SYLLABUS
PART I
EDISON STATE COMMUNITY COLLEGE
CIS 227S CLOUD DEVELOPMENT
3 CREDIT HOURS

COURSE DESCRIPTION
Comprehensive study of cloud development with an emphasis on developing storage solutions, flexible NoSQL solutions, REST APIs, and event-driven serverless solutions. Securing access to cloud resources using identity and access management (IAM), working with containers and caching, and automating deployments using continuous integration and continuous deployment (CI/CD) methodologies are also included. Prepares students for the AWS Cloud Developing certification exam. Prerequisite: CIS 121S and CIS 217S. Lab fee.

COURSE GOALS
The student will:

Bloom's Level		Program Outcomes
1	1. Recall cloud computing services and models.	1, 5, 6
2	2. Describe development on the cloud.	1, 2, 3, 5, 6
5	3. Write code that interacts with the cloud using SDKs.	1, 3, 5, 6
4	4. Explain the role of IAM in the cloud.	1, 5, 6
4	5. Explain caching within the cloud.	1, 5, 6
3	6. Configure containers in the cloud.	1, 3, 5, 6
5	7. Develop solutions using messaging services.	1, 5, 6
2	8. Describe the use of step functions.	1, 2, 5, 6
5	9. Create a REST API.	1, 2, 5, 6
4	10. Explain how to build secure applications.	1, 2, 5, 6
4	11. Identify best practices for deploying applications.	1, 2, 5, 6

CORE VALUES
The core values are a set of principles that guide Edison State Community College in creating its educational programs and environment. They will be reflected in every aspect of the College. Students' educational experiences will incorporate the core values at all levels, so that a student who completes a degree program at Edison State Community College will not only have been introduced to each value, but will have had them reinforced and refined at every opportunity.

TOPIC OUTLINE
1. Introducing Cloud Development
2. Developing Storage Solutions
3. Securing Access to Cloud Resources
4. Developing Flexible NoSQL Solutions
5. Developing REST APIs
6. Developing Event-Driven Serverless Solutions
7. Introducing Containers and Container Services
8. Caching Information for Scalability
9. Developing with Messaging Services
10. Defining Workflows to Orchestrate Functions
11. Developing Secure Applications in the Cloud
12. Automating Deployment with CI/CD Pipelines