. B.S., Cornell University; M.A., Florida International University.
- MAILLOUX II, LAWRENCE J., *Assistant Professor, Chemistry/Physics, Kendall*. B.S., M.S., Michigan Technological University.
- MALONEY, JOHN J., *Assistant Professor, CIS, Homestead*. M.I.T., American Intercontinental University.
- MANSILLA, JAMES J., *Assistant Professor, Biology, Health & Wellness, North*. A.A., Miami Dade College; B.A., University of Toledo; M.S., United States Sports Academy.
- MARI, MARIA C., *Professor, Business Administration, Kendall*. A.A., Miami Dade College; B.A., B.B.A., M.S., Florida International University. The Carlos Arboleya/Barnett Bank Endowed Teaching Chair 1995-1997. John A. and Elizabeth Rode Endowed Teaching Chair 2004-2006. The Louis Wolfson III Endowed Teaching Chair. 3rd Year 2008-2010. Juan A. Galan, Jr. Endowed Teaching Chair in Entrepreneurship. 3rd Year 2012-2014.
- MARRERO, MARITZA, *Associate Professor, Hospitality Management, Kendall*. A.A., Broward Community College; B.S., M.S., Florida International University.
- MARTI, NOEL, *Assistant Professor, Emergency Medical Services, Medical*. A.S., Miami Dade College; B.P.A., M.P.A., Barry University.
- MARTINEZ, JUAN C., *Assistant Professor, Computer Information Systems, Wolfson*. M.S., Ph.D., Florida International University.
- MARTINEZ-CANAS, MARIA C., *Assistant Professor, Fine & Apld Visual Arts, NWSA*. B.A., University of The Arts; M.F.A., School of The Art Institute of Chicago.
- MARTINEZ-CANAS, ROSARIO, *Associate Professor, Fine & Apld Visual Arts, NWSA*. B.A., Loyola University New Orleans; M.F.A., Miami International University of Art & Design.
- MASER, DONALD M., *Associate Professor Sr., Natural Sciences, Wolfson*. B.A., Rutgers University; M.A., Rowan University. Rotary Club Endowed Teaching Chair of Exec in Honor of G.H. "Buck Ashmore" 2003-2005.
- MASI, ANNMARIE, *Professor, Education, Kendall*. B.A., Ed.S., M.Ed., Ph.D., Florida Atlantic University. Rosenberg-McIntosh-Leigh Foundations Endowed Teaching Chair. 3rd Year 2010-2012.
- MASS, COREY, *Professor, E.S.L./Foreign Languages, Wolfson*. B.A., C.U.N.Y. Brooklyn College; M.A., University of Kansas.
- MASSAD, NELSON, *Assistant Professor, BS-Cis-Inform Syst Tech W/C, Wolfson*. B.S., Lebanese American University; M.S., University of San Francisco; M.S., Ph.D., Syracuse University.
- MASSIMINI, NICOLAS, *Associate Professor Sr., Physician Assistant, Medical*. A.S., Universidad de Buenos Aires; B.S., Escuela Nacional Normal Superior de Profesores Marianoacosta; M.D., Universidad Central del Este.
- MATAMOROS, TORIBIO J., *Instructor, Mathematics, Wolfson*. B.S., Universidad Nacional Autonoma de Nicaragua; M.S., Florida Atlantic University.
- MATHEWS, ROBERT A., *Assistant Professor, Developmental Education, North*. A.A., Sandhills Community College; B.A., St. Andrews Presbyterian College; M.A., Appalachian State University.
- MATHON, BERNARD F., *Associate Professor, Mathematics, Wolfson*. B.L.S., Barry University; M.S.Ed., University of Miami.
- MAURY, ANTOLIN, *Assistant Professor, Nursing, Medical*. B.S., Universidad del Atlantico; B.S.N., M.S.N., Florida International University; M.D., Free University (la Universidad Libre).
- MC CURRY, PATRICK D., *Instructor, Distribvt-Culinary Arts, Wolfson*. B.S., The Art Institute of Fort Lauderdale **; M.B.A., University of Phoenix.
- MCCARTHY, MAUREEN J., *Assistant Professor, E.S.L./Foreign Languages, Wolfson*. B.A., B.S., S.U.N.Y. at Buffalo; M.S., Florida International University.
- MCDONALD, TAKENYA J., *Associate Professor, Nursing, Medical*. B.S.N., M.S.N., Florida International University.
- MCGAULEY, MICHAEL G., *Associate Professor Sr., Chemistry/Physics, Kendall*. B.S., University of California-San Diego; M.S., Ph.D., University of Miami.
- MCGRATH, ROBERT G., *Associate Professor, College Prep, Kendall*. B.A., The Richard Stockton College of New Jersey; M.A., University of Miami.
- MCKINNEY, CURTIS R., *Associate Professor Sr., Chemistry/Physics/Earth Science, North*. B.S., Florida State University; M.S., University of Florida; Ph.D., Southern Methodist University.
- MCKNIGHT-SAMMS, EULETT P., *Associate Professor Sr., E.A.P./Foreign Languages, North*. B.A., University of West Indies; M.Ed., Prairie View A & M University.
- MCLAUGHLIN, JOAN H., *Associate Professor Sr., Medical Laboratory Technology, Medical*. B.S.,

- Howard University; M.S., University of Maryland-Baltimore County.
- MCPHEE, ALLEN L., *Associate Professor Sr., Arts & Philosophy, Kendall*. A.S., Community College of The Air Force; B.A., University of California-Davis; M.A., Stanford University.
- MEDINA, MERCEDES, *Professor, The Law Center, Wolfson*. B.A., S.U.N.Y. College at Plattsburgh; J.D., Fordham University.
- MEDINA-CABRAL, MYRA M., *Professor, E.A.P./Foreign Languages, North*. B.A., M.Ed., Rhode Island College; Ed.D., University of Phoenix. American Express Endowed Teaching Chair 2001-2003.
- MEIER, MERCEDES, *Assistant Professor, World Languages, Kendall*. M.A., Ph.D., Universidad de Salamanca.
- MEJIA RODRIGUEZ, LILIANA, *Instructor, Vision Care, Medical*. A.S., Miami Dade College; B.B.A., Florida International University; M.B.A., University of Phoenix.
- MELENDEZ, BEATRIZ I., *Associate Professor Sr., Physical Therapy Assistant, Medical*. B.S.Ed., University of Miami; M.S., Florida International University; D.P.T., Nova Southeastern University.
- MELTZER, STUART, *Instructor, Fine & Appld Art Theatre, NWSA*. A.A., Miami Dade College; B.F.A., University of Florida; M.F.A., The New School.
- MERCHANT, KENDRA T., *Assistant Professor, BS-Biological Sciences-K/C, Kendall*. M.S., Ph.D., Florida Atlantic University.
- MEYER JR., LAWRENCE E., *Associate Professor Sr., Computer Information Systems, Kendall*. B.S., Florida State University; M.S., Florida International University.
- MGBOKWERE, MARIA S., *Instructor, Nursing, Medical*. B.S.N., M.S.N., Ph.D., Barry University.
- MICHEL, ROBERT A., *Professor, E.S.L./World Languages, InterAmerican*. B.A., M.A., C.U.N.Y. Queens College; M.Phil., Ph.D., City University of New York-C.U.N.Y.
- MIDENCE, BARBARA R., *Associate Professor, English & Communications, Kendall*. B.A., M.A., University of Kansas.
- MIGLIACCIO, CHRISTOPHER P., *Professor, Natural Science, Wolfson*. B.S., University of Miami; M.S., Florida International University. Louis Wolfson III Endowed Teaching Chair 2001-2003. Mac Smith Endowed Teaching Chair For The Environmental Ethics. 3rd Year 2010-2012.
- MIGNONE, SUZANNE, *Associate Professor Sr., Social Science, Kendall*. B.A., University of Central Florida; D.Psy., Nova Southeastern University.
- MILLER, CONSTANCE H., *Professor, Nursing, Medical*. B.S.N., M.S.N., Barry University; D.N.P., University of Miami.
- MILLER, RODNEY N., *Associate Professor, Fine & Appld Artmusic, NWSA*. M.M., University of Illinois-Urbana-Champaign.
- MIRANDA, JEFFREY M., *Professor, College Prep, Homestead*. A.A., Miami Dade College; M.S., University of Miami; B.A., Ed.D., Florida International University.
- MITCHELL LEVY, JEMIMAH K., *Associate Professor, Nursing, Medical*. A.A., Miami Dade College; B.S.N., Florida A. & M. University; M.S.N., Florida International University; Ph.D., Barry University.
- MITCHELL, CRISTI, *Professor, World Languages, Kendall*. B.A., M.A., California State University-Long Beach; Ed.D., University of Miami.
- MITCHELL, TERESA L., *Assistant Professor, Fine & Appld-Arts, North*. B.M., M.M., University of Southern California; D.M.A., University of Miami.
- MOBLEY, AARON J., *Assistant Professor, English, Hialeah*. B.A., M.A., Florida State University; J.D., University of Alabama.
- MOFFETT, DEBORAH H., *Associate Professor Sr., Biology, Health & Wellness, Kendall*. A.A., Miami Dade College; B.S., Florida International University; M.S., Nova Southeastern University.
- MOLINA, AMNEL, *Instructor, Arts & Philosophy, North*. B.A., M.A., University of Miami.
- MOLINA, MARIANA V., *Assistant Professor, Psychology, Hialeah*. B.A., M.S., Ph.D., Florida International University.
- MONCK, PETER R., *Assistant Professor, English, Kendall*. B.A., C.U.N.Y.-Brooklyn College; M.A., New York University.
- MONSERRATE, JORGE J., *Assistant Professor, Dietetic Technology & Nutrition, Wolfson*. B.S., M.S., Texas Woman's University.
- MONT, MERCEDES, *Associate Professor, Esl and World Languages, Hialeah*. B.A., C.U.N.Y. Hunter College; M.A., University of London.
- MONTANEZ, MIGUEL A., *Associate Professor, Mathematics, North*. B.S., University of Puerto Rico-Humacao University College; M.Ed., Florida Atlantic University; M.B.A., Northern Illinois University; M.S., Purdue University.
- MONTES DE OCA, MARIA C., *Associate Professor, Mathematics, Kendall*. B.S., Universidad Centro Occidental "Lisandro Alvarado"; M.S., Florida International University.
- MONTOYA, AILE, *Associate Professor Sr., BS-Education-Soe Tep K/C, Kendall*. A.A., Miami Dade College; B.A., M.S.E., University of Miami; Ph.D., University of Florida.
- MOORE, DAVID B., *Associate Professor Sr., Biology, Health & Wellness, Kendall*. A.S., Roane State Community College; B.S., M.S., Middle Tennessee State University.
- MOORE, ROBERT B., *Associate Professor Sr., College Prep, Wolfson*. B.A., M.A., Northeastern Illinois University.
- MOOTRY, TRACY D., *Assistant Professor, Dental Hygiene, Medical*. A.A., Miami Dade College; A.A.S., Erie Community College; M.P.S., St. Thomas University.
- MORALES, MARLENE, *Associate Professor Sr., Education, InterAmerican*. B.S., Florida International University; Ed.S., Nova Southeastern University; M.S., Ph.D., Florida State University.
- MORALES, REINALDO, *Instructor, Arts & Philosophy, Kendall*. A.A., Miami Dade College; B.F.A., University of Central Florida; M.F.A., University of Miami.
- MORATA, JUAN M., *Associate Professor Sr., Natural Sciences, Wolfson*. B.S., M.S., Montclair State University. Philip Morris Endowed Teaching Chair. 3rd Year 2011-2013.
- MOSS, KAREN A., *Assistant Professor, Veterinary Technology, Medical*. A.A., B.A.S., St. Petersburg Junior College.
- MOSS, LAKISHA D., *Assistant Professor, Dental Hygiene, Medical*. A.A., A.S., Miami Dade College; B.A.S., St. Petersburg Junior College.
- MUELLE, CHRISTINA M., *Associate Professor, Education, North*. M.A.E., University of Florida; Ph.D., Florida International University.
- MUNIZ, KATHLEEN, *Instructor, Nursing, Medical*. A.S., B.S.N., Miami Dade College; M.S.N., Florida Atlantic University.
- MUNOZ, SERVANDO, *Professor, Chemistry/Physics, Kendall*. B.S., Florida International University; M.S., Ph.D., University of Florida.
- MURGO, DANIEL O., *Assistant Professor, Business Mgt-Homestead, Homestead*. M.A., Ph.D., Florida International University.
- MURPHY, SCOTT P., *Assistant Professor, Social Science, North*. M.A., Ph.D., University of California-Riverside.
- MURPHY, WILLIAM O., *Associate Professor, English & Communications, Kendall*. M.A., University of Colorado; Ph.D., University of Denver.
- N**
- NADAL, LESLEY V., *Instructor, Education, InterAmerican*. B.A., M.S., Florida International University.
- NAIR, MEERA K., *Professor, Biology, Health & Wellness, Kendall*. M.S., Kerala Agricultural University; Ph.D., Florida International University.
- NANIA, MARGARET L., *Assistant Professor, Fine & Appld-Arts, Homestead*. B.A., M.A., California State University-Northridge.
- NATION, PATRICIA A., *Professor, E.S.L./Foreign Languages, Wolfson*. B.A., Stetson University; M.S., Florida International University.
- NEAL, BRIAN E., *Assistant Professor, Music, Theater & Dance, Kendall*. B.M., Manhattan School of Music; M.M., University of Miami.
- NEUNDER, MARK F., *Professor, Arts & Philosophy, Kendall*. B.A., Wittenberg University; M.A., Ph.D., University of Miami.
- NGIM, ALAN G., *Associate Professor Sr., Arts & Philosophy, Wolfson*. B.A., B.S., University of California-Santa Barbara; M.M., Northwestern University; D.M.A., University of Miami.
- NGUYEN, HIEN M., *Associate Professor, Cis-West-Hib, North*. A.A., Miami Dade College; B.S., M.S., Ph.D., Florida International University. Peter Masiko, Jr./Miami Jai-Alai Endowed Teaching Chair. 1st Year 2015-2017.
- NGUYEN, MANINI T., *Assistant Professor, Mathematics, Wolfson*. B.A., M.A., University of South Florida.
- NICOLL-SUCO, ELIZABETH, *Professor, Mathematics, Wolfson*. B.A., M.A., University of Miami. The Simon Bolivar Endowed Teaching Chair. 3rd Year 2006-2008.
- NILES, JENNIFFER C., *Assistant Professor, English & Communication, North*. A.A., Miami Dade College; B.A., Florida International University; M.S., Nova Southeastern University.
- NITTI, YOLANDA, *Assistant Professor, Nursing, Medical*. B.S.N., C.U.N.Y.Hunter College; M.S., Columbia University.
- NOBLE III, F DORSET, *Associate Professor, Fine & Appld Art Theatre, NWSA*. B.A., Auburn University.
- NOONAN, KATHLEEN M., *Assistant Professor, English & Communication, North*. B.S., Georgetown University; M.A., Florida International University.
- NORONHA-NIMMO, ALDA, *Professor, Developmental Education, North*. B.S., M.S., Ed.D., Florida International University.
- NOWLAND, ANNE E., *Associate Professor Sr., CIS, Homestead*. A.A., Miami Dade College; A.A., B.A., Marymount University; M.S., Barry University.
- O**
- O'REILLY, ARAMIS P., *Associate Professor Sr., Fine & Appld Visual Arts, NWSA*. B.F.A., M.F.A., Florida International University.
- OBESO, JORGE L., *Professor, Biology, Health & Wellness, North*. B.S., University of Puerto Rico-Rio Piedras; M.S., Ph.D., University of Wisconsin-Madison. Linda & Hank Raattama Endowed Teaching Chair. 2nd Year 2014-2016.
- OBREGON, LUCIA, *Assistant Professor, Education, Kendall*. M.Ed., Loyola University of Chicago.
- OCHOA, ROLANDO M., *Assistant Professor, BAS-Supervision & Mgmt-W/C, Wolfson*. A.A., A.S., Broward Community College; M.B.A., University of Miami; D.B.A., Nova Southeastern University.
- OKUNGBOWA, JOE, *Professor, Biology, Health & Wellness, North*. B.S., University of Benin; Ph.D., University of Glasgow.
- OLIVER, BILLY M., *Associate Professor Sr., School of Entertainment & Design Technologies, North*. B.A., M.A., Auburn University. Squire, Sanders & Dempsey Endowed Teaching Chair 3rd Year 2013-2015.

