



El Camino College
COURSE OUTLINE OF RECORD – Official

Subject:	CIS
Course Number:	659
Descriptive Title:	AWS Cloud Practitioner Certification Exam Preparation Review
Division:	Business
Department:	Computer Information Systems
Course Disciplines:	Computer Information Systems
Catalog Description:	This noncredit course is a review of the concepts and skills required to successfully pass the Amazon Web Services Cloud Practitioner certification examination. The course adheres to the AWS Academy Cloud Foundations curriculum and provides a detailed overview of cloud concepts, AWS core services, security, architecture, pricing, and support.
Prerequisite:	CIS 150, CIS 152, CIS 154, and CIS 156 or equivalent experience
Co-requisite:	
Recommended Preparation:	
Enrollment Limitation:	
Hours Lecture (per week):	0.67
Hours Laboratory (per week):	0.67
Outside Study Hours:	1.34
Total Course Hours:	24
Course Units:	0
Grading Method:	No Grade
Credit Status:	Noncredit
Transfer CSU:	No
Effective Date:	
Transfer UC:	No
Effective Date:	
General Education ECC:	
Term:	
Other:	
CSU GE:	
Term:	
Other:	
IGETC:	
Term:	
Other:	

Student Learning Outcomes:	1. Topic Review: Students receive a review of topics covered in the AWS Cloud Practitioner exam. 2. Exam Scope: Students are presented with an understanding of the scope of the AWS Cloud Practitioner exam. 3. Career Opportunities: Students gain an understand of the career paths available upon the successful completion of the AWS Cloud Practitioner exam.
Course Objectives:	1. Review of test-taking strategies found on industry certification examinations. a. Multiple Choice b. Quizzes 2. Review of common AWS cloud computing terminology found on the industry certification examination. a. Multiple Choice b. Quizzes 3. Review of cloud computing concepts and models emphasized on industry certification examinations a. Multiple Choice b. Quizzes 4. Review of cloud computing economics, support, and pricing as it pertains to the industry certification examinations. a. Multiple Choice b. Quizzes
Major Topics:	I. Industry certification exams (1 hour, lecture) A. Exam taking strategies 1. Overcoming exam anxiety 2. Structure of the certification exam 3. Developing a systematic approach to challenging questions B. Introduction to Other industry certification exams C. Introduction to AWS Documentation and references II. Cloud Concepts Overview (1 hour, lecture) A. Introduction to cloud computing B. Advantages of cloud computing C. Introduction to Amazon Web Services (AWS) D. Moving to the AWS Cloud – The AWS Cloud Adoption Framework III. Cloud Economics and Billing (1 hour, lecture) A. Fundamentals of pricing B. Total Cost of Ownership C. Billing D. Technical support IV. AWS Global Infrastructure Overview (1 hour, lecture) A. AWS Global Infrastructure B. AWS services and service category overview V. AWS Cloud Security (1 hour, lecture) A. AWS shared responsibility model B. AWS Identity and Access Management (IAM) C. Securing a new AWS account D. Securing accounts E. Securing data on AWS F. Working to ensure compliance G. Additional security services VI. Networking and Content Delivery (1 hour, lecture)

