

Proposed/tentative
AUSTIN COMMUNITY COLLEGE
DEPARTMENT OF COMPUTER STUDIES AND ADVANCED TECHNOLOGY
APT

Introduction to Database Programming: Oracle
Course ITSE 2309- 37037-002 Fall 2015

Instructor: David Trevino,, Associate Professor

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Office Hours: MTWTH 1pm to 5pm

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I will attempt to have a response time to inquires is within 24hr MTWTH

Course Description: Applications development using database programming techniques emphasizing database structures, modeling, and database access. This course instructs the student in the essential concepts and design methodology for the Relational Database Model as implemented by Oracle. Other topics include: the Data Definition Language, the Data Manipulation Language, database normalization, transaction processing, security, multi-user problems and solutions.

Pre-requisite: COSC1315 Fundamentals of Programming, COSC1336 Programming Fundamentals or **department approval.**

Approved Course Text: Set by taskforce

Database Systems Design, Implementation, and Management – 11th Edition By
Coronel/Morris – Thompson/Course Technology
ISBN 978-1-285-19614-5

Oracle 11g: SQL Set by taskforce

Author: Casterll

Edition: 2nd 10

Publisher: Cengagel

ISBN: 9781439041284

Instructional Methodology: The course will have both lab and lecture. The student will be Required to do assigned readings from the text and handouts as well as scheduled individual labs to reinforce the material covered in class. Scheduled tests will be used to assess the progress of the student toward achievement of the course objectives. (Instructor may add to this).

Course Rationale: This course is designed as a survey course to teach students to design, implement, and maintain databases. The Relational Database Model and the SQL language will be emphasized. On-line Transaction Processing Systems will be studied and contrasted with Distributed Database Management Systems and Data Warehousing Systems. Web databases will be introduced. The Oracle DBMS will be used throughout the course in Lectures and in labs.

This course is part of the Computer Information Technology Database Certificate plan. Completion of this course provides the student with the initial knowledge required in preparation for consideration as an entry level database programmer, and acts as preparation for Oracle Certification test .

Course Objectives/ Learning Outcomes:

Establish a basic understanding of the analysis and design of a database.
Establish a basic understanding of the process of Database Development and Administration using SQL.
Enhance Programming and Software Engineering skills and techniques using SQL.
Establish a basic understanding of background materials needed for technical support using SQL.
Solve Database problems using Oracle 11g SQL by applying SQL commands to Create, Insert, Update, and Retrieve a simple database.
Understand the services provided by a Database Management System.
Understand the use and application of the Relational Database Model.
Understand Transaction Processing and Multi-user Database support.
Understand the difference between a Production transaction database and a Data Warehouse.
Understand the Client/Server structures used in Database Management Systems.
Design and Implement a basic database using the Oracle Database Management

Instructor may add to but not delete any course objective/learning Outcomes

Scans Competencies: Instructor will not change.

Grade Policy: Grade will be based both on concepts and practical application.

Grade Scale:

90% - 100%	A
80% - 89%	B
70% - 79%	C
60% - 69%	D
0% - 59%	F

Course/Class Policies:

Academic Integrity:

A student is expected to complete his or her own projects and tests. Students are responsible for observing the policy on academic integrity described in the Current ACC Student Handbook, under “Student Discipline Policy, Section C”.

“Acts prohibited by the college for which discipline may be administered include scholastic dishonesty, including but not limited to cheating on an exam or quiz, plagiarizing, and unauthorized collaboration with another in preparing outside work. Academic work submitted by students shall be the result of their own thought, research or self-expression. Academic work is defined as, but not limited to tests, quizzes, whether taken electronically or on paper; projects, either individual or group; classroom presentations, and homework”.

