

# ITIS 160: INTRODUCTION TO DATABASE CONCEPTS

## Citrus College Course Outline of Record

Heading	Value
Effective Term:	Fall 2022
Credits:	3
Total Contact Hours:	54
Lecture Hours :	54
Lab Hours:	0
Hours Arranged:	0
Outside of Class Hours:	108
Strongly Recommended:	ENGL 101.
Transferable to CSU:	No
Transferable to UC:	No
Grading Method:	Standard Letter, Pass/No Pass

## Catalog Course Description

This beginning course on database design focuses on the skills needed to define, create, and maintain a fully programmed database system using Microsoft Access in a Windows environment. The course covers database concepts, design, tables, queries, reports, and menus. 54 lecture hours.

## Course Objectives

- analyze data management needs
- create appropriate tables and define appropriate relationships to meet specific database requirements
- design, create, and modify appropriate forms for data entry and editing
- design, create, and modify appropriate reports for data output
- properly utilize appropriate techniques for sorting and filtering data
- properly use queries to extract data from one or more linked tables according to a variety of criteria
- import and export data to and from other data formats
- determine database needs through interviews with prospective database users.
- define needed fields for data capture and will construct objects for successful data extraction according to varying criteria.

## Major Course Content

1. Database Tables
  - a. Identifying field data
  - b. Field definition/properties
  - c. Normalization
  - d. Relationships
    - i. Establish relationships
    - ii. Enforce referential integrity
    - iii. Cascades
2. Queries
  - a. SQL
  - b. Inner/outer joins

- c. Field selection
- d. Sorting/filtering
- e. Criteria
  - i. Single
  - ii. Multiple – AND/OR
3. Forms
  - a. Single/multi-table
  - b. Active controls
    - i. List box
    - ii. Check box
    - iii. Option button
  - c. Form with sub form
4. Reports
  - a. Single/multi-table
  - b. Calculated fields
  - c. Subtotals
5. Import/export data
  - a. Excel
  - b. Access
  - c. Text delimited

## Suggested Reading Other Than Required Textbook

None required

## Examples of Required Writing Assignments

Students will outline data structures noting various fields with requisite properties prior to actual database creation.

## Examples of Outside Assignments

Students will be required to create, modify, query, and report from various sample databases through selected case problems.

## Instruction Type(s)

Lecture, Online Education Lecture