Miami Dade College

Course Description

CIS1321 | Introduction to Systems Analysis and Design | 4.00 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 1060C. Knowledge of business accounting is recommended. Laboratory fee.

Course Competencies:

Competency 1: The student will understand the concept of systems analysis by:

1. Identifying the responsibilities and role of the systems analyst
2. Explaining the relationship between the systems analyst and user
3. Identifying business organizational structure
4. Describing the structure of an IT department
5. Identifying key components of an information system

Competency 2: The student will demonstrate knowledge of business processes by:

1. Identifying key business system stakeholders
2. Explaining business system functionality and performance requirements
3. Identifying business models
4. Analyzing the impact of internet commerce issues
5. Discussing the impact of enterprise systems
6. Explaining the alignment of IT and business strategies
7. Identifying the purpose of the strategic plan
8. Describing how to research and understand specific corporate culture

Competency 3: The student will demonstrate an understanding of the principles of information system management by:

1. Analyzing how IT policies, procedures and methodologies support the strategic plan
2. Identifying the infrastructure and its relationship to applications and user requirements
3. Describing processes used to maintain organizational efficiencies and resources
4. Researching service provider activities

Competency 4: The student will demonstrate knowledge of system development, acquisition, and implementation by:

1. Explaining the purpose of the SDLC to business case studies
2. Explaining the Preliminary Investigation for business case studies
3. Analyzing User requirements using Interview and Questionnaire methodologies
4. Identifying the input, process and output requirements.
5. Explaining a system implementation plan using software tools (PERT/CPM,Gantt charts)

Competency 5: The student will demonstrate an understanding of feasibility studies by:

1. Describing the types of feasibility
2. Using current software tools to generate a candidate comparison grid

Competency 6: The student will demonstrate an understanding of user design criteria by:

1. Explaining the benefits of relational database design
2. Identifying the components of a database

3. Explaining data warehousing and its benefits
4. Analyzing screen and form design criteria
5. Describing types of data relationships using Entity Relationship Diagrams (ERDs)

Competency 7: The student will demonstrate knowledge of documenting and reporting information systems requirements and components by:

1. Describing Unified Modeling Language (UML), modeling techniques and methods
2. Analyzing a Functional Decision Diagram (FDD), Data Flow Diagram (DFD), and Use Case diagram for a Business Case
3. Explaining Object Modeling and creating a class diagram
4. Presenting findings in written, slide, and oral presentation formats

Competency 8: The student will demonstrate an understanding of Cost-Benefit Analysis by:

1. Explaining cost-benefit analysis
2. Explaining the purpose of return on investment (ROI) analysis to determine candidate feasibility
3. Explaining Payback Analysis to determine candidate feasibility
4. Describing discretionary costs
5. Describing nondiscretionary costs
6. Using Net Present Value (NPV) analysis to determine candidate feasibility

Learning Outcomes

- Solve problems using critical and creative thinking and scientific reasoning
- Formulate strategies to locate, evaluate, and apply information
- Use computer and emerging technologies effectively