- A. Networking basics
- B. Amazon VPC
- C. VPC networking
- D. VPC security
- E. Amazon Route 53
- F. Amazon CloudFront
- VII. Compute (1 hour, lecture)
 - A. Compute services overview
 - B. Amazon EC2
 - C. Amazon EC2 cost optimization
 - D. Container services
 - E. Introduction to AWS Lambda
 - F. Introduction to AWS Elastic Beanstalk
- VIII. Storage (1 hour, lecture)
 - A. Amazon Elastic Block Store (Amazon EBS)
 - B. Amazon Simple Storage Service (Amazon S3)
 - C. Amazon Elastic File System (Amazon EFS)
 - D. Amazon S3 Glacier
- IX. Databases (1 hour, lecture)
 - A. Amazon Relational Database Service
 - B. Amazon DynamoDB
 - C. Amazon Redshift
 - D. Amazon Aurora
- X. Cloud Architecture (1 hour, lecture)
 - A. AWS Well-Architected Framework
 - B. Reliability and high availability
 - C. AWS Trusted Advisor
- XI. Automatic Scaling and Monitoring (2 hours, lecture)
 - A. Elastic Load Balancing
 - B. Amazon CloudWatch
 - C. Amazon EC2 Auto Scaling
- XII. Cloud Economics and Billing (1 hour, lab)
 - A. Monthly Cost Calculator
 - B. Billing Dashboard
- XIII. AWS Global Infrastructure Overview (1 hour, lab)
 - A. AWS Console Exploration
- XIV. AWS Cloud Security (1 hour, lab)
 - A. AWS Identity and Access Management (IAM)
- XV. Networking and Content Delivery (1 hour, lab)
 - A. Amazon VPC Web Server
- XVI. Compute (2 hours, lab)
 - A. Amazon EC2
 - B. Introduction to AWS Lambda
 - C. Introduction to AWS Elastic Beanstalk
- XVII. Storage (1 hour, lab)
 - A. Amazon Elastic Block Store (Amazon EBS)
- XVIII. Databases (2 hours, lab)
 - A. AWS Database Application
- XIX. Cloud Architecture (1 hour, lab)
 - A. AWS Well-Architected Framework
- XX. Automatic Scaling and Monitoring (2 hours, lab)
 - A. AWS Scalable Architecture Application

Total Lecture Hours:	12
Total Laboratory Hours:	12
Total Hours:	24
Primary Method of Evaluation:	2) Problem solving demonstrations (computational or non-computational)
Typical Assignment Using Primary Method of Evaluation:	Compare and contrast a serverless architecture application with a traditional server-based application. What are the advantages and disadvantages of a serverless approach to deploying applications? Write a 1-2 page report that explores an application where a server based deployment method is more appropriate. Also include in your report an example of an application where using a serverless platform is preferred.
Critical Thinking Assignment 1:	Using Amazon Web Services, set up a static website hosted on Amazon S3. Configure the S3 resources to be publicly accessible. Set up an Amazon EC2 instance hosting a Linux-based web server with the same files as you've set up in S3. Write a 1-2 page report comparing and contrasting the two different approaches. Which solution would you choose for your own personal website?
Critical Thinking Assignment 2:	Set up an EC2 instance running the Amazon Linux 2 Amazon Machine Image (AMI). Install a web server and ensure the instance is reachable over an associated elastic IP address. Set up an Amazon RDS instance running MySQL on a private subnet. Install Wordpress on the EC2 instance, but have the database reside on the RDS instance. Ensure your security groups are properly configured so that the EC2 instance and the Amazon RDS can communicate over the necessary ports. How will you know be able to tell if your installation and configuration is successful?
Other Evaluation Methods:	Other (specify)
If Other:	Practice Exams
Instructional Methods:	Demonstration, Discussion, Group Activities, Lab, Lecture, Multimedia presentations
If other:	
Work Outside of Class:	Other (specify), Required reading, Study
If Other:	Certification practice exams.
Up-To-Date Representative Texts:	Mannan, Md Shahinoor. Master the AWS Certified Cloud Practitioner CLF-C02 Exam. Independently Published, 2024
Alternative Texts:	
Required Supplementary Readings:	
Other Required Materials:	Instructor-provided exam review materials
Requisite	Prerequisite
Category	sequential
Requisite course:	CIS 150, CIS 152, CIS 154, and CIS 156
Requisite and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s).	An introduction to the concepts of cloud computing with AWS is required knowledge for this exam preparation course. CIS 150 - Describe the Cloud Computing Model.

	The concepts and use of block-level and object-level data storage is required knowledge for this examination prep course. CIS 152 - Demonstrate the management of block-level and object-level data storage in AWS. The concepts and implementation of cloud based compute engines with scaling and load balancing functionality is required knowledge for this examination prep course. CIS 154 - Students will be able to set up, configure, and manage a compute engine with AWS and implement load balancing and scaling functionality. An understanding of the AWS Global Infrastructure and the Shared Responsibility Security Model is required knowledge for this examination prep course. CIS 156 - Students will understand the AWS Global Infrastructure Security and the Shared Responsibility Model.
Requisite Skill:	
Requisite Skill and Matching skill(s): Bold the requisite skill(s). if applicable	
Requisite course:	
Requisite and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s).	
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Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	K. Lu
Date:	2/1/2021
Original Board Approval Date:	01/21/2026
Effective Term:	FALL 2026