



Course Information

Course Title	Database Programming
Course Prefix, Num. and Title	ITSE 2309 – Database Programming
Division	Technology and Business
Department	Computer Science
Course Type	WECM Course
Course Catalog Description	Database development using database programming techniques emphasizing database structures, modeling, and database access. Uses Structured Query Language (SQL) in a Relational Database Management System (RDBMS) to create tables, views, sequences, and constraints.
Pre-Requisites	None
Co-Requisites	None

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours:	3:2:2
Lab/Other Hours	
Equated Pay Hours	3
Lab/Other Hours Breakdown: Lab Hours	2
Lab/Other Hours Breakdown: Clinical Hours	0
Lab/Other Hours Breakdown: Practicum Hours	0
Other Hours Breakdown	0

Approval Signatures

Title	Signature	Date
Prepared by:		
Department Head:		
Division Chair:		
Dean/VPI:		
Approved by CIR:		

Additional Course Information

Topical Outline: Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction).

Define: SQL and relational database
Define: table, row, cell, column, primary key
Select statements
Select clauses
Where clauses
Equal condition
Less than condition
In, between, like, null, not null conditions
Order by clause
Compound conditions in where clause
Creating: tables and views
Difference/similarities between tables and views
Deleting tables and views
Adding/deleting rows and columns
Commit and rollback
Insert, update and delete constraints
Transactions
Column formats
Use of the data dictionary
Primary and foreign keys – creating and use
Duplicate row issues
Data formats
Sequences
Indexes
Referential integrity
Inserts, updates and deletes using referential integrity
Check, unique, not null and primary key constraints
Inner joins

Course Learning Outcomes:

Learning Outcomes – Upon successful completion of this course, students will:

This course incorporates the National Workforce Center for Emerging Technologies Programming/Software Engineering skill standards recognized by the Texas Skill Standards Board.

Methods of Assessment:

Critical Work Function Key Activities assessed in this course:
C3 Develop appropriate data model and database scheme

Required text(s), optional text(s) and/or materials to be supplied by the student:

- Oracle 11g: SQL, 2nd Edition; Joan Casteel; Course Technology; ISBN 9781439041284
- Oracle 10g Developer: PL/SQL programming; Joan Casteel; Course Technology; ISBN 978-1-4239-0136-5

Suggested Course Maximum:

20

List any specific or physical requirements beyond a typical classroom required to teach the course.

One PC per student with Oracle database installed.

Course Requirements/Grading System: Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course.

40% Labs

10% Project

50% Tests and Final Exam

Curriculum Checklist:

- Administrative General Education Course** (from ACGM, but not in WCJC Core) – No additional documents needed.
- Administrative WCJC Core Course.** Attach the Core Curriculum Review Forms
 - Critical Thinking
 - Communication
 - Empirical & Quantitative Skills
 - Teamwork
 - Social Responsibility
 - Personal Responsibility
- WECM Course** -If needed, revise the Program SCANS Matrix and Competencies Checklist