- OLSEN, NEIL S., *Instructor, English & Communications, Kendall*. B.A., M.A., San Francisco State University.
- OROZCO-VACA, SYLVIA H., *Associate Professor, College Prep, Kendall*. A.A., Miami Dade College; B.S., Florida International University; M.A.S., University of Miami.
- ORR, DONALD W., *Associate Professor Sr, Mathematics, Kendall*. B.A., M.S., University of Wyoming.
- ORRO, MARGARITA, *Professor, World Languages, North*. B.A., M.A., C.U.N.Y. Queens College; Ph.D., City University of New York Graduate Center.
- ORTA, JOSE A., *Associate Professor Sr, Chemistry/Physics, Kendall*. B.S., Universidad Autonoma de Centro America; M.S., Ph.D., University of Miami. Peter Masiko, Jr. Endowed Teaching Chair. 1st Year 2015-2017.
- ORTA, ROXANA, *Assistant Professor, Nursing, Medical*. A.S., Miami Dade College; B.S., M.S., D.N.P., Florida International University.
- ORTEGA KIMSEY, MARIA, *Assistant Professor, Hltb Ocp-Generic Nurse-H/C, Homestead*. A.A., Miami Dade College; B.S.N., University of Florida; M.S.N., University of Phoenix.
- ORTEGA, MARIO F., *Associate Professor Sr, School of Architecture/Interior Design, Kendall*. A.A., Miami Dade College; B.A., M.Arch., M.S.A.R., University of Florida. Col. Mitchell Wolfson, Sr. Endowed Teaching Chair. 3rd Year 2010-2012.
- OSORIO, CLAUDIO, *Associate Professor Sr, Arts & Philosophy, North*. B.M., University of Miami; M.M., Manhattan School of Music.
- OSWALD, ANNETTE C., *Instructor, Education, InterAmerican*. B.S., Florida International University; M.S.Ed., University of Miami.
- OTTO, CAROLINE K., *Instructor, Nursing, Medical*. B.S.N., Kaplan University; M.S.N., University of Phoenix.
- PACIOS, MARTA S., *Associate Professor Sr, E.A.P./Foreign Languages, North*. B.L.S.T., Barry University; M.S., Florida International University.
- PACKER, STEPHANIE, *Professor, Developmental Education, North*. A.A., Miami Dade College; B.A., Florida International University; Ed.S., University of Florida; M.A., Ph.D., University of Miami.
- PAGE, MATTHEW K., *Associate Professor Sr, Mathematics, Kendall*. B.S., Dickinson College; M.S., University of Virginia.
- PALOMBO, LEON, *Associate Professor, E.A.P./Foreign Languages, North*. B.S., M.S., Ph.D., Florida International University.
- PANDO MOREJON, ORLANDO, *Assistant Professor, Physical Sciences, InterAmerican*. B.S., M.S., Ph.D., Universidad de La Habana.
- PANEQUE, ONEYDA M., *Professor, Education, InterAmerican*. B.A., Northern Illinois University; A.M., University of Illinois-Urbana-Champaign; Ed.D., Florida International University.
- PATTON, RICHARD T., *Associate Professor, Biology, Health, Wellness, North*. B.S., M.S., University of Florida; M.P.A., University of North Carolina-Asheville.
- PAU-LLOSA, RICARDO M., *Professor, English, Kendall*. A.A., Miami Dade College; B.A., Florida International University; M.A., Florida Atlantic University.
- PEARL, SUZANNE F., *Associate Professor Sr, College Prep, Wolfson*. B.A., M.Ed., Temple University.
- PEDRAZA, TERESITA, *Associate Professor, Social Science, Kendall*. A.A., Miami Dade College; B.A., M.A., M.P.A., Florida International University.
- PEDRESCHI, CAROLA S., *Instructor, Social Science, North*. A.B., University of Georgia; M.S., University of Central Florida.
- PERALTA, HECTOR V., *Assistant Professor, Physical Sciences, InterAmerican*. B.S., Universidad de Oriente; M.S., Universidad de Camaguey.
- PEREZ, JESSYCA, *Associate Professor, Social Science, Homestead*. B.A., Florida International University; M.S., St. Thomas University.
- PEREZ-MIRABAL, ELENA, *Associate Professor Sr, English, Kendall*. B.A., M.A., Florida International University. At&t II Endowed Teaching Chair. 3rd Year 2011-2013.
- PEREZ-TRIFF, ALFREDO, *Professor, Arts & Philosophy, Wolfson*. B.M., Manhattan School of Music; B.A., Thomas Edison State College; M.M., Ph.D., University of Miami.
- PETERS, FAITH E., *Assistant Professor, Mathematics, Wolfson*. A.A., Broward Community College; B.A., Florida Atlantic University; M.S., Florida International University.
- PETERSON-TENNANT, GINNY S., *Professor, Social Science, North*. B.A., University of Dayton; M.A., Rider University; Ph.D., Barry University.
- PFLEEGOR, CLYDE K., *Professor, School of Justice, North*. A.A., Keystone Junior College; B.A., M.S.Ed., J.D., University of Miami.
- PHILLIAS, ERIC, *Associate Professor, Mathematics, Homestead*. B.S., M.S., Florida International University.
- PHILIPPE, LESLY J., *Assistant Professor, Biology, North*. A.A., Miami Dade College; B.S., Nova Southeastern University; M.H.S.A., St. Joseph College; D.O.C.T., St. Matthew's University School.
- PHILP, ETON G., *Associate Professor, Communication, Arts & Philosophy, InterAmerican*. A.A., Miami Dade College; B.A., M.A., University of Miami.
- PIERRE-PHILIPPE, LOMER, *Associate Professor Sr, Esl and World Languages, Hialeah*. A.A., Miami Dade College; B.A., Florida Atlantic University; M.S., Nova Southeastern University.
- PINO, ALFONSO A., *Professor, Biology, Health & Wellness, Kendall*. M.D., Universidad de la Habana.
- PINO, ILEANA S., *Associate Professor, Dental Hygiene, Medical*. A.S., Miami Dade College; M.H.S., Nova Southeastern University.
- PITAYAPISUT, PRAPAPIS, *Professor, Nursing, Medical*. B.S.N., Mahidol University; M.S.N., Florida International University; Ed.D., Nova Southeastern University.
- PITCHENIK, ALISA J., *Professor, Fine & Apld Visual Arts, NWSA*. M.F.A., School of Visual Arts. The Congresswoman Carrie Meek Endowed Teaching Chair. 3rd Year 2007-2009.
- PITTMAN, ANITA, *Instructor, Nursing, Medical*. A.A., B.S., University of South Florida; M.S.N., Barry University.
- PLATA, MONICA M., *Associate Professor, College Prep, Kendall*. B.S., M.S., Barry University; Ed.S., Nova Southeastern University.
- PLOTKIN, SHARON L., *Instructor, School of Justice, North*. A.A., Broward Community College; B.S.S.W., M.C.J., Florida International University.
- PODONA, TCHAO, *Professor, Chemistry/Physics/Earth Science, North*. Ph.D., Universite D'Orleans.
- POE II, JAMES M., *Associate Professor Sr, BS-Engineering K/C, Kendall*. B.S., M.S., Florida International University; Ph.D., University of Florida.
- POLANCO-PAULA, ROSA, *Associate Professor Sr, Biology, Health & Wellness, Kendall*. B.S., University of New Mexico; M.S., Florida International University.
- POLLARD, LONNIE F., *Instructor, Computer Information Systems, North*. A.A., A.S., Miami Dade College; B.P.S., Barry University; M.S., Florida International University.
- POMARES, YULY B., *Professor, Social Science, Kendall*. A.A., Miami Dade College; B.S., Barry University; M.S., Ph.D., University of Miami.
- POMPEE-SYNSMIR, ANGE MARIE, *Instructor, Nursing, Medical*. A.A.S., C.U.N.Y. Medgar Evers College; B.S.N., M.S.N., Barry University.
- PONS, EUGENE H., *Instructor, English & Communication, Wolfson*. B.S., M.A., University of Miami.
- PONTIER, RYAN W., *Instructor, Education, InterAmerican*. B.A., Boston College; M.S.E., Ph.D., University of Miami.
- POPOLA, BARBARA E., *Assistant Professor, Nursing, Medical*. B.S.N., Barry University; M.S.N., Florida International University.
- PORGES, ILEANA H., *Associate Professor Sr, Esl and World Languages, Hialeah*. A.B., Vassar College; M.A., American University; M.S., Florida International University. Sun Trust Bank Endowed Teaching Chair in Banking and Finance. 3rd Year 2013-2015.
- POWELL, DEBORAH, *Professor, Social Science, Kendall*. B.A., Clarke College; M.A., Ohio State University.
- PRESA, ARTURO, *Professor, Mathematics, Wolfson*. B.S., Universidad de Oriente; Ph.D., Saint Petersburg University.
- PRIETO-VALDES, JUAN J., *Professor, Mathematics, Kendall*. Ph.D., Kharkov Polytechnic Institute.
- PRINCIPE, GRISELLE L., *Assistant Professor, World Languages, Kendall*. B.S., University of Dayton; M.A., Ohio State University.
- PRINCIVIL, EDONY, *Instructor, Mathematics, Hialeah*. A.A., Miami Dade College; B.S., M.S., Florida International University.
- PUCKETT, VIRGINIA A., *Associate Professor Sr, Mathematics, North*. B.S., M.A.T., University of Florida.
- PULIDO, JESSE E., *Assistant Professor, Chemistry/Physics/Earth Science, North*. B.A., B.S., Ph.D., Florida International University.
- PULLEY, STEWART J., *Associate Professor, Aviation, Homestead*. M.B.A., Campbell University.
- PURKISS, MERLENE J., *Associate Professor Sr, College Prep, Kendall*. A.A., A.S., Miami Dade College; B.L.S., Barry University; M.S., Nova Southeastern University.
- QUEBBEMANN, FRANK J., *Assistant Professor, E.S.L./Foreign Languages, Wolfson*. B.S., Loyola University of Chicago; M.A., University of Illinois-Chicago.
- QUESADA, ADELAIDA, *Associate Professor Sr, Mathematics, Kendall*. A.A., Miami Dade College; B.S., Florida International University; M.A., University of Miami. Dr. German Munoz Endowed Teaching Chair. 3rd Year 2012-2014.
- QUINN, JEFFREY C., *Professor, Fine & Apld Art Theatre, NWSA*. B.A., M.F.A., Penn State University.
- QUINTANA, SHANNON M., *Assistant Professor, Psychology, Homestead*. M.S., Ph.D., Florida International University.
- QUINZI, STEPHEN S., *Associate Professor, School of Entertainment & Design Technologies, Kendall*. B.M., M.M., University of Miami. The Frances Louise Wolfson Endowed Teaching Chair of Excellence in Arts. 3rd Year 2013-2015.
- QUIROGA, ANDRES, *Assistant Professor, Arts & Philosophy, North*. B.F.A., University of Florida; M.F.A., Florida Atlantic University.

