Miami Dade College

Course Description

CTS2960 | Cloud Computing Capstone | 4.00 credits

This course requires students to demonstrate their competence to analyze, design, develop, and test a cloud based complex system. Each student will create and present a cloud-based solution proposal that includes: design documentation, implementation plan, cloud resources required, projected cost analysis, basic security plan and project test plan to create an operational cloud-based system solution. Must be taken during the last semester before graduation and with a departmental permission. Prerequisite: Departmental Approval.

Course Competencies:

Competency 1: The student will successfully formulate project requirements and a statement of work by:

1. Setting up the project purpose and the scope of work to be conducted
2. Planning the project deliverables and the respective timeline with milestones
3. Identifying and defining technical requirements for a cloud-based application
4. Designing a formal written report following the assigned format and style

Competency 2: The student will develop Cloud solutions to satisfy project requirements by:

1. Using the project life cycle management process
2. Adhering to essential life-cycle phases: initiation, planning, execution, and closure
3. Documenting each life-cycle phase following the assigned format and style
4. Identifying computer, networking, storage, and database services required
5. Create a complete design for the project using the identified resources

Competency 3: The student will articulate issues related to cloud-based projects by:

1. Assessing the unique attributes and diverse nature of cloud solutions
2. Examining recent trends affecting cloud projects
3. Identifying which cloud-based services meet a given technical requirement
4. Understanding the issues involved with cloud-based global infrastructure

Competency 4: The student will demonstrate decision-making, problem-solving, and risk assessment skills by:

1. Differentiating between types of scalable storage methods, estimating costs and needs for their cloud-based application
2. Distinguishing processes for creating a cloud-based, redundant, scalable network
3. Estimating the primary source of risks on their cloud-based project
4. Demonstrating an understanding of security features and tools that cloud-based computing provides and how they relate to traditional services
5. Developing an example of a response planning strategy to address the identified risks and design requirements

Competency 5: The student will professionally evaluate cloud-based project proposals and budgets by:

1. Using cloud management tools and software to assist in project cost management
2. Developing a project proposal document following the assigned guidelines
3. Presenting the cloud-based design proposal
4. Describing different project proposals, options designing and costs for their project and the budget to an active audience

Learning Outcomes:

- Communicate effectively using listening, speaking, reading, and writing skills.
- Formulate strategies to locate, evaluate, and apply information.
- Use computer and emerging technologies effectively