



ANTELOPE VALLEY COLLEGE

Academic Affairs
Course Outline of Record

Academic Affairs Only

<input type="checkbox"/>	New Course
<input type="checkbox"/>	Effective Date (for articulation)
<input checked="" type="checkbox"/>	COR Revision 4/22/2010
<input type="checkbox"/>	Pre Req/Advisories
<input checked="" type="checkbox"/>	Other Changes Title
<input checked="" type="checkbox"/>	SLOs 4/10/2008

COURSE SUBJECT & NUMBER: CA 131

COURSE NAME: *Relational Database Management and Design

COURSE UNITS: 3 **COURSE HOURS:** 4 hours weekly

COURSE REQUISITES: *(Follow format of similar courses found in the college catalog.)*

ADVISORY: Completion of CA 103 or CA 221, and Eligibility for READ 099 and MATH 070.

COURSE DESCRIPTION: *(Write a short paragraph providing an overview of topics covered. Be sure to identify target audience--transfer, major, GE, degree/certificate, etc. If repeatable, state the number of times at end of description as (R#).*

Database management systems (DBMS) concepts and designs are explored using Microsoft Access. The relational model of database management, which is commonly used on micro and larger computers, is emphasized. The course covers database design, building a model using computer software, application generators, programming in database software, structured query language, and database administration. **BEFORE ENROLLING** students should have used the Microsoft Access database software to create a structure, enter records, reorder records, save, and print. Students should also possess an understanding of how personal computers, software, and peripherals work together. (CSU, AVC)

COURSE OBJECTIVES: *(Title 5 requires that courses show evidence of critical thinking skills. Use Bloom’s taxonomy to formulate concise, performance-based measurable objectives common to all students. Objectives must be closely aligned with course content, assignments, and methods of evaluation)*

Upon completion of course, the successful student will be able to:

1. Define relational and other models of database management design.
2. Explain the essential concepts of database design.
- *3. Design and build a multiple table database system including tables and data-entry forms.
- *4. Operate the Access table, form, and report wizards (application generators).
- *5. Modify applications produced by the application generators.
- *6. Create tables, forms, and reports without the assistance of any application generators.
7. Define the roles and purpose of the database administrator.
8. Compare and contrast the role of a database administrator to that of a database user and data-input person.
- *9. Apply database skills taught in one situation to another case.

* Denotes SCANS competencies.

Course Subject & Number: CA 131

Course Name: *Relational Database Management and Design

COURSE CONTENT: *(Enter course content in terms of specific topics or a specific body of knowledge that each instructor must cover. Put topics in outline form with major and minor headings. Each instructor must cover all material listed below.)*

- I. Relational database concepts and design
 - A. Relational and other database management models
 - 1. The relational database model
 - 2. Other database models
 - B. Database design and normalization

- II. Microsoft Access relational database
 - A. Introduction to queries
 - B. Input screens (forms)
 - 1. Simple one-table forms
 - 2. Complex multiple-table forms
 - 3. Tabbed forms
 - C. Output reports
 - 1. Report wizard
 - 2. Advanced report design
 - D. Advanced queries
 - 1. Query wizard
 - 2. Advanced query design
 - 3. Using Structured Query Language (SQL) in Microsoft Access

- III. Microsoft Access database applications
 - A. Command mode and files
 - 1. Macros
 - 2. Visual Basic for applications
 - B. Application generators
 - C. Modifying programs from the application generator

- IV. Microsoft Access security and database administration

Course Subject & Number: CA 131

Course Name: *Relational Database Management and Design

TYPICAL HOMEWORK ASSIGNMENTS: (Do not include in-class work, quizzes, or tests)

This information is necessary for all credit courses. Assignments should be closely related to course objectives, content, and methods of evaluation. (See sample of a “Model Outline” in the AP&P Standards & Practices Handbook.) Include a range of assignments (minimum of three) from which faculty may choose when designing their syllabus.

1. Describe nature and frequency of typical reading assignments if applicable; note if any are required:

This course uses a combination textbook and lab manual. Reading assignments with questions are assigned from both lab and appendix sections of the text. Students must read and execute the step-by-step instructions in the lab manual portion. Students will read approximately 25 to 30 pages per week.

2. Describe nature and frequency of typical writing assignments if applicable; note if any are required:

Writing requirements in this database course consists of short answers to weekly reading assignment questions. Answers typically range in length from one word to several sentences. In the final chapter of the lab manual, students will write short programs using Visual Basic code, which may include comments. Students submit short-answer writing assignments based on weekly readings, and submit 10 lab assignments that demonstrate mastery of lab manual topics.

3. Describe nature and frequency of typical computational assignments if applicable; note if any are required:

Students will need to calculate sums, percentages, and averages.

4. Describe other types of homework assignments that students may be asked to complete (oral presentations; special projects; visual/performing arts; etc); note if any are required:

Students are assigned a Lab Practicum where they must design and build a new database, populate the data tables, and create screens used for data input.

For categories 1-4 above, list the estimated hours per week it would take a student to complete assignments. Title 5 (section 55002) requires that each unit must be shown to require three hours of work per week by the student either in or out of class. Homework formula: 3 hours of class work times each unit of credit minus classroom hours equals required homework hours.

Reading Assignments: 2 hours

Writing Assignments: 2 hours

Computational Assignments: 2 hours

Other Assignments: 1 hour

Course Subject & Number: CA 131

Course Name: *Relational Database Management and Design

METHODS OF INSTRUCTION: *(Methods must be consistent with content and appropriate to objectives; state in terms of what instructor will be doing in order to present course content to students: for example, lecture, demonstration, present audio/visual materials; facilitate group work, etc. Do not list specific instructional equipment.)*

Students are taught through lecture, instructor demonstration, question-and-answer sessions, and written step-by-step lab exercises. Individual assistance is provided by the instructor during lab-time.

METHODS OF EVALUATION: *(These must be clearly related to course objectives and reflect course content and assignments in order to comply with Title 5 requirements. Describe what instructor will be looking for when evaluating various assignments and tests in order to determine whether students have met course objectives. Grades must be based on demonstrated proficiency in subject matter and determined, where appropriate, by essays, objective and essay tests, research papers or projects, problem solving exercises, or skills' demonstrations.)*

Grades will be determined through an evaluation of the following (objectives listed in parenthesis).

Lab assignments will be used to evaluate a student's ability to design and build databases, and modify applications produced by application generators. (3, 5)

Class participation will be used to evaluate a student's understanding of database management concepts and his or her ability to differentiate between the various roles associated with database management. (1, 2, 7, 8)

Short writing assignments will be used to evaluate a student's understanding of database management design concepts. (1, 7, 8, 9)

A lab practicum will be used to evaluate a student's ability to design, build, modify, and operate a well-designed database. (3, 4, 5, 6)

A comprehensive final examination will be used to evaluate a student's understanding of design concepts, model differentiation, role participation, and necessary skills required for managing a database system. (1, 2, 7, 8, 9)

Suggested Texts or Other Instructional Materials

(List several when possible; include title, author, publisher, date, and latest edition. If older than five years, provide brief rationale.)

New Perspectives on Microsoft Office Access 2007, Comprehensive. Joseph J. Adamski , Kathy T. Finnegan
Publisher: Cengage Learning, Inc