SYLLABUS

PART I

EDISON STATE COMMUNITY COLLEGE

CIS 217S CLOUD ARCHITECTING

3 CREDIT HOURS

COURSE DESCRIPTION

Comprehensive study of cloud architecting with an emphasis on installing, configuring, managing, maintaining, monitoring, and troubleshooting virtual cloud-based infrastructure. Prepares students for the AWS Cloud Architecting certification exam. Prerequisite: CIS 117S, CIS 211S, and CIS 214S. Lab fee.

COURSE GOALS

The student will:

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| Bloom’s Level |  | Program Outcomes |
| 4 | 1. | Select, install, and configure operating systems in the cloud. | 3, 5, 7 |
| 3 | 2. | Establish identities and access to cloud-based resources and data. | 1, 3, 7, 8 |
| 3 | 3. | Migrate on-premise systems to the cloud. | 1, 3, 6, 7 |
| 4 | 4. | Analyze and troubleshoot issues and devise solutions to those issues. | 3, 6, 8 |
| 3 | 5. | Establish secure cloud-based resources using hardening best practices. | 1, 3, 6, 7, 8 |
| 5 | 6. | Measure system performance using appropriate monitoring tools. | 3, 6, 7, 8 |

CORE VALUES

The Core Values are a set of principles that guide in creating educational programs and environments at Edison State. They include communication, ethics, critical thinking, human diversity, inquiry/respect for learning, and interpersonal skills/teamwork. The goals, objectives, and activities in this course will introduce/reinforce these Core Values whenever appropriate.

TOPIC OUTLINE

1. Introducing Cloud Architecting
2. Adding a Storage Layer
3. Adding a Compute Layer
4. Adding a Database Layer
5. Creating a Networking Environment
6. Connecting Networks
7. Securing User and Application Access
8. Implementing Elasticity, High Availability, and Monitoring
9. Automating an Architecture
10. Caching Content
11. Building Decoupled Architectures
12. Building Microservices and Serverless Architectures
13. Planning for Disaster