CIT - 185 - Database Design and SQL

2025-2026 Course Proposal Form

Course Information

Please select which best fits this course proposal:*
- ☑ Course New/Reactivation Proposal
- ☐ Course Revision Proposal
- ☐ Course Retirement Proposal
- ☐ Course Outcomes Revision Proposal

Department* Computer Information Technology

IF proposing a new course type or prefix, please select "NEW Course Type or NEW Prefix" from the dropdown and input the requested data in the new text field that follows.

Course Type:* Computer Information Technology

NEW Course Type: n/a

NEW Prefix: n/a

Prefix:* CIT　　　　　**Course Number:*** 185

Course Title:* Database Design and SQL

Credit(s):* 3

Course Description:* This course covers features of a Database Management System (DBMS) and will focus on design principles, relationships, normalization, and SQL (Structured Query Language) queries for a moderately complex small-scale business application. SQL is utilized to create, modify, and query multi-table database(s) and produce output.

Lecture Hours:* 3

Laboratory Hours:* 0

Clinical Hours:* 0

Internship Hours:* 0

Prerequisite(s): n/a

Corequisite(s): n/a

Pre / Corequisite(s): n/a

Required Materials* Check the College Bookstore for Required Materials.

Course Learning Outcomes:*

1. Create normalized tables for use in database applications

2. Establish multi-table relationships.

3. Define key SQL terms.

4. Create tables primary keys.

5. Develop SQL statements to retrieve and manipulate information from tables.

Student Learning Outcomes:* • Create a Model Relational db. • Name the tables in a Model rdb. • Name the Key Fields in all tables in a Model rdb. • Name the Foreign Keys in all tables in a Model rdb. • Name Relationships between tables in a Model rdb. • Enter data to a Model rdb. • Enter SQL to Create a Table in the Model rdb. • Enter SQL to Alter a Table in the Model rdb. • Save SQL in the Model rdb. • Print SQL in the Model rdb. • Print the Result Set from executing SQL statements. • Enter SQL Select/Where to select specified records. • Test SQL Select/Where to select specified records. • Enter SQL Select/Where using And, Or and Not. • Test SQL Select/Where using And, Or and Not. • Enter SQL Select/Where using the Between Operator. • Test SQL Select/Where using the Between Operator. • Enter SQL Select/Where using the In Operator. • Test SQL Select/Where using the In Operator. • Enter SQL Select/Where using the Is Null Operator. • Test SQL Select/Where using the Is Null Operator. • Enter SQL Select/Where using the Count Function. • Test SQL Select/Where using the Count Function. • Enter SQL Select/Where using the Sum Function. • Test SQL Select/Where using the Sum Function. • Enter SQL Select using Group By to group on one column. • Test SQL Select using Group By to group on one column. • Enter simple SQL Select using the Order By Clause. • Test simple SQL Select using the Order By Clause. • Enter compound SQL Select using Order By Clause. • Test compound SQL Select using Order By Clause. • Enter SQL to Join multiple tables with From Clause. • Test SQL to Join multiple tables with From Clause. • Enter SQL to Join multiple tables with Where Clause. • Test SQL to Join multiple tables with Where Clause. • Enter SQL to run an Update query. • Test SQL to run an Update query. • Enter SQL to run a Delete query. • Test SQL to run a Delete query. • Design a multi-table rdb for a business. • Apply principles and SQL knowledge to build a mock business rdb. • Apply data validation principles and SQL to place data constraints on tables. • Insert new columns to a db table with SQL. • Insert rows to a db table with SQL. • Modify data field attributes with SQL. • Create a data view(s) with SQL. • Apply the First Normal Form to a table. • Apply the Second Normal Form to a table. • Apply the Third Normal Form to a table. • Determine when to de-normalize a table structure • Determine how to de-normalize a table structure

General Education Outcomes:

Please select up to 2 from the list of the general education outcomes taught in this course.

