COURSE DESCRIPTION

Prerequisite: None.

Introduction to the analysis and utilization of data requirements and organization into normalized tables.

A study of database fundamentals and technologies as used in managing data within organizations defining data needs; concepts and tools; functional design; normalization; logical design; and distributed processing concepts. This course broadly examines databases, trends in database management systems and their application in a wide range of organizational areas. The course will provide an overview of database processing, both historical and discussion of recent trends in database management. The importance of databases in modern organizations will be emphasized and the course will illustrate the range of choices available for data and knowledge management. Examples will be provided of application of various approaches to managing data and knowledge in a variety of different types of organizations. Students will be exposed to a range of tools, including a relational DBMS as well as an object-oriented DBMS. The course will provide the student with exposure to a number of topics relevant to modern information systems and management.

This is a 3 credit hour course. (2 Lec., 4 Lab.)

WECM END-OF-COURSE OUTCOMES: Normalize data tables; create entity-relationship models and diagrams; design database tables with relationships; create and update tables; and retrieve and maintain data.

STUDENT LEARNING OUTCOMES:

Upon successful completion of ITSE 1346, students will be able to:

- Identify introductory level database terms, organization, normalization and usage.
- Produce assigned databases that organize data into normalized tables, create entity relationship models and diagrams, retrieve and maintain data and develop web databases.
- Reinforce skills by normalizing tables and applying queries based on assignment criteria.
- Demonstrate knowledge of database processing by developing and writing documented programs, debugging and analyzing query code.

COURSE MATERIALS


A student of this institution (El Centro College) is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.
Major Course Requirements

Students will participate in **Discussion Forums**

Students will complete **Lab Assignments** which include the following:

- Use of fundamental database concepts
- Design & conceptualization of databases using different methodologies
- Development of applications which include advanced database systems
  (web-based applications and commercial RDBMs such as MYSQL, Oracle, SQL Server, DB2 and Access)

**Mid-term** and a **Final Exam** will evaluate the student’s understanding of database theory and design concepts and course knowledge.

Subject Matter

Topics covered in the lecture portion of the course include:

- File Systems & Databases
- Data Models
- The Relational Database model
- ER Modeling
- Designing database with Visio Professional
- Normalization
- SQL
- Database Design
- Conceptual Design, Verification, Logical Design, Implementation & Loading
- The Data Warehouse
- Databases in Electronic Commerce
- Web Database Development
- Database Administration

Disclaimer

The provisions contained in this syllabus do not constitute a contract between the student and El Centro College. These provisions may be changed at the discretion of the Coordinator/Instructor. When necessary, appropriate notice of such changes will be given to the student.

The instructor-of-record may provide additional information to enhance the course to meet the needs of the enrolled students, provided that the enhancements do not conflict with the official course syllabus.

Policies

Students should click on the links below and read all of these policies.

- General institutional policies
- Course-related institutional policies