De Anza College

I. Catalog Information

CIS 95F	**Managing Cloud Projects**	**4 Unit(s)**

Pre-requisites: Advisory: EWRT 211 and READ 211 (or LART 211), or ESL 272 and 273

Hours: Four hours lecture (48 hours total per quarter)

Description: Establish the Cloud Strategy within a business context and focus on governance issues and business processes; the administration of Cloud Services; support, monitoring, and billing; documenting a Cloud Strategy, which optimizes expense structure, improves security, and supports conformance; standards and protocols for the Cloud; and management of devices that connect to the Cloud.

Student Learning Outcome Statements (SLO)

- **Student Learning Outcome:** Create cloud strategy within a business context being mindful of governance issues and business processes.

II. Course Objectives

- **A.** Recognize the fundamentals of Cloud Computing

- **B.** Distinguish how the management and administration of the Cloud is different from traditional computing systems.

- **C.** Describe how to establish Cloud strategy for a business context.

- **D.** Learn the technical concepts of Cloud Implementation

- **E.** Learn how Cloud Computing will change everything that connects to it.

III. Essential Student Materials

- A. Access to QwikLabs
- B. Access to Codelabs
- C. Access to Google Cloud Platform (Free Trial)
- D. Access to Amazon Web Services (Free Trial)

IV. Essential College Facilities

    None

V. Expanded Description: Content and Form

  A. Recognize the fundamentals of Cloud Computing
      a. Introduction to the business definition of the Cloud in context of user experience.
      b. Outline technicali definition of the Cloud
      c. Lists Everything-as-a-Service business models and their beliefs
  B. Distinguish how the management and administration of the Cloud is different from traditional computing systems.
      a. Interpret factors involved in managing the Cloud.
      b. Explains variation in required skills for administering the Cloud Platform in contrast to the traditional platforms.
  C. Describe how to establish Cloud Strategy for a business context
      a. Describe the business context that is required considering govenrance structures and business processes.
      b. Create an administration model in which Service Level Agreements, Support, Monitoring and Billing help with administration of the Cloud services.
      c. Document a Cloud Strategy that untangles the computing environment, optimizes expense structure, improves security and supports conformance.
  D. Learn the technical concepts of Cloud Implementation
      a. Cluster as a single machine.
      b. Workload a strategy alignment to the horsepower in data center
      c. Application and Data Management of Clustered environments.
      d. Private versus Public Clouds and conformance to Security Standards
      e. Explore the creation of massively parallel scaled application systems using As-A-Service framework
  E. Learn how Cloud Computing will change everything that connects to it.
      a. Understand Security risks assocaited with Cloud Computing and ways to mitigate it.
      b. Create a governance structure and setting the IT structure for success
      c. Virtualization Layers and Cloud Computing
      d. Management of Devices that connec to the Cloud
      e. Standards and Protocols for Cloud
      f. Embaring on your journey for enabling Cloud Computing in your organization

VI. Assignments

  A. Practice Exam covering the topics covered in class
  B. Readings from Papers/Text

VII. Methods of Instruction

  A. Lecture and Visual Aids
  B. Discussion fo Assigned Reading
  C. Discussion and Problem Solving Performed in Class

D. Collaborative Learning and Small Group Exercises

E. Collaborative Projects

VIII. Methods of Evaluating Objectives

A. One or two midterm examinations requiring students to write/apply code referencing topics covered in the lectures and reading.

B. Final Examination requiring students to apply topics covered in the lectures, reading, and assignments.

C. Quizzes

IX. Texts and Supporting References

A. Examples of Primary Texts and References
   a. A Guide to Managing Cloud Projects, Sukhjit Singh, MS - Management of Software System Development, CMU, 2013

B. Examples of Supporting Texts and References
   a. None

X. Office Hours

C. Fridays 1-2p (Baldwin Winery, ATC 204, or Online)

D. Saturdays 1-2p (Baldwin Winery, ATC 204, or Online)