- RACHELSON, ANOUCHKA N., *Professor, World Languages, Kendall*. M.S.Ed., University of Miami; B.A., Ed.D., Florida International University. Dr. Eduardo Padron Endowed Teaching Chair. 1st Yr 2015-2017.
- RAINES, SCOTT J., *Instructor, Vc-Hlth Ocp-Pharmacy Tech-Hlth, Medical*. B.S., Tennessee Technological University.
- RAMOS, ANTONIO D., *Associate Professor Sr., Mathematics, InterAmerican*. B.S., Universidad de la Habana; M.S., University of Miami.
- RAMSAY, ELIZABETH, *Associate Professor Sr., E.S.L./Foreign Languages, Wolfson*. B.A., University of Massachusetts; M.S., Florida International University.
- RANDOLPH II, JAMES B., *Assistant Professor, Fine & Appld Art Theatre, NWSA*. B.F.A., University of Miami; M.F.A., University of Florida.
- REMEK, ROBERT T., *Associate Professor Sr., Arts & Philosophy, North*. B.S., Florida International University; B.M., M.M., D.M.A., University of Miami.
- REMESAR, JOSE C., *Associate Professor Sr., Mathematics, Wolfson*. B.S., Universidad de la Habana; Ph.D., Academia de Ciencias de Cuba.
- RESPASS, SELENA M., *Instructor, School of Justice, North*. B.S., M.S.C.J., Northeastern University.
- REVUELTA, RENE S., *Associate Professor, Biological Sci-Arts & Sci, InterAmerican*. A.A., Miami Dade College; B.A., University of Miami; Ph.D., University of Puerto Rico-Mayaguez.
- RICCIO, NORMA, *Associate Professor Sr., E.S.L./Foreign Languages, Wolfson*. B.S., University of Puerto Rico; M.S., Nova Southeastern University.
- RICHARDSON, SIMEON A., *Assistant Professor, College Prep, Homestead*. M.S., Florida Memorial University.
- RICKHI, SAISNATH, *Associate Professor Sr., Mathematics, North*. B.S., University of West Indies; M.S., Florida Atlantic University.
- RILEY, MICHELLE T., *Associate Professor Sr., English & Communication, Wolfson*. A.A., Miami Dade College; B.A., Florida A. & M. University; M.S., Barry University.
- RILEY-DEWAR, FAITH, *Instructor, Nursing, Medical*. M.S.N., University of Phoenix.
- RITTER, STEVEN, *Professor, Biology, Health & Wellness, North*. A.S., Mercer County Community College; M.S., Northwest Missouri State University; B.S., M.S., Rutgers University; Ph.D., Florida International University. George W. Jenkins/Publix Supermarkets Endowed Teaching Chair. 3rd Year 2010-2012.
- RIVAS, ANTONIO J., *Associate Professor, Physician Assistant, Medical*. B.S., Florida International University; M.P.A.S., University of Nebraska Medical Center.
- RIVAS, Yaelis, *Instructor, Natural Science, Wolfson*. B.S., M.S., Universidad de la Habana.
- ROACHE, PENELOPE A., *Assistant Professor, E.S.L./World Languages, InterAmerican*. A.S., Miami Dade College; B.P.A., M.S., Florida International University.
- ROBERTS, TINA M., *Instructor, Hlth Ocp-Generc Nurse-H/C, Medical*. B.S., Purdue University; M.S., Regis University; D.H.A., University of Phoenix.
- ROBINSON, CHRISTINE A., *Professor, English, Kendall*. A.A., Miami Dade College; M.A., University of Miami; B.A., Ed.D., Florida Atlantic University.
- ROBINSON, DEBORAH B., *Associate Professor, Nursing, Medical*. B.S.N., Indiana University-Bloomington; M.B.A., D.N.P., University of Miami.
- ROCA, OCTAVIO, *Assistant Professor, Arts & Philosophy, North*. B.A., Emory University; M.A., Georgetown University.
- RODRIGUEZ, AIMEE C., *Associate Professor, World Languages, Kendall*. A.A., Miami Dade College; B.A., M.A., University of Miami.
- RODRIGUEZ, ELISA, *Associate Professor, Nursing, Medical*. B.S.N., M.S.N., D.N.P., University of Miami.
- RODRIGUEZ, JESSICA M., *Assistant Professor, BS-Education-Soe Ecep Iac, InterAmerican*.
- RODRIGUEZ, LUIS, *Instructor, Mathematics, InterAmerican*. B.S., M.S., Florida International University.
- RODRIGUEZ, MARIA C., *Assistant Professor, Nursing, Medical*. A.S., Miami Dade College; B.S.N., Excelsior College; M.S.N., Florida International University.
- RODRIGUEZ, MARINA M., *Associate Professor Sr., Developmental Education, North*. B.S., M.S., Ed.D., Florida International University. Simon Bolivar Endowed Teaching Chair. 1st Year 2015-2017.
- RODRIGUEZ-DEHMER, ISABEL, *Professor, Developmental Education, North*. B.A., Trinity International University, South Florida Campus; Ed.S., M.S., Ph.D., Barry University. The Peter Masiko Jr. Endowed Teaching Chair. 3rd Year 2007-2009. Blockbuster Entertainment Corporation Endowed Teaching Chair. 1st Year 2014-2016.
- ROGERS WALKER, MONIQUE M., *Professor, Nursing, Medical*. B.S.N., Florida International University; M.S.N., University of Phoenix; Ph.D., Capella University.
- ROITSTEIN, STEVEN, *Associate Professor, School of Entertainment & Design Technologies, Kendall*. B.M., M.M., University of Miami.
- ROLAND, HELEN E., *Associate Professor Sr., World Languages, Kendall*. A.B., Lincoln Christian College; M.S.Ed., University of Miami; M.S., Southern Illinois University-Carbondale.
- ROMANACH, PEDRO A., *Associate Professor, E.S.L./World Languages, InterAmerican*. B.A., M.A., University of Miami.
- ROMER, NIDIA S., *Professor, Biology, Health & Wellness, Kendall*. B.S., Universidad de Bogota "Jorge Tadeo Lozada"; M.S., University of Miami; Ed.D., Nova Southeastern University.
- RONEY, JANET L., *Assistant Professor, Music, Theater & Dance, Kendall*. M.A., M.F.A., University of South Dakota.
- ROQUETA, MILDRED, *Associate Professor Sr., Social Science, Kendall*. B.S., M.S., Carlos Albizu University, Miami Campus; Ed.D., Nova Southeastern University.
- ROSADO, JAMES, *Professor, Psychology, Wolfson*. B.S., Ed.S., M.A.E., University of Florida; M.Phil., Ph.D., Teachers College, Columbia University.
- ROSE, RICHARD, *Professor, School of Entertainment & Design Technologies, Kendall*. B.M., University of Miami; M.S., Florida International University; D.M.A., University of Texas-Austin. The Ruth Wolkowsky Greenfield Chair in Music Endowed Chair 2002-2004. The Sylvan E. Meyers Endowed Teaching Chair. 3rd Year 2009-2011.
- ROSEN GONZALEZ, KRISTEN M., *Assistant Professor, English & Communications, Kendall*. B.A., Tufts University; M.A., Barry University.
- ROTHSTEIN, ROBERT, *Professor, Biology, Health & Wellness, Kendall*. B.S.Ed., S.U.N.Y. College at Cortland; M.S.Ed., Alfred University. The Murray Sisselman/Peter Clayton Endowed Teaching Chair 2000-2002.
- RUBIN, KAY A., *Instructor, Social Science, North*. B.S., University of Florida; M.A., Alfred University.
- RUIZ, CARLOS A., *Associate Professor, Biological Science, Hialeah*. Ph.D., University of Miami.
- RUIZ, FREDY, *Associate Professor, Biology, Health & Wellness, North*. M.D., Juan N. Corpas School of Medicine.
- SALEH, ABDEL-RIDA, *Professor, Mathematics, Kendall*. M.S., University of Miami; B.S., M.S., Louisiana Tech University.
- SALINAS, ALEJANDRO, *Associate Professor Sr., Communication, Arts & Philosophy, InterAmerican*. B.S., M.A., Florida International University. The Gerrits Construction Company Endowed Teaching Chair. 1st Year 2015-2017.
- SALVADOR, TOYIN M., *Associate Professor, Nursing, Medical*. A.S., Miami Dade College; B.S., Florida International University; M.S., University of Phoenix.
- SALVATIERRA, JUDY L., *Associate Professor Sr., Psychology, Wolfson*. B.S., University of Miami; M.A., Ph.D., Florida Atlantic University.
- SANCHEZ, PAULA R., *Associate Professor Sr., World Languages, Kendall*. B.S., University of Wisconsin-Eau Claire; M.S., University of Miami.
- SANCHEZ, REBECCA S., *Associate Professor, Education, Wolfson*. B.A., Trinity International University, South Florida Campus; M.S., Nova Southeastern University.
- SANCHEZ-SUAREZ, DALIA E., *Assistant Professor, Diagnostic Medical Sonography, Medical*. B.S., Barry University.
- SANG, MATTHEW M., *Instructor, Philosophy, InterAmerican*. B.A., California Polytechnic State University-San Luis Obispo; M.A., Brock University.
- SANTELISES, JUAN M., *Associate Professor, English & Communication, North*. B.A., Universidad Catolica Madre y Maestra; M.A., University of Iowa.
- SANTOS, GIANNINA R., *Instructor, Nursing, Medical*. A.S., Broward Community College; B.S.N., M.S., Florida Atlantic University; D.N.P., University of Alabama.
- SARABIA, RICHARD B., *Assistant Professor, BAS-Supply Chain Management-K/C, Kendall*. B.S., M.S., California Polytechnic State University-San Luis Obispo; Ph.D., Argosy University, Sarasota.
- SARGSIAN, GOHAR, *Associate Professor, Mathematics, Kendall*. B.S., M. Nalbandyan State Pedagogical Institute; M.S., Florida International University.
- SAWHNEY, AMARJEET S., *Professor, School of Architecture/Interior Design, Kendall*. B.A., Panjab University; M.A., Cornell University. The Spillis Candela and Partners, Inc. Endowed Teaching Chair 1992-1994. Spillis Candela and Partners, Inc. Endowed Teaching Chair 2001-2003.
- SAXTON, JENNIFER C., *Associate Professor, Library Science-K/C, Kendall*. B.A., Quinnipiac College; M.S., Florida State University.
- SCALISE, CLAUDIA M., *Associate Professor, Arts & Philosophy, Wolfson*. A.A., Miami Dade College; B.F.A., Florida International University; M.F.A., University of Miami.
- SCHMELZER, TIMOTHY T., *Assistant Professor, Aviation, Homestead*. B.S., Troy University; M.B.A., Embry-Riddle Aeronautical University. The J. Harvey Watson Chair in Aviation Endowed Teaching Chair 2002-2004. American Express Endowed Teaching Chair in Hospitality. 2nd Year 2014-2016.
- SCHROEDER, DAVID, *Professor, English, Kendall*. A.A., Fulton-Montgomery Community College; B.A., M.A., University of Miami. Peter H. Clayton Endowed Teaching Chair 2001-2003.
- SCHUEMANN, CYNTHIA M., *Professor, E.S.L./World Languages, InterAmerican*. B.A., University of Wisconsin-Milwaukee; M.S., Ed.D., Florida International University. The Citibank Endowed Teaching Chair. 3rd Year 2008-2010.
- SCHUH, MATTHEW A., *Associate Professor Sr., Arts & Philosophy, North*. B.A., M.A., Ph.D., University of Miami.

- SCHWANER, SHAWN L., *Associate Professor, BAS-Intrdcpnlry-Public Safety, Kendall*. B.A., Denison University; M.B.A., Sullivan University; M.A., Ph.D., Ohio State University.
- SCOTLAND, AGATHINE M., *Professor, Nursing, Medical*. B.S.N., M.S.N., Ph.D., Barry University.
- SENDIN, EMILIA A., *Associate Professor Sr, Communication, Arts & Philosophy, InterAmerican*. A.A., Miami Dade College; B.A., M.A., Florida International University. The Arthur H. Hertz Endowed Teaching Chair. 3rd Year 2005-2007.
- SER, CARY D., *Professor, English, Kendall*. A.A., B.A., M.A., Ph.D., University of Florida.
- SERFATY DE MARKUS, ALICIA, *Professor, Mathematics, North*. B.M.E., M.S., Ph.D., Simon Bolivar University.
- SERPA, JOSE A., *Associate Professor Sr, Mathematics, InterAmerican*. B.S., M.S., Donetsk State University; Ph.D., Kiev Institute of National Economy.
- SEWELL-HENRY, HYACINTH D., *Instructor, Nursing, Medical*. B.S.N., University of Phoenix; M.S., Barry University.
- SHAHEEN, DAVID M., *Professor, Social Science, Kendall*. M.A., Catholic University of America; B.A., D.A., George Mason University.
- SHAIKH, SAEED A., *Assistant Professor, Engineering, North*. A.S., Miami Dade College; B.S., Florida International University; M.I.S.M., Keller Graduate Scho.
- SHAKIL, MOHAMMAD, *Professor, Matbematics, Hialeab*. M.S., Florida International University; B.S., Ph.D., Patna University.
- SHANAHAN, STACI K., *Instructor, Business, Wolfson*. B.A., Curry College; M.Acc., Florida International University.
- SHAW, LISA, *Professor, English & Communication, North*. B.A., University of South Florida; M.A., St. Thomas University; M.F.A., C.U.N.Y. York College. The John and James L. Knight Foundation Endowed Teaching Chair 2002-2004. The Ruth B. Jack Kassewitz Endowed Teaching Chair. 3rd Year 2007-2009. The Bonnie McCabe Endowed Teaching Chair in The Humanities. 1st Year 2015-2017.
- SHEAF, LEAH E., *Assistant Professor, School of Justice, North*. J.D., Florida International University.
- SHIPPEY, MARGARET, *Assistant Professor, E.S.L./ Foreign Languages, Wolfson*. B.A., Davidson College; M.S., Florida International University.
- SHRIVER-RICE, MERYL, *Assistant Professor, Arts & Philosophy, Wolfson*. M.A., University of Nottingham; B.A., Ph.D., University of Miami.
- SIGALE, MERWIN, *Associate Professor Sr, English & Communications, Kendall*. B.S., M.A., University of Illinois.
- SIKAH, VICTOR P., *Professor, World Languages, Kendall*. B.A., M.S., Byelorussian Institute of Agriculture Mechanization; M.S., Ed.D., Florida International University.
- SILVA-O'NEAL, YOMARIE, *Associate Professor, Arts & Philosophy, Kendall*. B.F.A., M.F.A., Florida International University.
- SILVERA, MERLINA, *Instructor, Education-Soe Tep H/C, InterAmerican*. B.S., University of Surrey; B.F.A., Brunel University; M.S., Rochampton University.
- SIMMONS, RONALD J., *Professor, Vision Care, Medical*. A.S., Hillsborough Community College; B.A., University of South Florida.
- SINKOFF, SHERRI E., *Associate Professor Sr, Communications, Hialeab*. B.A., M.S., Long Island University-C.W. Post. John & James L. Knight Foundation Endowed Teaching Chair in Communications. 2nd Year 2014-2016.
- SIU, HENRY H., *Professor, Biology, Health & Wellness, North*. M.S., University of North Texas; Ph.D., University of Texas Southwestern Medical Center at Dallas.
- SLOCUM, PHILLIP D., *Assistant Professor, Respiratory Care, Medical*. A.A., Miami Dade College; B.A., Trinity International University.
- SMITH, GREGORY A., *Assistant Professor, Physical Science, Hialeab*. B.S., Fordham University; Ph.D., University of Miami.
- SMITH, NAYRIE L., *Instructor, Accounting/ Busiadmin Off Ocp, North*. B.B.A., Florida International University; M.B.A., Florida Memorial University.
- SMITH, RANDY O., *Associate Professor, Mathematics, North*. B.S., Florida Memorial University; M.S., University of Miami.
- SMITH, REBECCA M., *Professor, Dental Hygiene, Medical*. A.A., A.S., Miami Dade College; B.H.S.A., Florida International University; M.P.H., University of Miami; Ed.D., University of Florida. Arthur Hertz Endowed Teaching Chair. 2nd Year 2014-2016.
- SOLA, JESUS, *Instructor, Emergency Medical Services, Medical*. A.S., Miami Dade College; B.S., Florida International University.
- SONG, YING, *Associate Professor Sr, Trd & Inds-Ocp-Engnrng-H/C, Homestead*. M.S., Ph.D., Duke University.
- SOUCHAK, SOUMIA M., *Assistant Professor, Chemistry/Physics, Kendall*. B.S., M.S., Ph.D., Universite/Mohammed V Agdal.
- SPANN JR., JAMES, *Assistant Professor, The Law Center, Wolfson*. A.A.S., Miami Dade College; B.A., St. Thomas University; L.L.D., University of Miami.
- SPENCE, LEIGHTON A., *Associate Professor, Developmental Education, North*. B.A., Long Island University Brooklyn Campus; M.S., Nova Southeastern University.
- STEELE, CAROL A., *Assistant Professor, Arts & Philosophy, North*. B.A., Palm Beach Atlantic College; M.M., University of Miami.
- STERLING, KATRIKA N., *Assistant Professor, English & Communication, North*. A.A., Miami Dade College; B.A., M.A., Florida Atlantic University.
- STEWART, RASHIDA L., *Instructor, Nursing, Medical*. B.S., Columbia University; B.A., New York University; M.P.H., M.S.N., Barry University.
- STRIZVER-MUNOZ, STEVE B., *Associate Professor Sr, Esl and World Languages, Hialeab*. B.A., University of Maryland-College Park; M.A., University of Maryland-Baltimore County.
- STUBBS, RONALD L., *Professor, Natural & Social Sciences, InterAmerican*. B.A., M.A., University of Kansas; M.A., Ph.D., Florida International University.
- STURRUP, CASSANDRA L., *Instructor, Nursing, Medical*. A.S., Miami Dade College; B.S., Florida International University; M.S.N., University of Phoenix.
- SUCO, ERIKA J., *Instructor, Mathematics, Kendall*. B.S., Florida State University; M.A., University of Miami.
- SUMMONS, SUSAN P., *Associate Professor Sr, Biology, Health & Wellness, Kendall*. A.A., Roxbury Community College; B.S., Southern New Hampshire University; M.S., Florida International University. The Andrew Blank Endowed Teaching Chair 1999-2001. The Henry E.S.Reeves/Miami Times Endowed Teaching Chair. 3rd Year 2007-2009.
- SUSSMAN, BARBARA D., *Associate Professor Sr, College Prep, Wolfson*. B.A., University of Rochester; M.S.Ed., University of Pennsylvania.
- SYDER, THEODORE P., *Associate Professor Sr, Social Science, North*. A.A.S., B.S., St. Francis College; M.S., St. Thomas University; Ph.D., Union Institute & University.
- TALAVERA, ERNEST, *Associate Professor Sr, College Prep, Wolfson*. B.A., University of Miami; M.S., Florida International University.
- TAMARGO, JOSEPH, *Associate Professor, Arts & Philosophy, Wolfson*. A.A., Miami Dade College; B.F.A., Florida International University; M.F.A., University of Miami.
- TANG, DIANA, *Assistant Professor, E.S.L./World Languages, InterAmerican*. M.A., University of Delaware.
- TAPIA, RICHARD, *Instructor, Social Science, North*. B.A., M.P.A., Florida International University.
- TARAF, MARIA E., *Professor, Chemistry/Physics, Kendall*. B.S., M.S., Ph.D., University of Miami.
- TARKAN BLANCO, BASHAK, *Associate Professor Sr, English, Kendall*. B.A., Bogazici University; M.A., Western Michigan University.
- TARVER, JUDITH F., *Professor, English & Communication, Wolfson*. B.A., M.A., Rollins College.
- TAVARES-SOGOCIO, ANGELA M., *Associate Professor, E.S.L./Foreign Languages, Wolfson*. B.A., University of Massachusetts-Dartmouth; M.A., Catholic University of America.
- TAYLOR, CLEVELAND A., *Assistant Professor, Mathematics, InterAmerican*. M.S., Ph.D., Tufts University.
- TAYLOR, MALIE, *Instructor, Nursing, Medical*. B.S.N., Barry University; M.S.N., University of Phoenix.
- TE, FRANKLYN T., *Professor, Natural Sciences, Wolfson*. Ph.D., University of Hawaii-Manoa.
- THEVENOT, MARIA HELENA, *Instructor, Arts & Philosophy, North*. B.A., University of Maryland; M.A., New York University.
- THOMAS, KATHY J., *Professor, Hltb Ocp-Generc Nurse-H/C, Homestead*. A.A., Miami Dade College; B.S.N., University of Florida; M.S.N., University of Miami; Ph.D., Barry University. The George W. Jenkins Foundation/Public Supermarkets Charities Endowed Teaching Chair 1999-2001. M.Anthony Burns/Ryder Systems, Inc. Endowed. 3rd Year 2012-2014.
- THOMPSON LOMAX, TERESA L., *Instructor, Hltb Ocp-Generc Nurse-H/C, Medical*. B.S.N., Florida State University; M.S.N., Barry University.
- THOMPSON, ADRIANNE A., *Associate Professor Sr, E.S.L./World Languages, InterAmerican*. B.A., University of Iowa; M.A., Teachers College, Columbia University.
- TIBAQUIRA, DIEGO O., *Associate Professor Sr, Computer Information Systems, InterAmerican*. B.S., University of North Carolina-Greensboro; M.S., North Carolina A & T State University.
- TISEVICH, PAUL, *Associate Professor Sr, Social Science, Wolfson*. A.B., University of Illinois-Chicago; M.S., University of Illinois-Urbana-Champaign; M.A., American Public University System.
- TOMASELLO, RANDAL S., *Professor, Music, Theater & Dance, Kendall*. B.M., M.M., University of Miami.
- TOMLINSON, ANNETTE W., *Instructor, Nursing, Medical*. A.S., Miami Dade College; B.S.N., Florida International University; M.S.N., Nova Southeastern University.
- TORRES, CLARA R., *Associate Professor Sr, Nursing, Medical*. M.S.N., Florida International University; B.S.N., D.N.P., University of Miami.
- TORRES, SANDRA L., *Assistant Professor, BAS-Supervision & Mgmt-N/C, North*. M.I.B., D.B.A., Nova Southeastern University.
- TOWNSEND, PETER C., *Professor, English, Kendall*. A.A., Miami Dade College; B.A., M.A., University of Miami.
- TSENG, DAVID H., *Associate Professor, Mathematics, Kendall*. B.S., National Taiwan Ocean University; M.E., C.U.N.Y.-City College.

