Las Positas College
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Course Outline for CIS 57

DATABASE CONCEPTS

Effective: Spring 2018

I. CATALOG DESCRIPTION:
CIS 57 — DATABASE CONCEPTS — 3.00 units

Introduction to Database Concepts, a computer program that is used to organize, store, and retrieve information. Understanding of data, database structure, and database objects using Microsoft Access or similar programs with emphasis on business applications. Identify and evaluate client needs/requirements and translate those needs into a working database application model. Integrate Microsoft Access data with other Microsoft applications, such as Word and Excel.

2.00 Units Lecture 1.00 Units Lab

Strongly Recommended
CIS 50 - Intro to Computing Info Tech
and

CIS 55 - Integrating Office Applications

Grading Methods:
Letter or P/NP

Discipline:
- Computer Information Systems

	MIN
Lecture Hours:	36.00
Lab Hours:	54.00
Total Hours:	90.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1

III. PREREQUISITE AND/OR ADVISORY SKILLS:

Before entering this course, it is strongly recommended that the student should be able to:

A. CIS50
1. Describe existing and emerging technologies and their impact on organizations and society;
2. Demonstrate familiarity with the computing environment, including the hardware, operating system, the user interface, and applications;
3. Investigate current issues in computer environments such as security, society and business ethics over the use of computer data, and organization of data processing resources within the organization; and

B. CIS55
1. Create a spreadsheet file using special functions, data manipulation, charts, link, template, and report features
2. Create a database structure that includes tables, query, form, and report features
3. Use cloud storage and processing to publish, share, collaborate
4. Use Object Linking and Embedding (OLE), to create integrated Office documents

IV. MEASURABLE OBJECTIVES:

Upon completion of this course, the student should be able to:

A. Design, create, and manipulate the database objects tables, queries, forms and reports
B. Create forms, reports, and queries using multiple tables
C. Manipulate database information to provide meaningful business information
D. Evaluate client needs and design an appropriate database
E. Integrate data with other applications

V. CONTENT:
A. Creating a Database
1. Define database software
2. Learn terminology
3. Start Access and open a database
4. View the database window
5. Navigate records

6. Enter records
7. Edit records
8. Preview and print a datasheet
9. Get Help and exit Access

B. Building a Database and Defining Table Relationships
1. Plan a database
2. Create a table
3. Modify a table
4. Format a datasheet

C. Maintaining and Querying a Database
1. Understand sorting, filtering and finding
2. Sort records and find data
3. Filter records
4. Create and modify a query

D. Creating Forms Using Form Tools and Custom Layouts
1. Plan, create a form
2. Move and resize controls
3. Modify labels, text boxes, tab order
4. Enter and edit records
5. Insert an image

E. Creating Custom Reports
1. Plan, create a report
2. Group records
3. Change the sort order
4. Add a calculation
5. Align, format controls
6. Create reports with different layouts

F. Sharing, Integrating, and Analyzing Data
1. Insert an Excel worksheet as a table
2. Export a report to Word
3. Use an Access table as a data source for a mail merge

G. Using Action Queries and Advanced Table Relationships
1. Create an update, append and delete query to modify data in a table
2. Add referential integrity to table relationships

H. Managing and Securing a Database

VI. METHODS OF INSTRUCTION:

A. **Lecture** -
B. Classroom discussion
C. Lab presentation and classroom demonstration
D. Discussion boards
E. Reading assignments and student research on the web
F. PowerPoint presentations
G. Chat rooms
H. Hands-on step-by-step assignment laboratory assignments using the world wide web

VII. TYPICAL ASSIGNMENTS:

A. Read next tutorial (chapter) in preparation for lecture
B. Create a database table
1. define fields
2. set a primary key field
3. save the table
4. enter records into the table

C. Create a form
1. select appropriate fields and design
2. modify form
3. use form to input data

VIII. EVALUATION:

A. **Methods**

1. Quizzes
2. Group Projects
3. Lab Activities
4. Other:
    a. Discussion Board Activities

B. **Frequency**

1. Three to four quizzes and a final examination
2. Six to eight discussion topics on business practices and application
3. At least one group project covering analysis and design
4. Weekly lab assignments covering program functions

IX. TYPICAL TEXTS:

1. Gaskin, Shelley, and Nancy Graviett. *GO! With Microsoft Access 2016 Comprehensive* . 1st ed., Prentice Hall, 2017.
2. Friedrichsen, Lisa. *Illustrated Microsoft® Office 365 & Access 2016: Comprehensive.* 1st ed., Cengage Learning, 2017.
3. Shellman, Mark, and Sasha Vodnik. *New Perspectives Microsoft® Office 365 & Access 2016: Comprehensive.* 1st ed., Cengage Learning, 2017.

X. OTHER MATERIALS REQUIRED OF STUDENTS:

A. Storage media, e.g., floppy disks, USB drive
B. Go Print card