

**PALOMAR COLLEGE  
COURSE OUTLINE OF RECORD  
FOR DEGREE CREDIT COURSE**

FORM VERSION: 5/95  
REVISED: 10/26/98

  x   Transfer Course

  x   A.A. Degree Applicable Course

**COURSE NUMBER AND TITLE:** CSIS 254 - Oracle Database Design

**UNIT VALUE:** 3

**MINIMUM NUMBER OF SEMESTER HOURS:** 64

**BASIC SKILL REQUIREMENTS:** Appropriate language and computational skills.

**ENTRANCE SKILLS:**

Prerequisite: CSIS 252 – Introduction to Oracle

Corequisite: None

Recommended Preparation: None

**SCOPE OF COURSE:**

A top-down, systematic approach to the development of Oracle relational databases.

**SPECIFIC COURSE OBJECTIVES:** Successful students will:

- A. Learn to define requirements as entities, attributes and relationships.
- B. Develop entity-relationship (ER) diagrams that accurately reflect business processes.
- C. Map ER diagrams to Oracle database designs.
- D. Create Oracle relational databases from Oracle database designs.
- E. Use Oracle relational databases.

**CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:**

- I. Define the Stages of the Oracle Database Development Process
  - A. Database design goals
  - B. User views
  - C. Database design methodology
- II. Develop Basic Data Models
  - A. Terminology
  - B. Expressing relationships
  - C. Entity-Relationship model
  - D. Relational Algebra
- III. Develop Data Models
  - A. Normalization
  - B. Functional dependence
  - C. Keys
  - D. Normal forms
- IV. Map an ER Diagram to an Oracle Database Table Design
  - A. Tables
  - B. Indexes
  - C. Views
- V. Create an Oracle Database from an Oracle Database Table Design
  - A. Physical vs. logical
  - B. Creating tablespaces
  - C. Create Database syntax
  - D. The log file
  - E. Startup
  - F. Shutdown
- VI. Use an Oracle Database
  - A. Structured Query Language (SQL)
  - B. Data Manipulation statements
  - C. Transaction control statements
  - D. Database triggers
  - E. Stored procedures and functions

**REQUIRED READING:**

Ensor, Dave and Ian Stevenson. Oracle Design. Sebastopol, CA: O'Reilly & Associates. 1997.

**SUGGESTED READING:**

None

**REQUIRED WRITING:**

Database design and implementation projects must be well documented in terms of the overall design goals and implementation strategies. Each student will write the equivalent of five pages of documentation over the course of the semester.

**OUTSIDE ASSIGNMENTS:**

**Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short term classes.**

Eight Oracle database design and implementation projects are assigned, each ranging from one to ten hours to complete.

**INSTRUCTIONAL METHODOLOGY:**

Check all that apply:

- Lecture
- Laboratory
- Lecture-laboratory combination
- Directed study

**This course may be offered as a distance education course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380. Yes  No**

**If yes, check all that apply:**

- Telecourse
- Mediated Instruction
- Computer Assisted Instruction

**GRADING POLICY AND STANDARDS:**

30% - Programming Projects

30% - Exams

30% - Final Exam

10% - Written Homework

**IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?**

Yes \_\_\_ No X Number of times course may be taken for credit: 1.

If yes, identify specific provision of Title 5 Division 2 section(s) 55761-55763 and 58161 which qualifies course as repeatable:

**CONTACT PERSON: Tony Smith x2630**

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| SIGNATURES ON FILE |
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