TULLOCH, DENTON P., *Professor, College Prep, Kendall*. A.A., Miami Dade College; B.S., M.S., Nova Southeastern University; Ph.D., Curtin University of Technology.

TULLOCH, JOAN Y., *Associate Professor Sr., College Preplab, Hialeah*. B.A., University of West Indies; M.S., Nova Southeastern University; Ed.D., Benedictine University.

UHLE JR., THOMAS S., *Assistant Professor, Education, InterAmerican*. B.A.E., M.Ed., University of Florida; Ed.D., University of Central Florida.

URHOGHIDE, ISAAH N., *Professor, Chemistry/Physics/Earth Science, North*. B.S., M.S., Ph.D., Bendel State University.

USZEROWICZ, VICTOR, *Associate Professor Sr., English & Communication, Wolfson*. B.A., New York University; M.A., Columbia University.

VALDES, ENRIQUE, *Instructor, Busi Mgmt-West, West*. A.A., Miami Dade College; B.S., Florida State University; M.S., Florida Atlantic University.

VALDES, GUILLERMO R., *Assistant Professor, Nursing, Medical*. B.S.N., Barry University; M.S.N., University of Phoenix; D.N.P., Chatham University.

VARELA, MARISOL L., *Professor, English, Kendall*. A.A., A.S., Miami Dade College; B.A., Florida International University; M.S., Ed.D., Nova Southeastern University.

VARGAS, MARIA R., *Associate Professor Sr., Est and World Languages, Hialeah*. B.A., C.U.N.Y. Queens College; M.S., C.U.N.Y. Herbert H. Lehman College.

VARKEY, THOMAS K., *Instructor, Radiologic Sciences, Medical*. A.S., Miami Dade College; B.S., Florida Hospital College of Health Science.

VAZQUEZ, AMERICA, *Professor, E.S.L./World Languages, InterAmerican*. B.A., University of Puerto Rico; M.Ed., Temple University.

VAZQUEZ, HECTOR, *Professor, Music, Theater & Dance, Kendall*. B.M., M.M., Ph.D., University of Miami.

VAZQUEZ, JOSE, *Associate Professor, School of Architecture/Interior Design, North*. B.E.V.D., University of Puerto Rico-Rio Piedras; M.Arch., Ohio State University.

VELASQUEZ-SEDLITO, MARLENE M., *Associate Professor, Nursing, Medical*. B.S., M.S., D.N.P., University of Miami.

VELLONE, ADAM D., *Associate Professor, English, Homestead*. B.A., M.A., Edinboro University of Pennsylvania. Murray Sisselman & Peter H. Clayton Endowed Teaching Chair. 1st Year 2015-2017.

VIERA, YUSNIER, *Instructor, College Prep, Homestead*. M.S., Universidad de La Habana.

VILLAR-SMITH, MARIA C., *Associate Professor Sr., College Prep, Wolfson*. B.A., University of Florida; M.A., American University; Ed.S., Florida International University.

VINCIGUERRA, ANTHONY, *Professor, Chemistry/Physics/Earth Science, North*. B.S., University of Miami; Ph.D., Florida State University.

WADLE, DAVID M., *Associate Professor Sr., English & Communications, Kendall*. B.S., M.S., Texas Christian University.

WAHL, FLORENTINA S., *Assistant Professor, Fine & Applied Art, NWSA*. A.A., Saint Paul College

of Manila; B.F.A., University of Florida.

WALD, FLAVIA A., *Assistant Professor, Chemistry/Physics, Kendall*. Ph.D., Universidad de Buenos Aires.

WALKER, DENACY S., *Associate Professor, Nursing, Medical*. B.S., Columbia Union College; M.S.N., University of Miami.

WALKER, RONALD E., *Associate Professor Sr., English & Communication, InterAmerican*. A.A., Miami Dade College; B.A., M.S., Florida International University.

WALKER-PERRY, GERALDINE, *Professor, English, Homestead*. B.Ed., University of Miami; M.Ed., Louisiana State University and A. & M.; Ed.D., Florida International University. The Jenkins/Publix Supermarkets Endowed Teaching Chair 2002-2004. The Ruth Anderson Foundation Endowed Teaching Chair. 3rd Year 2007-2009.

WALSH, JANIS M., *Instructor, Hltb Ocp-Generc Nurse-H/C, Medical*. B.S., Indiana Wesleyan University; M.S.N., Hardin-Simmons University.

WALTERS, SABRINA D., *Associate Professor, Developmental Education, North*. B.A., Michigan State University; M.S., Nova Southeastern University.

WALTON, MICHAEL J., *Professor, Computer Information Systems, North*. A.A., Miami Dade College; B.A., University of West Florida; M.S., Barry University.

WALZ, LEO R., *Assistant Professor, Music, Theater & Dance, Kendall*. D.M.A., University of Miami.

WARD, WENDY J., *Associate Professor, English & Communication, Wolfson*. A.A., Miami Dade College; B.A., M.Ed., University of Florida.

WASHINGTON-FISHER, SHIRELLE E., *Instructor, Nursing, Medical*. B.S.N., M.S., Florida International University.

WHITE, RICHARD O., *Professor, CIS, Homestead*. A.A., Miami Dade College; B.S., M.S., Barry University; Ph.D., University of Miami.

WILLIAMS III, CHARLES, *Assistant Professor, Business Mgt-Hialeah, Hialeah*. B.S., M.S., Florida State University.

WILLIAMS, GAIL L., *Assistant Professor, Nursing, Medical*. B.S., State University of New York Health Science Center at Stony Brook; M.S.N., University of Phoenix.

WILLIAMS, PAMELA D., *Instructor, Hospitality Management, Wolfson*. A.S., Culinary Institute of America; B.S., The Art Institute of Fort Lauderdale **; M.S., Florida International University.

WILLIAMS, REGINA M., *Instructor, Education, InterAmerican*. B.B.A., University of Miami; Ed.S., Florida State University; M.S., Nova Southeastern University.

WILLIAMS, SELWYN A., *Assistant Professor, BS-Biological Sciences, North*. B.S., C.U.N.Y. Brooklyn College; Ph.D., City University of New York-C.U.N.Y.

WILLIAMS, STUART K., *Associate Professor, Social Science, Kendall*. B.A., M.A., Florida International University; M.A., The New School.

WINSTON, RON, *Instructor, Dental Hygiene, Medical*. A.A., A.S., Miami Dade College; B.A.S., St. Petersburg Junior College; M.B.A., American Intercontinental University.

WIRTEL, JOSEPH P., *Associate Professor Sr., Est and World Languages, Hialeah*. B.A., Florida Atlantic University; B.A., Florida State University; M.S., Nova Southeastern University.

WONG, ALICE, *Associate Professor Sr., Mathematics, North*. B.A., University of Miami; M.A., Stanford University.

WORSLEY, MARY E., *Associate Professor, Medical Management Sciences, Medical*. A.S., Miami Dade College; B.S., M.S., Nova Southeastern University.

YASSIN, RAEF R., *Assistant Professor, Engineering-N/C, Wolfson*. A.A., A.S., Miami Dade College; B.S., M.S., Ph.D., Florida Atlantic University.

YI ORTIZ, NANCY C., *Associate Professor Sr., College Prep, Kendall*. A.A., Miami Dade College; B.S., M.S., Florida International University.

YODER, MICHAEL A., *Assistant Professor, Emergency Medical Services, Medical*. A.S., Florida Keys Community College; A.S., Miami Dade College.

YOUNG, CLIFFORD W., *Professor, Social Science, Kendall*. B.A., M.A., University of Texas-Austin; Ed.D., Florida International University. Adorno and Zeder Employee Charitable Foundation Endowed Teaching Chair 2001-2003.

ZABALA, MARIA D., *Associate Professor, School of Architecture/Interior Design, North*. B.Arch., University of Miami; M.S., Columbia University.

ZAMORANO, MARTHA B., *Professor, English, Kendall*. B.A., M.A., University of Miami.

ZEJNILOVIC, ADNAN, *Instructor, Computer Information Systems, Wolfson*. M.S., Florida Institute of Technology.

ZHANG, QIANHUI, *Professor, Chemistry/Physics/Earth Science, North*. Ph.D., University of Miami.

ZOLFAGHARI, MERLIN R., *Assistant Professor, Radiologic Sciences, Medical*. A.S., Miami Dade College; B.S., M.S., Florida International University.

ZUSMAN, VICTORIA S., *Associate Professor Sr., Biology, Health & Wellness, North*. B.A., College of Notre Dame-Maryland; M.S., Radford University; M.P.H., University of Minnesota Twin Cities.



Professors Emeriti

- ADELSON, ESTELLE G., (1967-1986), B.A., M.A.
 AIDEM, JOHN R., (1965-1984), D.C.T., B.S., M.S.
 AIKENS, JOSEPH W., (1961-1985), B.S., Ed.S., M.Ed.
 ALDERFER, MILTON C., (1968-2003), B.B.A., M.B.A.
 ALEXANDER, DIMITRY N., (1966-1996), B.A., J.D.
 ALHEIM, WILLIAM R., (1961-1996), B.S., M.A., Ph.D.
 ALLEN, ROGER D., (1965-1986), B.S., M.A., M.S.
 ALLEN, STEWART, (1969-1997), B.A., M.A.
 ALPERSTEIN, A.A., (1965-1989), B.S., M.A.
 ALTSHULER, THELMA C., (1962-1998), B.A., M.A.
 ANDERSON JR, GEORGE S., (1965-1994), B.S., M.Ed., Ed.D.
 ANDREWS, LINCOLN G., (1969-1988), B.Ed., M.Ed.
 ARANEGUI, SANTIAGO Q., (1974-), B.S.
 ARCHIBALD, JOHN M., (1966-1991), B.Ed., M.S.
 ARTZT, NORBERT S., (1966-1996), B.A., M.A.
 ASBURY, CHARLES J., (1969-1994), B.A., M.A., M.A., Ph.D.
 AUGUSTINE, FRANK L., (1969-1990), B.A., Ed.S., M.Ed., M.S.
 AUSTIN, ELLYN W., (1965-2003), B.A., M.A.T.
 AUSTIN, JACQUELIN C., (1969-1990), B.A., M.S.
 AUSTIN-HILL, SUZANNE (1982-2010), BA, MS, Ph.D.
 BABSKI, CARL A., (1960-1996), B.S., M.S., Ed.D.
 BALDWIN, FREDERICK L., (1970-1998), B.S., M.A.
 BALLESTER, ANIBAL, (1967-1992), B.A., M.S.
 BAMBER, EDWARD A., (1966-1987), B.S., M.Ed.
 BARONE, ROBERT, (1966-1996), B.A., M.A.
 BATTLE, MARGARITA, (1988-2011), M.A., Ph.D.
 BEAVIN, CHARLES W., (1969-2006), B.A., M.B.A.
 BENNETT, HOWARD C., (1967-1992), B.S., M.S.
 BENSON JR, NEAL P., (1964-1996), B.S., M.A., Ed.D.
 BENSON, ROBERT N., (1964-1993), B.A., M.A.
 BERGEN, GEORGE T., (1967-1993), B.A., M.A.
 BERKEY, ALAN S., (1968-2006), B.A., M.A., Ed.D.
 BETHARDS, LEONARD S., (1964-1988), B.A., Ed.S., M.B.A.
 BIDDLE, MARY M., (1962-1983), B.S., M.S.
 BIRDSEY, MONROE R., (1963-1982), B.A., M.A., Ph.D.
 BLACKSTONE, ELAINE D., (1970-1990), B.S., M.Ed., M.S.N., Ed.D.
 BLITZER, ROBERT F., (1971-1998), B.A., M.A., Ed.D.
 BOCHES, ANNE E., (1969-1994), B.A., M.A.
 BODGER, ARTHUR, (1967-1986), B.M., M.M.
 BOLES, EDWIN V., (1972-1992), B.B.A., M.A.
 BOSSTICK, MAURICE, (1966-1996), B.S., M.S.
 BOYLE, JOSEPH J., (1967-2003), B.S., M.S.T.
 BRADY, RAYMOND G., (1966-1994), B.A., M.A.T.
 BRECHNER, ROBERT A., (1966-2003), B.S., M.B.A.
 BREDENBERG JR, HENRIK, (1967-1996), B.A., L.L.B., M.A., Ph.D.
 BRIGGS, DONALD C., (1962-1996), B.A., D.A.
 BRODSKY, MICHAEL D., (1972-2005), B.Ed., M.S., M.S.W.
 BROWN, FREDERICK K., (1964-1984), B.B.A., M.B.A.
 BROWNER, MICHAEL B., (1967-1996), B.A., M.A.
 BURR, DORIS M., (1961-1991), B.A., M.A.
 BURR, MARIANNE G., (1966-1991), B.M., M.M.
 BURRUS, THOMAS L., (1965-1995), B.S., M.Ed.
 CHADURGIAN, JACK M., (1966-1990), B.S., M.Ed.
 CHASSMAN, ARTHUR R., (1961-1990), B.F.A., M.F.A.
 CHENG, KUO Y., (1961-1979), B.S., M.S.
 CHILLAG, JOAN C., (1968-1994), B.S., M.A.
 CHRISTIE, ROBERT E., (1960-1995), B.Ed., M.A.
 CIERESZKO, ANA A., (1976-2010), B.S., M.S., Ed.D.
 CLARK, DONALD B., (1966-1998), B.A., M.S., Ph.D.
 CLINE JR, FRANK P., (1963-1996), B.A., M.A.
 CLOUSTON, OFELIA M., (1968-1993), B.S.N., M.S.N.
 COATS, SHIRLEY B., (1961-1983), B.A., M.Ed.
 COE, EVAN G., (1961-1989), B.A., M.A.
 COLLINS, JOHN G., (1961-1982), B.A., M.A.
 COLMAN, CLIFFORD V., (1968-1998), B.A., M.A.
 COMBS, ARTHUR W., (1965-1989), B.A., M.Ed., Ph.D.
 CONOVER, PAUL H., (1961-1981), B.S., M.A.
 COOPER, CAROLYN, (1975-2006), A.S., B.A., M.S., Ed.D.
 CORBIN, JOHN P., (1961-1983), B.S.
 COULTER JR, JAY W., (1963-1985), B.Ed., M.Ed., Ed.D.
 COX, CHARLES L., (1974-2009), B.A., M.A., Ph.D.
 CRAIG, ELMER, (1971-1996), B.S., M.A.
 CRAIN, MARY T., (1967-1986), B.A., M.A.
 CRAWFORD, GALE E., (1971-1994), B.S., M.S.
 CREELY, BEVERLY A., (1965-1996), B.Ed., M.A.
 CREWS, GEORGE L., (1961-1982), B.S., M.Ed.
 CRONIN, JOAN M., (1966-1989), B.A., M.A.
 CRUSE, JOANNA S., (1973-1995), B.A., M.A., D.A.
 CUERVO, MARGARITA M., (1975-2008), B.B.A., M.S., Ed.D.
 DAGRAEDT, MARY V., (1961-1995), B.S., M.S.
 DALE, PAULETTE, (1976-2008), B.A., M.S., Ph.D.
 DAUGHERTY, GEORGETTE H., (1967-1993), B.A., M.Ed.
 DAVIS, BRUCE A., (1966-2003), B.S., M.S.
 DAVIS, LEE W., (1963-1985), B.S., M.A.
 DAWSON JR, WILLIAM G., (1978-2000), B.A., M.M.
 DE SAUTEL, BRUCE L., (1967-1995), B.S.
 DEAN, PATRICIA A., (1961-1986), B.A., M.A.
 DELONG, PATRICK D., (1961-1992), B.S., M.A.
 DEMARIS, RONALD E., (1965-1995), B.S., M.A.
 DERUMS, RASMA, (1967-1997), A.S., B.S., M.S.
 DIEBOLD, CLIFFORD A., (1974-1996), B.S., M.B.A.
 DIGGES JR, FRANK T., (1965-1996), B.S., M.A.
 DOMINGUEZ, NESTOR J., (1978-1996), B.A., M.A., Ph.D.
 DROBNER, ROBERT H., (1961-1986), B.S., M.A.
 DUFF, SHELBY, (1961-1991), B.A., M.Ed.
 DUNN, DOROTHY A., (1966-1988), B.A., M.A., D.A.
 EDMUNDSON, NELLIE U., (1964-1996), B.S., M.A.
 EMERSON, GEORGE H., (1967-2003), B.A., Ed.D.
 FACKRELL, J G., (1968-1996), B.A., M.Ed.
 FALLON, MARCIA J., (1967-1995), B.A., M.L.S., Ed.D.
 FERGUSON, BETTY T., (1971-2001), B.S., M.A.
 FERRER, MARTA, (1978-1996), M.S.
 FIRESTONE, BRUCE, (1969-1997), B.S., M.S.
 FISHBEIN, ELIZABETH L., (1967-1991), B.S., M.M., Ph.D.
 FISHER, IJOURIE S., (1961-1985), B.A., M.Ed., M.S., Ph.D.
 FIX, COLLEEN M., (1966-1998), B.A., M.S.
 FLEISCHER, JOEL W., (1973-2008), A.A., B.A., M.S., Ed.D.
 FLETCHER, MABEL, (1960-1982), B.A., B.L.S.
 FORRESTER, JANIE B., (1967-1986), B.A., M.S.
 FOSTER, BARBARA J., (1974-1996), B.S., M.S.
 FRANCIS, CYRIL A., (1970-1995), B.A., M.A., M.A., M.A.
 FROMM, MARIEL D., (1963-1995), B.S., M.A.
 FUNKE, FRANCIS J., (1960-1980), B.A., Ph.D.
 GAGER, GEORGE F., (1961-1992), B.S., M.S.
 GALLOWAY, BARBARA J., (1966-1996), B.S., M.B.A., M.S.
 GEARHART, DARWIN E., (1966-1996), A.A., A.S., B.A., B.D., T.H.M.
 GIBSON, ANNETTE R., (1979-2014), B.S.N., M.S.N., M.Ed.
 GIBSON III, JOSEPH H., (1967-1997), A.S., B.S., M.Ed.
 GILBERT, WILBUR A., (1967-1997), B.S., M.S.
 GILLESPIE, PAUL R., (1963-1986), B.A., M.S.
 GLUSKI, HENRY A., (1963-1988), B.A., M.A., M.A.
 GOLDSTEIN, KENNETH, (1964-1993), B.S., M.A.
 GOLL, ROBERT J., (1969-1996), B.S., B.S., Ph.D.
 GONZÁLEZ, ANGELA M., (1976-2003), B.Ed., M.A., Ed.D.
 GONZÁLEZ, BLANCA M., (1968-2002), A.A., B.B.A., M.B.A.
 GONZÁLEZ, CHARLES, (1969-1998), B.A., M.Ed.
 GORMAN JR, RAYMOND H., (1961-1992), B.A., M.Ed., M.S.
 GOTTLIEB, DORMA J., (1978-2010), B.S., M.S., Ph.D.
 GRANROS, FREDERICK E., (1964-1997), B.S., M.Ed.
 GRAY, JAMES S., (1966-1992), B.A., M.B.A.
 GREENE, CHARLES P., (1967-1997), B.A., M.Ed., Ed.D.
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 GREENFIELD, RUTH W., (1964-1988), B.M., M.M., D.M.
 GROSELLE, FRANCIS X., (1961-1995), B.S., Ed.S., M.S.
 GROSZ, ROBERT C., (1966-1996), B.A., M.S., Ed.D.
 GROWICK, SIMON, (1969-1993), A.A., A.S., B.S., M.S.
 GRUMBACH, ROYAL D., (1967-1990), B.A., M.A., Ph.D.
 GRUSSING, DALE E., (1969-2003), A.A., B.S., M.S., M.S.
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 HANDELSMAN, ROBERT J., (1968-1995), B.A., M.A., Ph.D.
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 HILLSTEAD, KANDELL W., (1970-1994), B.A., M.A.
 HODGES, PATRICIA, (1967-2000), B.S., M.B.A.
 HOFFMAN, LINDA K., (1968-1997), B.S., M.Ed.
 HOGAN, FRANCIS L., (1961-1990), B.S., M.S., Ph.D.
 HOLLAND JR, WILLIS A., (1965-1997), B.A., M.S., Ph.D.
 HOLT, CHARLES E., (1961-1981), B.A., M.A.
 HORNOR, MARIA B., (1960-1986), B.S., M.Ed.
 HUFF, KATHERINE A., (1975-1996), B.A., M.Ed.
 IZQUIERDO, RENE, (1989-2010), B.A., M.A., M.P., Ph.D.
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 JOHNSON, JUANITA B., (1974-2002), B.A., M.L.S.
 JOHNSON, RALPH E., (1970-1995), B.S., M.Ed., Ed.D.
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 JONES, MILDRED S., (1968-1995), B.S., M.S.
 JONES, WILLIAM B., (1963-1982), B.S., M.Ed.
 KAMBOUR, MICHAEL T., (1963-1988), B.Ed., B.S.E., M.Ed.
 KANZER, LAWRENCE, (1964-1993), B.A., M.A., J.D.
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 KERCHEVAL, BARBARA A., (1963-1995), B.S., M.S.
 KERN, JOHN E., (1972-1997), B.S., M.S.
 KING, MARY B., (1961-1999), B.A., M.A.
 KITNER, JON D., (1976-2008), B.F.A., M.A.
 KLEZMER, MICHAEL I., (1966-1996), B.A., M.F.A.
 KLINGENSMITH, CHARLES F., (1966-1996), B.S., Ed.S., M.Ed.
 KOBELIN, JOEL, (1963-1991), B.S., M.Ed., Ed.D.
 KOETH, LEONARD A., (1966-1996), B.S., M.B.A., Ed.D.
 KORNGOLD, RAYMOND B., (1962-1990), A.A., B.A., M.A.
 KRANTZ, BARBARA M., (1968-1996), B.S., M.Ed.
 KROHN, EDWARD J., (1972-2001), B.A.A., B.S., M.Ed.
 LALICH, VELJKO, (1966-1996), B.A., M.A., Ph.D.
 LAMADRIZ, ROCIO A., (1977-1997), B.A., M.A.
 LAMAR, ENRIQUE J., (1968-1992), B.A., M.S.
 LANGSAM, MARVIN I., (1970-2000), B.Ed., M.Ed.