Select up to 2 of the following:*
- ☐ Communicate effectively in oral and written formats
- ☐ Employ or utilize information access and literacy skills
- ☑ Demonstrate problem-solving and critical thinking skills
- ☐ Employ mathematical and science literacy skills
- ☐ Acquire a cultural, artistic and global perspective
- ☑ Demonstrate professional and human relations skills

Types of Formative Assessment:

Please select at least 3 formative assessment tools that are most appropriate to the course description and outcomes, regardless of modality. Formative assessment tools are learning activities or assessments that monitor and provide ongoing feedback on student learning. Formative assessments allow students to identify their strengths and weaknesses and for instructors to address student questions and misunderstandings

Select at least 3 of the following: *

- ☑ Practice Quizzes
- ☐ Paper Drafts
- ☑ Class Discussions/Q&A
- ☐ Low-stakes Group Work
- ☑ Homework Assignment
- ☐ Surveys/Polls
- ☐ Laboratory/Instrument Practice
- ☐ Written Reflections
- ☐ Self-appraisal using study guides, quiz software, interactive textbook
- ☐ Other

Types of Summative Assessment:

Please select **at least 2** summative assessment tools that are most appropriate to the course description and outcomes, regardless of modality. Summative assessment tools are learning activities or assessments that evaluate student learning at the end of an instructional period, like a module, unit, or course. Summative assessments are formally graded and allow instructors to determine whether and to what extent students have met the course learning outcomes.

Select at least 2 of the following: *

- ☑ Instructor-Created Exams/High-Stakes Quizzes
- ☐ Standardized Tests
- ☐ Laboratory Reports
- ☑ Final Projects
- ☐ Final Essays/Research Papers
- ☑ Final Presentations
- ☐ Final Reports
- ☐ Internships/ Clinical Site Evaluations
- ☐ Other

Minimum Acceptable Standards *

For quizzes, homework, and assessment activities listed, the instructor's analysis of satisfactory demonstration of knowledge will be used; on summative methods such as exams, papers, or projects, achieving a letter grade of "C", or 70% or above will demonstrate satisfactory understanding and basic mastery of outcomes.

Please answer the following questions related to your curriculum proposal:

Why are you recommending these changes? (courses outdated, recommendation of advisory committee, results of assessment activities and data, better attainment of program/course outcomes)

Justification: *

· Requested by CIT Advisory Committee

· Currently Microsoft Access is being used to teach Databases and we recently procured a server for CIT which can be used to deploy our own database that students can work on. So, Software engineering students will gain hands on experience with real world software.

· Betterment of program by being able to use the current technologies and trends

Last Semester Needed:	N/A

Impact Report Statement

List all program(s) or course(s) affected by these changes. If no program(s) or course(s) are affected, please state "NA" below. Run an Impact Report by clicking 📘 in the top left corner and answer below according to the results.

Impact Report:	N/A

What impact will these changes have on other courses or programs? (List impacted programs and comments or input you have gathered from other faculty, program directors, or Division Chairs)

Other Courses or Programs:	This course is only offered for software engineering student.

What impact will these changes have on institutional resources? (Budget, faculty, equipment, labs, instructional design, etc.) Have you already discussed this impact with appropriate personnel (financial aid, administration, division chair, other faculty)?

Institutional Resources:	This will be an OER course.

What impact will these changes have on current students? How will you ensure that current students are not penalized by these changes?

Current Students:	Waivers can be done on a case by case basis.

What impact will these changes have on transferability, national/regional association standards, etc.?

Transferability, National / Regional Association Standards, Etc.:	N/A

What impact will these changes have on the institution's mission and student's achievement of general education outcomes/requirements?

Mission; General Education Outcomes / Requirements:	N/A

Administrative Use Only

Please do _not_ alter the information within this section.

Course OID:

Course UID:

Information or Voting Item: ☐ Information Item (If the proposal does not impact other courses, select this option)

☐ Voting Item

Implementation Semester and Year * Fall 2025