Modesto Junior College
Course Outline of Record

CMPSC 275

I. OVERVIEW
The following information will appear in the 2010 - 2011 catalog

CMPSC 275 Database Management Systems/Microcomputer 3 Units
Formerly listed as: CMPSC - 275: Database Management Systems/Microcomputer
Prerequisite: Satisfactory completion of CMPSC 203.

Introduction to database management systems (DBMS). Instruction on the design, setup and maintenance of a DBMS. Applications in inventory control, mailing lists, report, report construction and format, sorting and indexing operations, general file relationships and information retrieval. Hands-on experience using a microcomputer. Emphasis on desktop DBMS such as Microsoft Access.

Four maximum completions.
Field trips might be required. (A-F or P/NP - Student choice) Lecture /Lab
Transfer: (CSU) General Education: (MJC-GE: D2 )

II. LEARNING CONTEXT
Given the following learning context, the student who satisfactorily completes this course should be able to achieve the goals specified in Section III, Desired Learning:

A. COURSE CONTENT

1. Required Content:

   a. Overview of computer systems and software
      i. Microcomputer hardware components.
      ii. Microcomputer system software.
      iii. Microcomputer applications.

   b. Introduction to database management systems
      i. Defining the need for databases.
      ii. Typical database operations.
      iii. Examples of real world database applications.

   c. Creating database tables/files
      i. Datasheet view
      ii. Design view
      iii. Table wizards
      iv. Modifying a table

   d. Working with relationships
i. Working with data

e. Importing and linking data
   i. Adding and editing original data
   ii. Deleting data
   iii. Sorting and indexing data
   iv. Filtering data

f. Querying data
   i. Creating a query
   ii. Using action queries

g. Database reports
   i. Creating reports
   ii. Using report wizards
   iii. Creating mailing labels
   iv. Customizing reports
   v. Formatting and publishing reports

h. Using multiple tables/files
   i. Exploring multiple table relational types
   ii. Table relationships
   iii. Multiple table queries
   iv. Multiple table forms
   v. Multiples table reports

i. Macros
   i. Creating and modifying macros
   ii. Referring to control from within macros
   iii. Using macros to forms and reports

2. **Required Lab Content:**

   In lab, students perform the functions listed in the lecture content section. Assignments are given that require application of the content.

   a. Overview of computer systems and software
i. Microcomputer hardware components.
ii. Microcomputer system software.
iii. Microcomputer applications.

b. Introduction to database management systems
   i. Defining the need for databases.
   ii. Typical database operations.
   iii. Examples of real world database applications.

c. Creating database tables/files
   i. Datasheet view
   ii. Design view
   iii. Table wizards
   iv. Modifying a table

d. Working with relationships
   i. Working with data

e. Importing and linking data
   i. Adding and editing original data
   ii. Deleting data
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   i. Creating reports
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h. Using multiple tables/files
i. Exploring multiple table relational types
ii. Table relationships
iii. Multiple table queries
iv. Multiple table forms
v. Multiple table reports

i. Macros
   i. Creating and modifying macros
   ii. Referring to control from within macros
   iii. Using macros to forms and reports

B. ENROLLMENT RESTRICTIONS
   1. Prerequisites
      Satisfactory completion of CMPSC 203.
   2. Requisite Skills
      Before entering the course, the student will be able to:
      a. Design, edit, update, copy, format, sort, and index database files.
      b. Create and modify database reports, labels, screens, views, and file relationships.

C. HOURS AND UNITS


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<thead>
<tr>
<th>INST METHOD</th>
<th>TERM HOURS</th>
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<tbody>
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<tr>
<td>Lab</td>
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<td>1.00</td>
</tr>
<tr>
<td>Disc</td>
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3 Units

D. METHODS OF INSTRUCTION (TYPICAL)
   Instructors of the course might conduct the course using the following method:
   1. Reading, lecture, and discussion
   2. Hands-on experience in laboratory exercises; and
   3. Practical experience with actual DBMS task
   4. Comparisons of various methods of handling database tasks
   5. Analysis and evaluations of popular DBMS programs; and
   6. Laboratory exercises based on student’s data and database design.

E. ASSIGNMENTS (TYPICAL)
1. **EVIDENCE OF APPROPRIATE WORKLOAD FOR COURSE UNITS**  
*Time spent on coursework in addition to hours of instruction (lecture hours)*  
Weekly lab assignments and projects  
Prepare for weekly quizzes and review questions  
Prepare for chapter Exams and projects

2. **EVIDENCE OF CRITICAL THINKING**  
*Assignments require the appropriate level of critical thinking*  
   
a. In a given database  
   i. Change field properties  
   ii. Add files to a table  
   iii. Enter data in a table  
   iv. Create table relationships  
   v. Create select, parameter and crosstab queries  
   vi. Create a form using the form wizard  
   vii. Create calculated controls in a form  
   viii. Create a custom report  
   ix. Create macros  
   x. Create a switchboard  
   xi. Set database properties and startup options

**F. TEXTS AND OTHER READINGS (TYPICAL)**  

**III. DESIRED LEARNING**

**A. COURSE GOAL**  
*As a result of satisfactory completion of this course, the student should be prepared to:*  
create, manage, implement and administer a single user desktop database system.

**B. STUDENT LEARNING GOALS**  
*Mastery of the following learning goals will enable the student to achieve the overall course goal.*

1. **Required Learning Goals**  
*Upon satisfactory completion of this course, the student will be able to:*  
   a. Explain the components of a microcomputer system.  
   b. Describe the functional difference between systems software and applications software.  
   c. Demonstrate how Windows is used to manage the computer system.
d. Define the need for database management systems.

e. Compare and contrast DBMS capabilities, cost, and convenience.

f. Describe how data can be structured for information retrieval.

g. Explain typical database operations and applications.

h. Define relationships between data tables.

i. Plan, implement, and modify a data table.

j. Demonstrate how to import or link data from different tables.

k. Demonstrate how to add, edit, and delete original data.

l. Demonstrate how to sort and file data.

m. Design database queries for selective information retrieval.

n. Create and modify custom reports.

o. Demonstrate formatting capabilities on data reports.

p. Demonstrate how to use relationships to create multiple table queries, forms, and reports.

q. Create macros to control data.

2. **Lab Learning Goals**

   *Upon satisfactory completion of the lab portion of this course, the student will be able to:*

a. Explain the components of a microcomputer system.

b. Describe the functional difference between systems software and applications software.

c. Demonstrate how Windows is used to manage the computer system.

d. Define the need for database management systems.

e. Compare and contrast DBMS capabilities, cost, and convenience.

f. Describe how data can be structured for information retrieval.

g. Explain typical database operations and applications.

h. Define relationships between data tables.

i. Plan, implement, and modify a data table.

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n. Create and modify custom reports.

o. Demonstrate formatting capabilities on data reports.

p. Demonstrate how to use relationships to create multiple table queries, forms, and reports.
q. Create macros to control data.

r. SECOND COMPLETION:

s. demonstrate updated skills reflecting current industry standards as software tools, interface and functions evolve in new versions.

t. THIRD COMPLETION:

u. demonstrate updated skills reflecting current industry standards as software tools, interface and functions evolve in new versions.

v. FOURTH COMPLETION

w. demonstrate updated skills reflecting current industry standards as software tools, interface and functions evolve in new versions.

IV. METHODS OF ASSESSMENT (TYPICAL)

A. FORMATIVE ASSESSMENT

1. Assignments

2. Exams/Quizzes

3. Projects/Labs

B. SUMMATIVE ASSESSMENT

1. Assignments

2. Exams/Quizzes

3. Projects/Labs