- LARKINS, MARGARET W., (1970-1999), B.S., Ed.S., M.S., Ed.D.
- LAZZARO, THOMAS A., (1964-1995), B.S., M.A.T.
- LEONARD, DOROTHEA L., (1967-1993), B.A., M.Ed., Ph.D.
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- MAHAN, MARY H., (1971-2001), B.S., M.S., Ed.D.
- MARKERT III, GEORGE W., (1961-1981), A.A., A.B., M.S.
- MARTÍNEZ, OLGA D., (1975-1995), M.S.
- MASON, GERALD E., (1964-1995), B.S., M.Ed., Ed.D.
- MAST, JANICE H., (1970-1974; 1982-2010), B.A., M.Ed.
- MAST, RICHARD C., (1966-2003), B.S., M.A., Ed.D.
- MATTOX, KAREN, (1974-2009), B.S., M.S.
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- MENDOZA, MANUEL G., (1965-1998), B.A., M.A.
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- OLSON, JOSEPH L., (1963-1985), B.A., M.Ed.
- ORSELL, WALLACE H., (1967-1993), B.S., M.S., Ph.D.
- OSSIP, BARBARA A., (1964-1996), A.A., B.A., M.A., Ed.D.
- OZAN, MAHMUT E., (1963-1993), B.A., M.Ed.
- PALOW, WILLIAM P., (1969-2003), B.S., M.Ed., Ed.D.
- PARRAGA, CHARLOTTE N., (1965-1985), B.A., M.Ed., Ph.D.
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- PERDUE, BENNIE L., (1974-2009), A.A., B.A., M.S.
- PERRY JR, ROY A., (1968-1996), B.M., M.A.
- PEAFF, ROBERT M., (1967-1992), B.Ed., M.A.
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- POTTER, RAYMOND J., (1968-1992), B.A., M.A., Ph.D.
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- READ, GABRIEL G., (1964-1996), B.Ed., M.Ed.
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- ROSE, JOHN G., (1977-1999), B.S., M.A., M.Ed.
- ROSE, MARGARET G., (1967-2002), B.A., M.A.
- ROTH, AUDREY D., (1963-1996), B.A., M.A., Ph.D.
- RUCKER, SUZANNE S., (1961-1996), B.A., M.Ed.
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- SANDOVAL, HOWARD K., (1969-1996), B.S., M.A., Ph.D.
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- SAPHIRE, SRUL U., (1970-1990), B.A., B.S., M.A., Ed.D.
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- SCHNEIDER, GEORGE H., (1961-1986), B.A., M.S.
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- SCHWARTZ, ALBERT, (1967-1988), B.A., M.S., Ph.D.
- SEAGER, CHARLES R., (1969-2003), B.S., M.S., Ph.D.
- SHAFFER, RICHARD D., (1960-1983), B.A., M.A., M.Ed.
- SHANE, KENNETH V., (1964-1986), B.A., J.D.
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- SHEROUSE, EVE T., (1967-1987), B.S., M.A.
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- SMITH, DOUGLAS R., (1960-1991), B.S.E., M.Ed.
- SMITH, MCGREGOR, (1966-1992), B.S., Ph.D.
- SMITH, RUTH C., (1961-1996), B.A., Ed.S., M.A.
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- SPIEGEL, HERBERT J., (1969-1992), B.S., M.S.
- SPITZER, DAVID D., (1964-1997), B.A., M.A.
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- STEINBERG, RONALD E., (1966-1996), B.A., L.L.D.
- STEINER, JAMES J., (1963-1982), B.S., L.L.M.
- STOCKER, CARL E., (1964-1994), B.S., M.S., M.S., Ed.D.
- STOKES, ROBERTA B., (1965-1998), B.S., M.A.
- TAKOVICH JR, JOHN M., (1964-1996), B.S., M.S., Ed.D.
- TAYLOR, CECIL J., (1967-1996), B.P.E., M.A.
- TAYLOR, RAYMOND, (1962-1989), B.S., M.A.
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- TESSICINI, SALLY S., (1970-1995), B.F.A., M.F.A.
- THIELE, ROBERT R., (1966-1996), B.F.A., M.F.A.
- THURBER, FRANK R., (1965-1995), B.Ed., M.Ed.
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- TIZIANI, DONALD B., (1965-1990), M.Ed.
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- TRACY, EVELYN H., (1965-1991), A.A., B.A., M.A., Ed.D.
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- WALZER, JOSEPH F., (1966-1989), B.A., B.B.A., M.B.A.
- WARNER, JORGE I., (1966-1997), B.S., M.S., P.D.
- WARNOCK, RONALD H., (1965-1998), B.S., M.S., Ph.D.
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- WATTERS, ROBERT D., (1967-1996), B.A., M.S.
- WEBB, MARTHA C., (1962-1990), B.Ed., M.A.
- WENZEL, GUSTAVE G., (1963-1990), B.A., M.A.
- WERNERT, JAMES E., (1967-1997), B.A., M.A.
- WEST, FELICIA M., (1961-1983), B.S., M.Ed.
- WHITE, CAROLYN B., (1969-1994), B.A., M.A., Ed.D.
- WILCOSKY, ROBERT W., (1975-), A.S., B.Ed., M.Ed.
- WILLCOX, WANDA M., (1963-1985), B.Ed., M.Ed., Ed.D.
- WILLIAMS, KEITH W., (1964-1993), B.A., M.A., M.D.V.
- WILSON, SUSAN U., (1973-1993), B.S., M.S.
- WINE, HENRY E., (1965-1989), B.A., B.S.Ed., M.S.
- WINEBRENNER, LAWRENCE M., (1964-1994), B.A., Ed.S., M.D.V., M.Ed.
- WINET, ALAN, (1969-1990), B.S., M.A., M.A.
- WORLEY, WILLIAM D., (1969-1988), B.S., M.A.
- YAFFA, HAROLD, (1964-1998), B.A., M.A.
- ZABSKY, HAROLD J., (1965-1996), A.S., B.S., M.S.
- ZALMANOVICH, MORRIS H., (1969-1991), B.S., M.Ed.
- ZEIEN, JOHN A., (1967-2003), A.A., B.A., M.Ed., Ed.D.
- ZINGALE, JOSEPH L., (1966-1987), B.A., B.S., Ph.D.
- ZION, CAROL L., (1960-1989), B.A., B.Ed., M.S., Ph.D.
- ZUCKERMAN, CLAIRE S., (1968-1993), B.B.A., M.A., M.S.
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Academic Definitions

The following are definitions of terms with which the reader may not be familiar:

Academic Year: Beginning of the fall term to the end of the summer term; approximately from the end of August to the end of the following July.

Advanced Technical Certificate: These are state-approved advanced specialized programs designed for students who already have an Associate in Science degree and wish to supplement their degree.

Basic Skills Assessment: A test that enables the College to identify the student's academic strengths and weaknesses in reading, writing, and math skills to be used to provide advisement and

placement in courses. See Computerized Placement Test (CPT).

College Credit: A unit of work in a subject, generally equivalent to one hour of class or two hours of laboratory a week for a regular sixteen (16) week term. Thus, a three-credit class meets for three class hours a week or two class and two laboratory hours. There is some variance in this rule for laboratory, clinical and studio courses.

College Credit Certificate Programs: These are state-approved programs that are an integral part of an Associate in Science/Associate in Applied Science degree program.

College-Level Academic Skills (CLAS):

Eliminated on July 1, 2011, the College-Level Academic Skills (CLAS) exam was administered from October 1982 to June 2009 to students seeking an Associate in Arts (A.A.), Bachelor of Arts (B.A.), Bachelor of Science (B.S.), or Bachelor of Applied Science degree from a Florida public college or university as a means of educational accountability that satisfied the mandates of Section 1008.29, FS. Effective July 1, 2011, public postsecondary students are no longer required to successfully complete CLAS requirements in order to be eligible for graduation.

Computerized Placement Test (CPT): An untimed computerized test in four sections (Reading Comprehension, Sentence Skills, Arithmetic and Elementary Algebra) administered to assess the basic skills level of students entering a degree program.

Community Education Courses: Courses that do not award academic credit (non-credit), but are offered for persons who wish to improve their personal efficiency, professional or business related skills and competencies, or enrich their personal lives.

Continuing Education Unit (CEU): Miami Dade awards CEUs for successful completion of Continuing Education non-credit CEU activities. One CEU is awarded for 10 contact hours, and is recorded on the student's permanent record.

Corequisite: A course, which must be taken simultaneously with another course.

Curriculum: A specific program of study comprised of courses leading to a degree or certificate.

Developmental Education: Developmental Education courses address basic skills deficiencies and are designed to prepare students for college level work. Students are advised into



these courses through self-referral, test scores and faculty referral. These courses do not satisfy degree requirements.

Elective: A subject or course, which a student may choose to take as distinguished from a "required course" in a program of study.

Full-Time Student: A student who is enrolled for 12 credits or more in the 16-week terms and six credits or more in the six-week terms. Credits taken in a 12-week term (summer A and summer B) count as half value in each six-week term. Credits enrolled for audit or by departmental examination do not count in computation of full-time status.

In specialized circumstances, the College may define full-time student status as less than the above. This special College-defined status would occur only in unusual circumstances related to the College's Standards of Academic Progress program.

Grade Point Average: The ratio of grade points earned to credits attempted. (See grade point average in Academic Regulations section.)

Major: The designation given to the complete group of courses necessary to fulfill the requirements for graduation in a specific field of baccalaureate programs (i.e., Public Safety Management, Electronics Engineering, etc.).

Occupational Programs: College credit programs leading to an Associate of Science degree.

Pathways: A set of curriculum pathways developed with focused career choices and course sequences to increase transfer success and completion of career-oriented degrees and certificates.

Prerequisite: An academic requirement, which must be met before a certain course can be taken.

Program: A curriculum or series of courses leading to a degree or certificate in a specific field of endeavor.

Registration: Process of enrolling for

classes, selection of courses by day and hour and the payment of fees.

Semester: See Term.

Standards of Academic Progress: Standards of satisfactory academic performance.

Supplemental Vocational Education Courses: These courses are for students currently or previously employed in a job category where skill upgrading is required to maintain current employment or to advance within their career field.

TABE: Test of Adult Basic Education administered to students enrolled in Career Technical Education Programs.

Term: A subdivision of the academic year, i.e., fall, spring, summer A and summer B terms.

Major term: fall and spring, approximately sixteen (16) weeks each.

Short Term: summer A and summer B, *six (6) weeks each. Courses meet additional contact hours per week during the summer A/summer B terms.

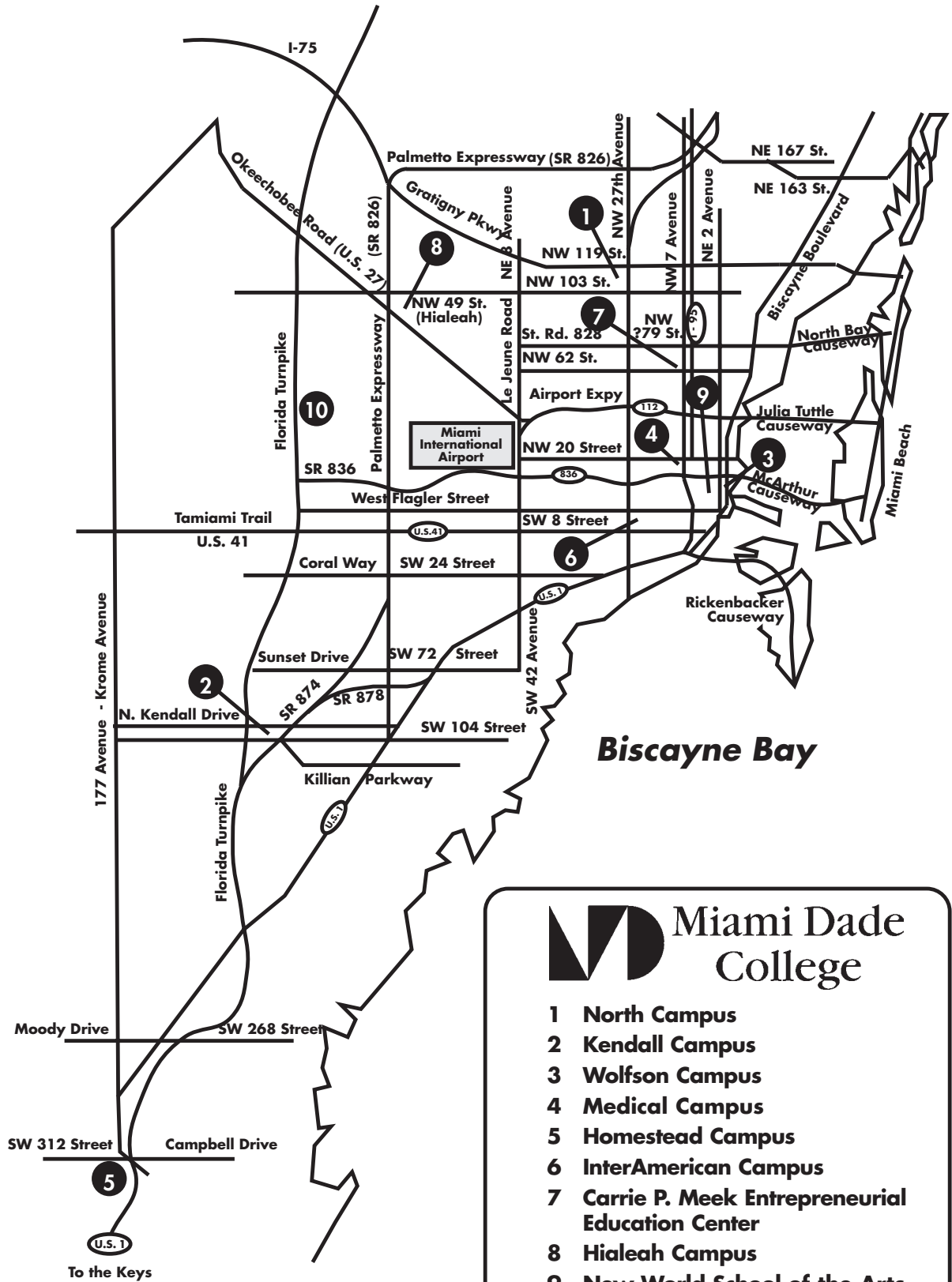
* Note: Some courses are scheduled for the combined summer A/summer B term of 12 weeks.

Transcript: A certified copy of the student's academic record.

Vocational Credit: A unit of work in a subject based on 30 contact hours of classroom participation (or equivalent for work experience).

Career Technical Education Programs (CTE): These programs are defined by the state of Florida and consist of courses valued in vocational credits. Career Technical Education programs are designed to lead to immediate job entry upon completion. Those who complete a Career Technical Education program receive a Career Certificate and are entitled to attend graduation exercises.





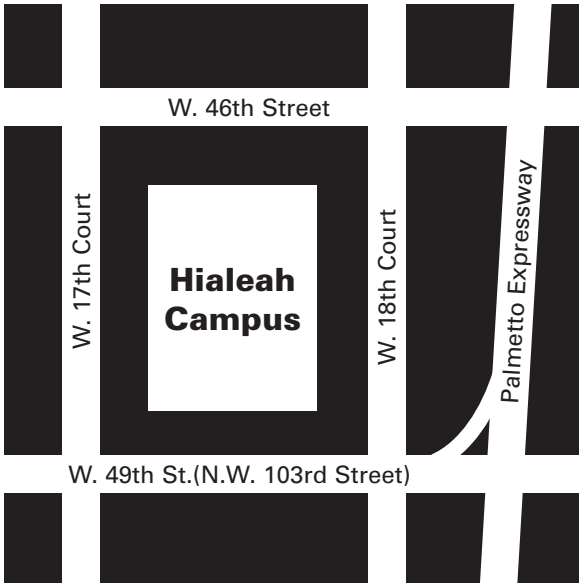


Miami Dade College

- 1 North Campus**
- 2 Kendall Campus**
- 3 Wolfson Campus**
- 4 Medical Campus**
- 5 Homestead Campus**
- 6 InterAmerican Campus**
- 7 Carrie P. Meek Entrepreneurial Education Center**
- 8 Hialeah Campus**
- 9 New World School of the Arts**
- 10 West Campus**

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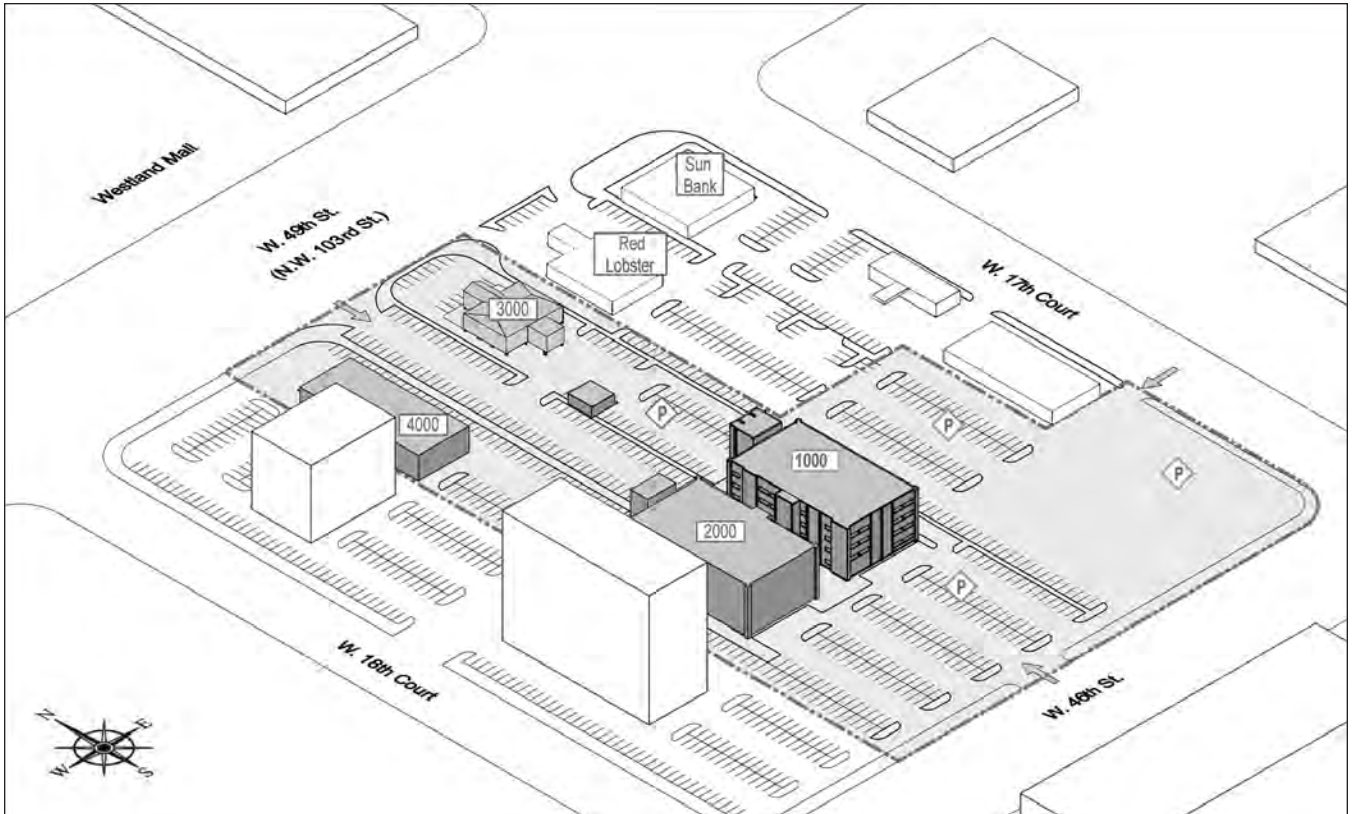


Important Phone Numbers

- 305-237-8775 • Admissions Information
- 305-237-8775 • Registration Information
- 305-237-8794 • Academic Advisement Information
- 305-237-8773 • Financial Aid Information
- 305-237-8701 • Campus Security
- 305-237-8791 • Testing Information

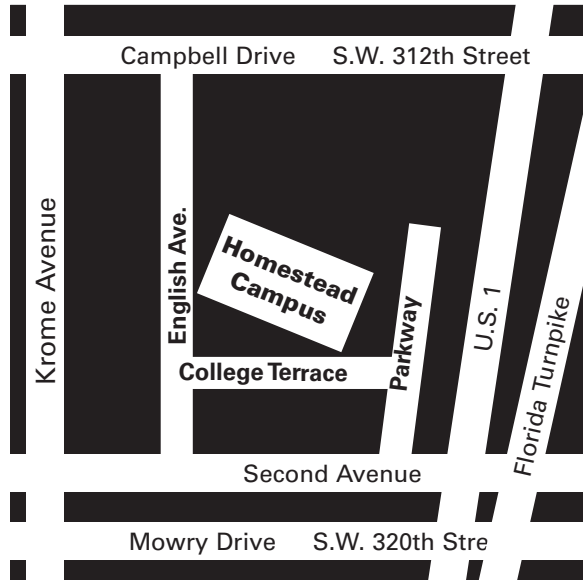
Key to Campus Locations

- 1000 Classrooms Building
- 2000 Hialeah Building 2
- 3000 Student Services Building
- 4000 Administration Building
- P Parking



Homestead Campus

500 College Terrace
Homestead, FL 33030

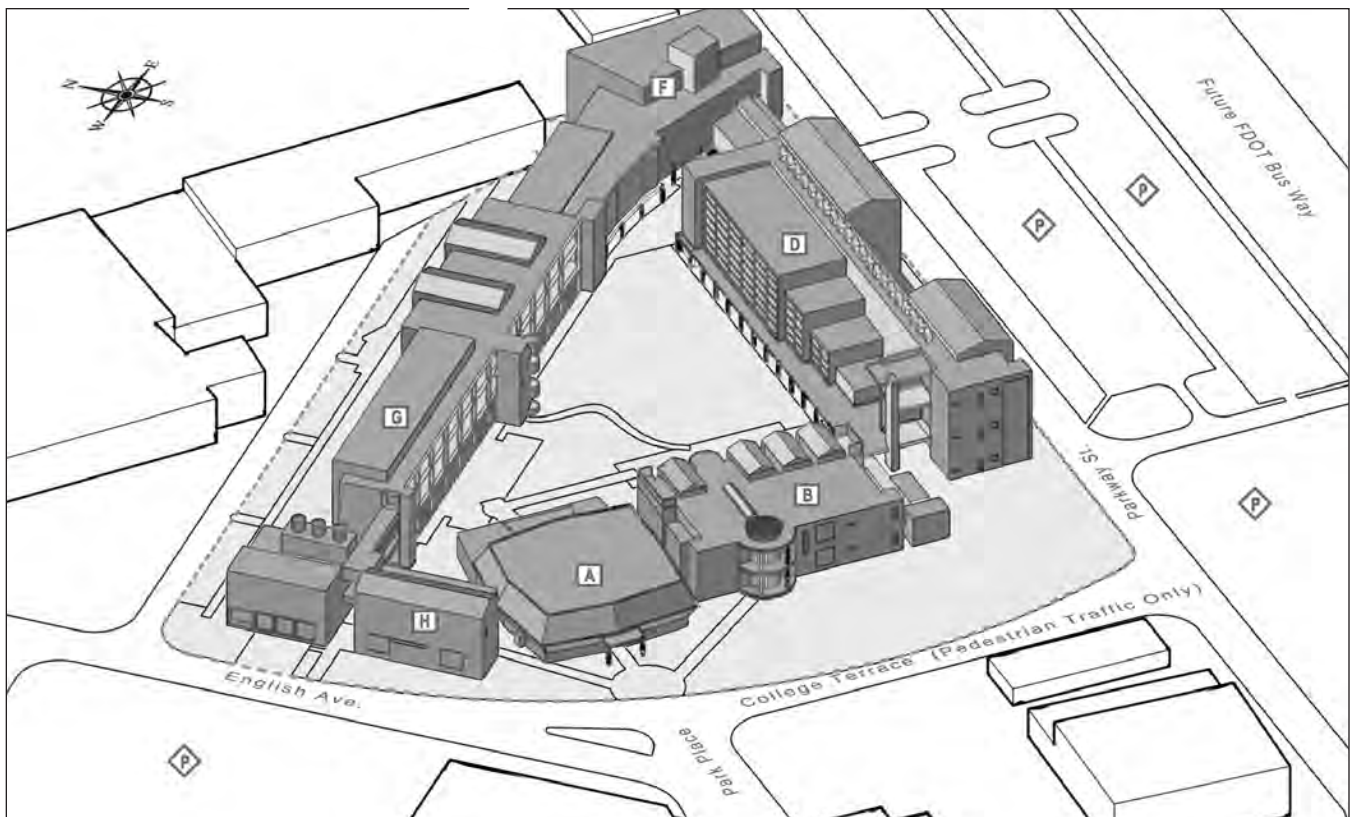


Important Phone Numbers

- 305-237-5555 • Admissions Information
- 305-237-5555 • Registration Information
- 305-237-5046 • Academic Advisement Information
- 305-237-5024 • Financial Aid Information
- 305-237-5100 • Campus Security
- 305-237-5105 • Testing Information

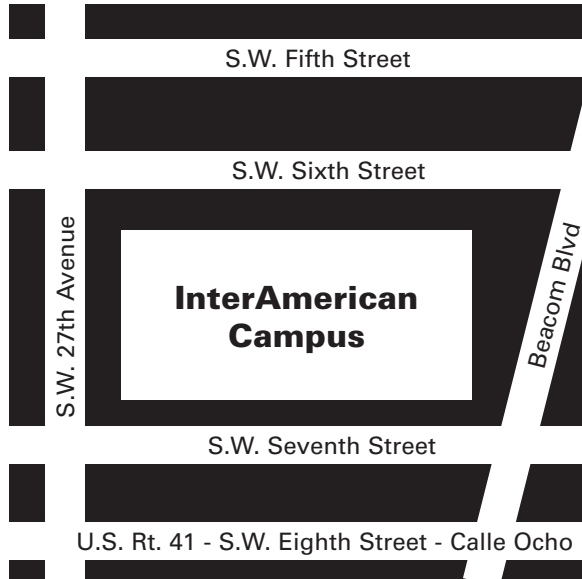
Key to Campus Locations

- A Registration and Student Services
- B Faculty/Administration
- D Information and Technology Center
- F Aviation Training Complex
- G Classrooms/Laboratories
- H Central Physical Plant
- P Visitors' Parking on Parkway Street



InterAmerican Campus

627 S.W. 27th Ave.
Miami, FL 33135

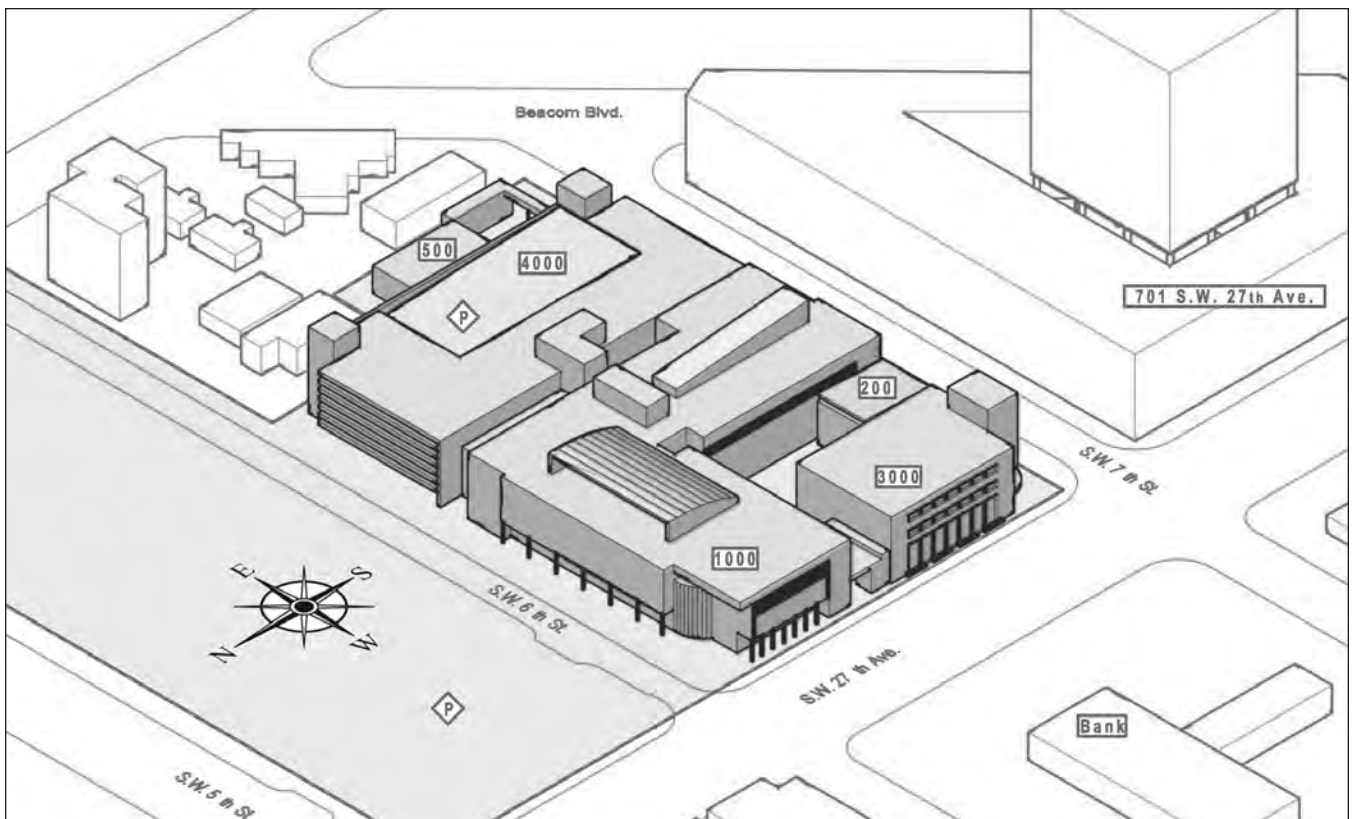


Important Phone Numbers

- 305-237-6052 • Admissions Information
- 305-237-6052 • Registration Information
- 305-237-6133 • Academic Advisement Information
- 305-237-6040 • Financial Aid Information
- 305-237-6100 • Campus Public Safety
- 305-237-6041 • Testing Information
- 305-237-6000 • Campus Main Number
- 305-237-6045 • Student Services Information

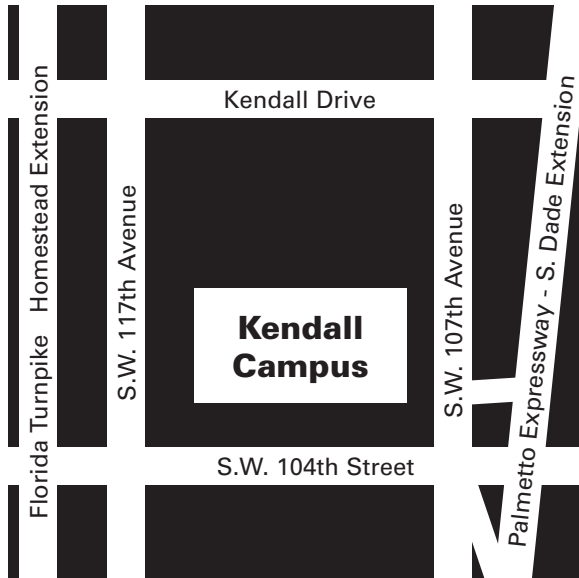
Key to Campus Locations

- 1000 Administrative & Faculty Offices, Classrooms, Student Services, Computer Courtyard and Other Labs
- 200 Instructional Building
- 3000 Classrooms and Laboratories
- 4000 Parking Structure
- 500 Service Building
- P Public Parking



Kendall Campus

11011 S.W. 104th St.
Miami, FL 33176

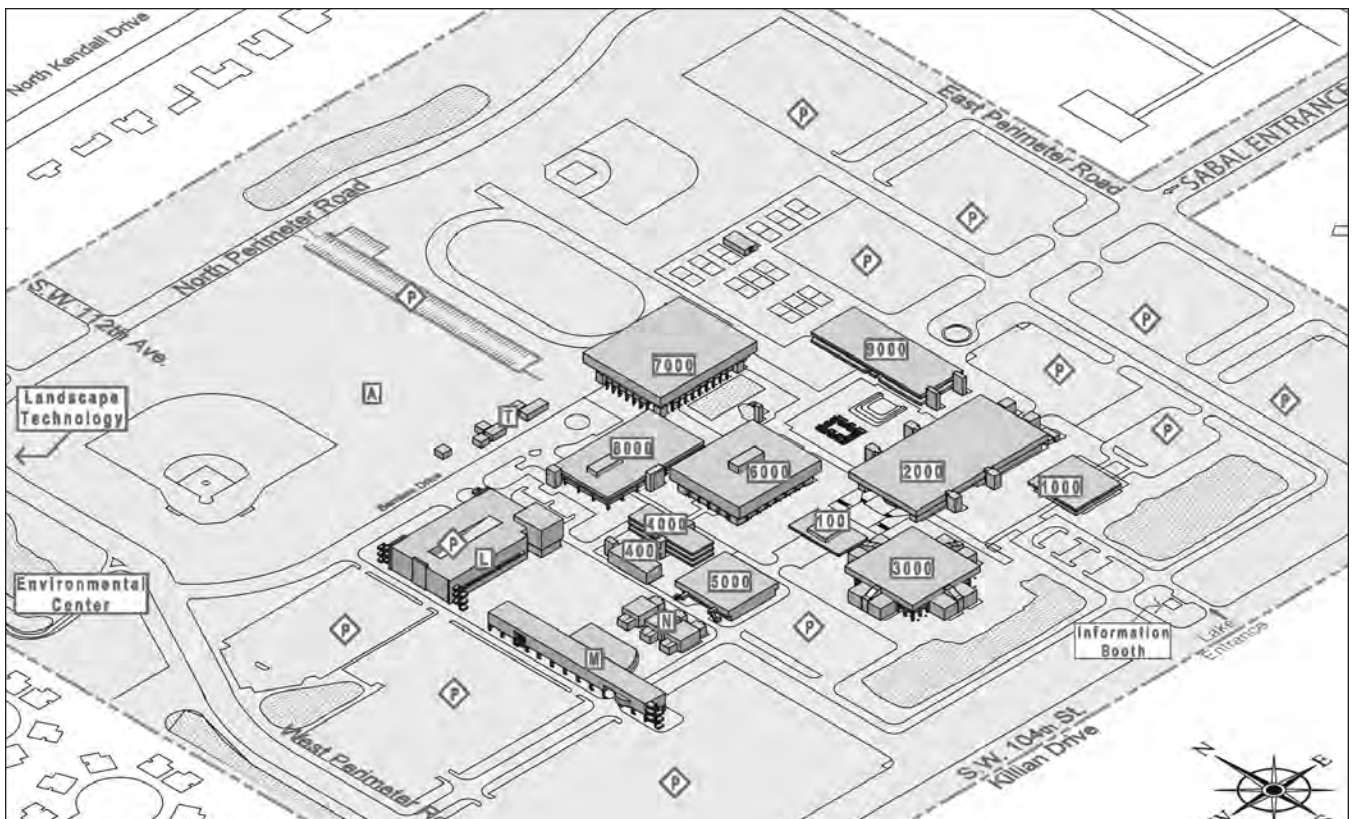


Important Phone Numbers

- 305-237-2222 • Admissions Information
- 305-237-2222 • Registration Information
- 305-237-2125 • Academic Advisement Information
- 305-237-2325 • Financial Aid Information
- 305-237-2100 • Campus Security
- 305-237-2341 • Testing Information
- 305-237-2161 • Community Education

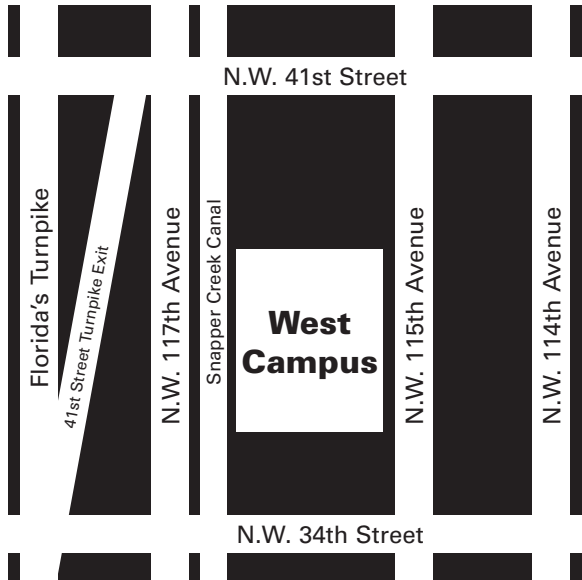
Key to Campus Locations

- 100 Student Life
- 1000 Peter Masiko Hall/Human Resources
- 2000 Niles Trammel Center/Library/Computer Courtyard
- 3000 Leonard Usina Hall/Student Services
- 4000 Daniel K. Gill Hall
- 5000 Fine Arts Building Annex/Public Safety
- 6000 Alfred L. McCarthy Hall
- 7000 Theodore R. Gibson Center/Gym
- 8000 Maria C. Hernandez Center/Bookstore, Cafeteria
- 9000 Jack Kassewitz Hall
- 400 Dante & Jeanne-Marie Fascell Conference Center
- A Athletic fields
- E Environmental Center
- L Parking Garage
- M Martin & Pat Fine Center for the Arts
- N Art Studio Building
- P Parking
- T Trailers



West Campus

3800 N.W. 115th Ave.
Doral, FL 33178

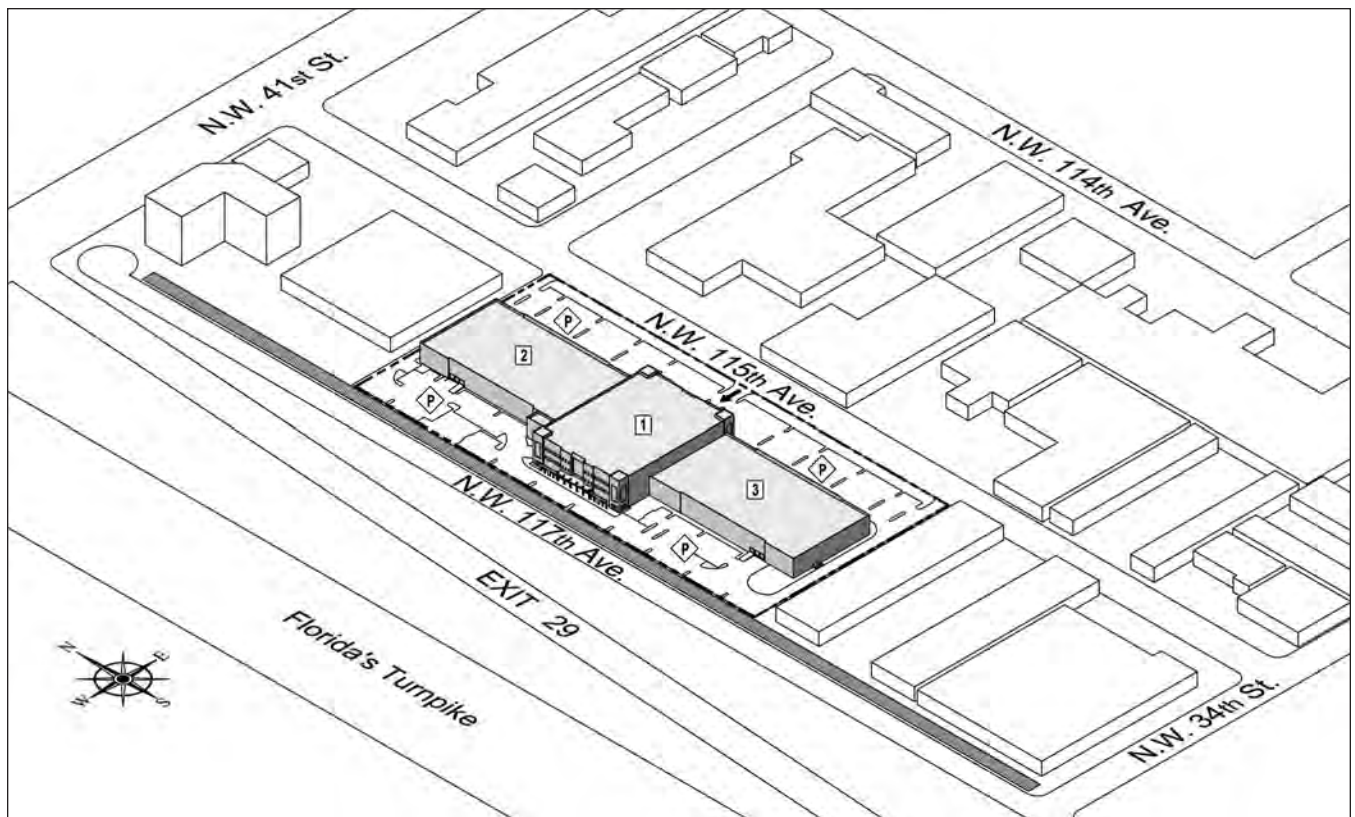


Important Phone Numbers

- 305-237-8900 • Admissions Information
- 305-237-8900 • Registration Information
- 305-237-8947 • Academic Advisement Information
- 305-237-8941 • Financial Aid Information
- 305-237-8100 • Campus Security
- 305-237-8912 • Testing Information

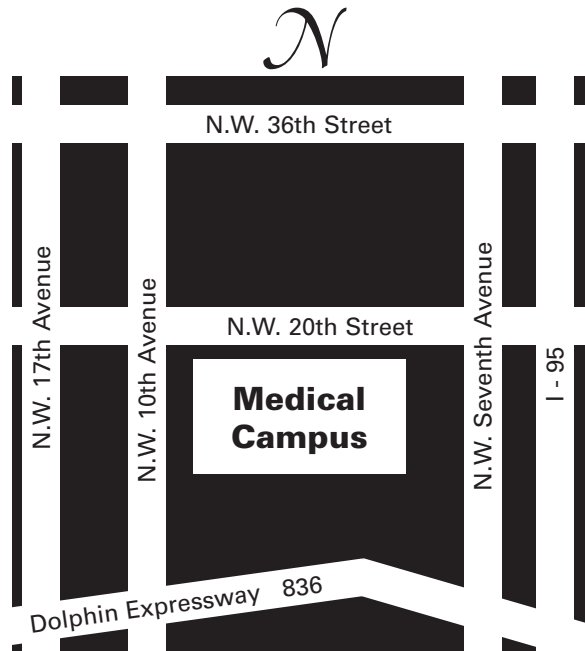
Key to Campus Locations

- 1 Central Building/Classrooms
- 2 Academic Support Center
- 3 South Wing (Parking Garage)
- P Parking



Medical Campus

950 N.W. 20th St.
Miami, FL 33127

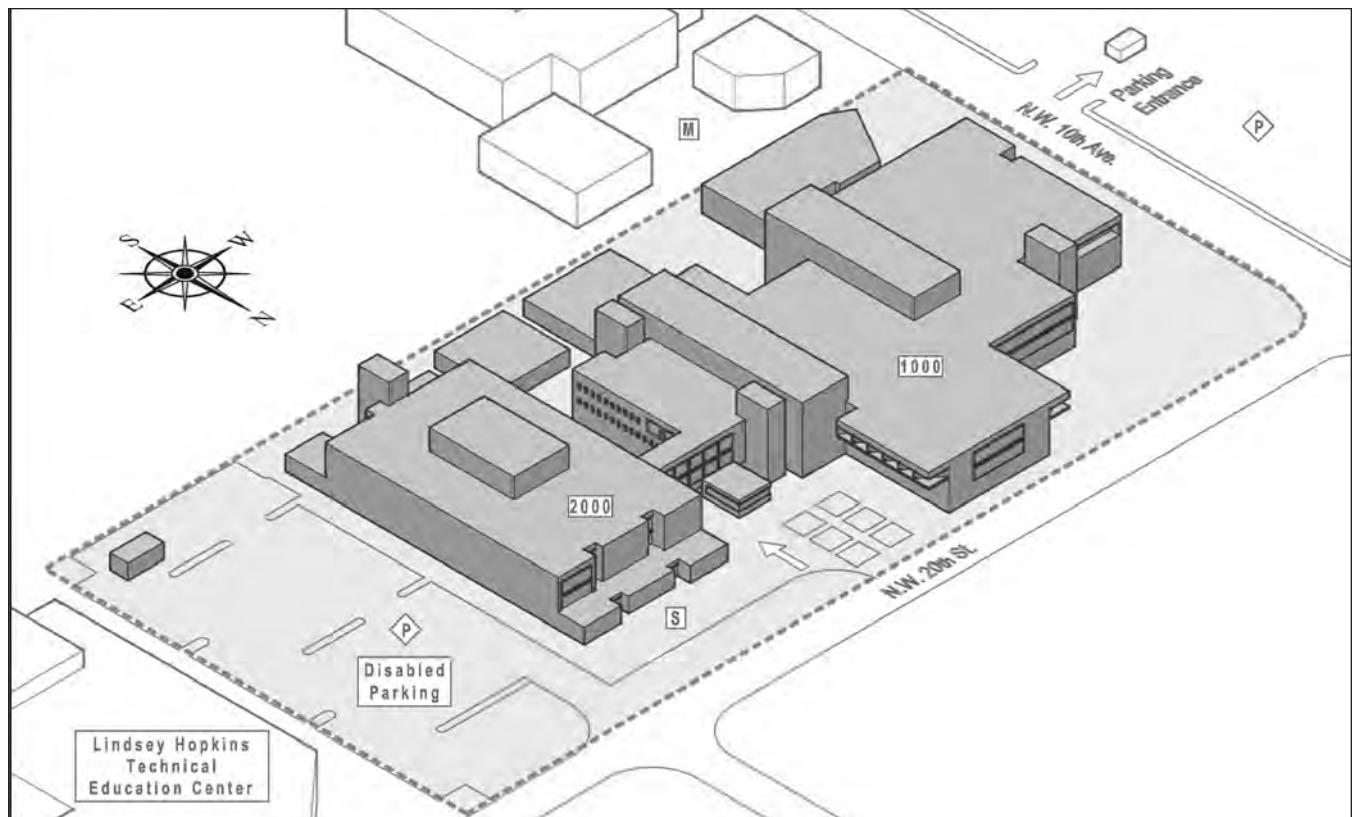


Important Phone Numbers

- 305-237-4444 • Admissions Information
- 305-237-4444 • Registration Information
- 305-237-4141 • Academic Advisement Information
- 305-237-4160 • Financial Aid Information
- 305-237-4141 • New Student Center
- 305-237-4100 • Campus Security
- 305-237-4275 • Testing Information

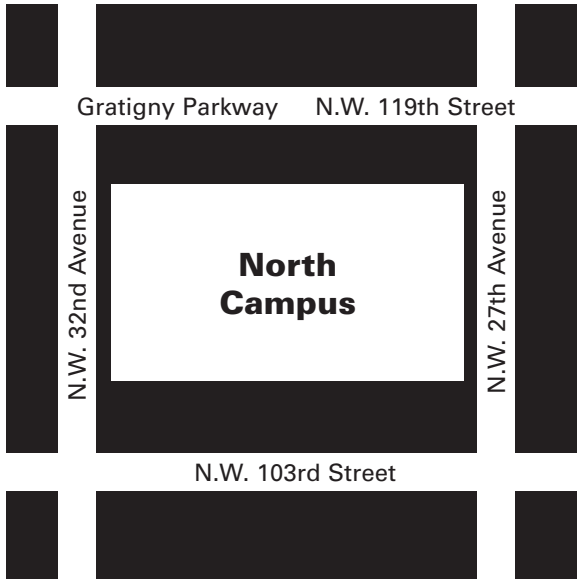
Key to Campus Locations

- 1000 Anna Brenner Meyers Hall
- 2000 Nursing/Allied Health
- P Parking
- M Medical Examiner Center - Dr. Joseph Davis Forensic Pathology
- S Shuttle Pick Up/Drop Off



North Campus

11380 N.W. 27th Ave.
Miami, FL 33167

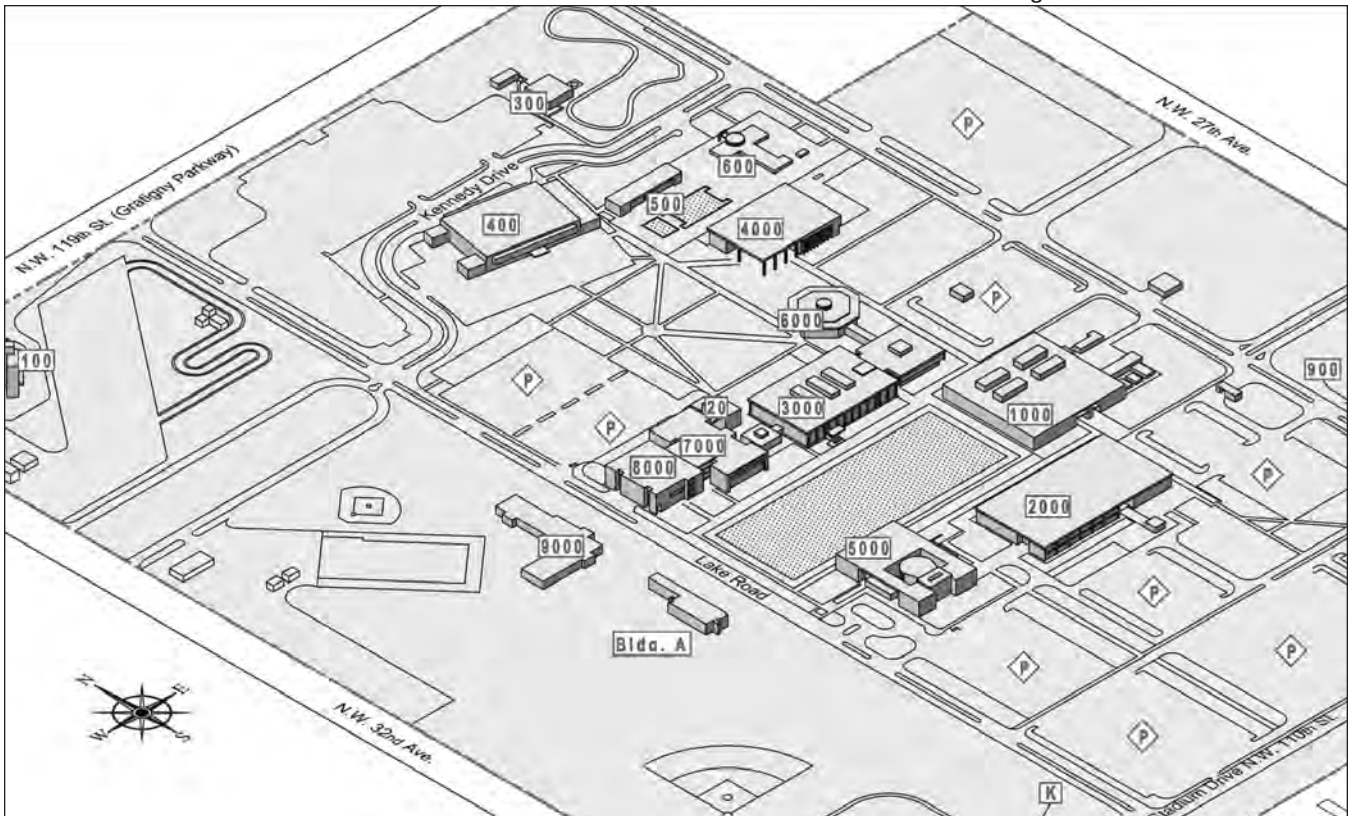


Important Phone Numbers

- 305-237-1149 • New Student Center
- 305-237-1111 • Admissions Information
- 305-237-1111 • Registration Information
- 305-237-1425 • Academic Advisement Information
- 305-237-1058 • Financial Aid Information
- 305-237-1100 • Campus Public Safety
- 305-237-1000 • Campus Main Number
- 305-237-1015 • Testing Information

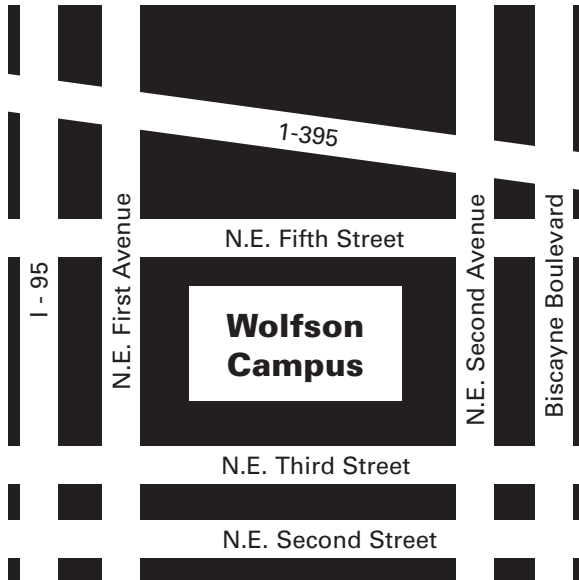
Key to Campus Locations

- 20 Environmental Science Technology Building
- 100 Chief Milton O. Bullock Fire Science Academy
- 300 Building 300
- 400 John F. Kennedy Health Center (Gym)
- 500 Aquatic Center
- 600 Pre-School Laboratory
- 1000 Paul R. Scott Hall - Registration and Student Services
- 2000 Mitchell Wolfson Learning Resources Hall/Library
- 3000 J. Nevelle McArthur Hall of Business and Technology
- 3000 Annex - W. L. Philbrick School of Funeral Sciences
- 4000 LeRoy Collins Campus Center/Student Life
- 5000 William D. Pawley Creative Arts Center and the William & Joan Lehman Theatre
- 6000 Developmental Studies Center
- 7000 Garth C. Reeves Hall
- 8000 School of Justice & Safety Administration
- 9000 School of Justice
- A Science Complex
- P Parking
- K Fire Science/Burn Building



Wolfson Campus

300 N.E. Second Ave.
Miami, FL 33132

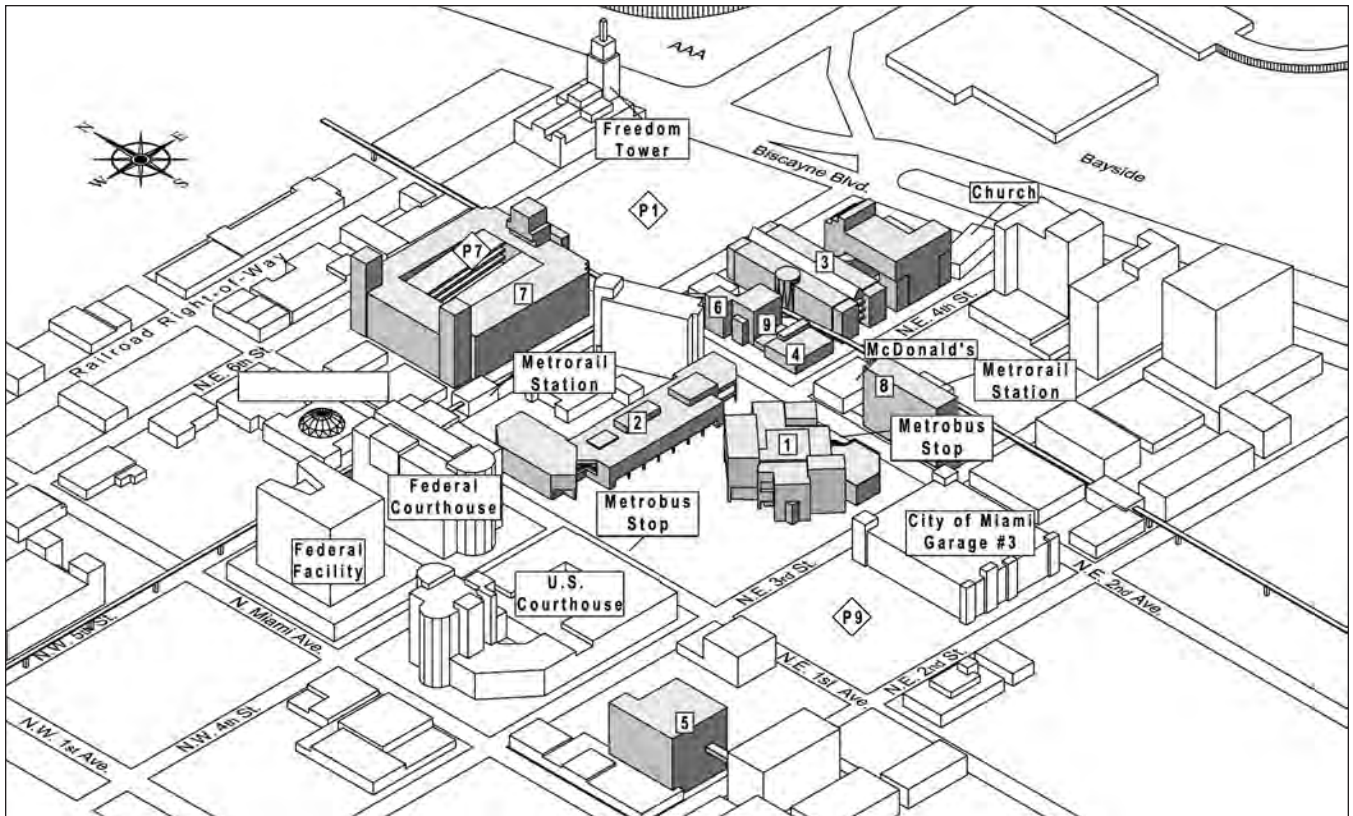


Important Phone Numbers

- 305-237-3076 • New Student Center
- 305-237-3131 • Admissions/
Registration Information
- 305-237-3077 • Academic Advisement
Information
- 305-237-3244 • Financial Aid Information
- 305-237-3011 • Testing Information
- 305-237-3100 • Campus Security
- 305-237-3358 • Career & Transfer Center
- 305-237-3358 • Job Placement
- 305-237-3072 • Access Services
- 305-237-3536 • Student Life

Key to Campus Locations

- 1 Wolfson Building 1
- 2 Wolfson Building 2
- 3 Wolfson Building 3
- 4 Wolfson Building 4
- 5 New World School of the Arts
- 6 Mail Room and Instructional Facilities
- 7 ETCOTA and Parking Garage
- 8 Miami Fire Station Number One
- 9 Miami Culinary Institute
- P1 Faculty/Staff Parking
- P7 Student/Faculty/Staff Parking
- P9 Student Faculty/Staff Parking



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