The penalty assessed will be in accordance with the current ACC Student Handbook policy. See <http://www.austincc.edu/handbook> for more information.
(Penalty for violation of academic policy must be specified)----Examples

Method of Determining Course Grade:

ORIENTATION QUIZ

1 Orientation Quiz = 10 Points

Orientation Quiz: Due first three days of course

Lecture text book

15 End of Chapter assessments 10 points each = 150 Points

3 Major Exams 150 point each = 450 Points

Lab text book

12 End of Chapter assessments (7.5 points each) = 90 Points

3 Laboratory Assignment (100 points ea.) = 300 Points

1000 total possible points

Note: 1) ALL COURSE WORK IS CONDUCTED IN BLACKBOARD

- 2) Allow an average of 15 hours per assignment
3. Multiple attempts on submittals will be averaged
- 4) Please be aware of the grading system which is using a weighted average method, as such, for example – a grade of 80 on a lab quiz would be 80% of 7.5 points or 6 points

Examinations:

Three (3) major examinations will be assessed (see course schedule)

- 1) Examinations are taken at an ACC Testing center.
- 2) Any changes to course schedule will announced by e-mail via the official student ACC E-mail address.
- 3) Students will be allowed to bring 1 page (both sides) of notes and a calculator to the exams.

If an Exam is missed, you will have made arrangements with the Instructor in advance and have 1 week to take the make up Exam at the Test Center.

Taking the make up Exam is subject to Instructor approval.

If you fail to take the make up Exam in the 1 week period, a Zero will be assigned.

Laboratory/Homework Assignments: -- Submitted using Blackboard

There will be three (3) Lab assignments. (see course schedule)

You may either download Oracle 11g Express Edition and build a remote location database or may choose to visit/ use the computer science laboratory facilities which are available at various Austin Community College Campuses

The combined 27 lecture and lab based quizzes are due no less than two weeks from the date assigned unless other arrangements have been made with Instructor.

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Incomplete:

A student may receive a temporary grade of “I” (Incomplete) at the end of the semester only if **ALL** of the following conditions are satisfied:

1. The student is unable to complete the course during the semester due to circumstances beyond their control.
2. The student must have earned at least half of the grade points needed for a “C” by the end of the semester.
3. The request for the grade must be made in person at the instructor’s office and necessary documents completed.
4. To remove an “I”, the student must complete the course by two weeks before the end of the following semester. Failure to do so will result in the grade automatically reverting to an “F”.

Classroom Conduct:

Food and drinks are not allowed in the classroom.

Cellular phones and pagers are to be turned off during class and labs.

Freedom of Expression Policy:

It is expected that faculty and students will respect the views of others when expressed in classroom discussions.

Attendance / Withdrawal Policy:

Students are expected to attend classes and will be held responsible for all material covered in class. Regular attendance helps ensure satisfactory progress towards completion of the course.

It is the student's responsibility to complete a Withdrawal Form in the Admissions Office if they wish to withdraw from this class. The instructor may withdraw students from this class if their absences exceed 10% of the total number of class meetings. The last date to withdraw for this semester is defined in the semester catalogue. It is not the responsibility of the instructor to withdraw the students from their class even though the instructor has the prerogative to do so under the above listed circumstances.

Note: Last day to withdraw from any semester is noted in the Austin Community College Academic Calendar.

Students with Disabilities Policy:

“Each ACC campus offers support services for students with documented physical or psychological disabilities. Students with disabilities must request reasonable accommodations through the Office for Students with Disabilities on the campus where they expect to take the majority of their classes. Students are encouraged to make this request three weeks before the start of the semester. (Refer to the Current ACC Student Handbook)”

SCANS ITEMS COMPETENCIES:

CODE	DESCRIPTION	ITSE2309 LEVEL
F1	READING: Locates, understands, and interprets written information in prose and documents such as manuals, graphs, and schedules	2
F3	ARITHMETIC: Performs basic computations; uses basic numerical concepts such as whole numbers, etc.	2
F4	MATHEMATICS: Approaches practical problems by choosing appropriately from a variety of mathematical techniques.	2
F5	LISTENING: Receives, Attends to, interprets, and responds to verbal messages and other cues.	2
F9	PROBLEM SOLVING: Recognizes problems and devises and implements plan of action	2
F10	SEEING THINGS IN THE MINDS EYE: Organizes and processes symbols, pictures, graphs, objects, and other information.	2
F12	REASONING: Discovers a rule or principle underlying the relationship between two or more objects and applies it when	2
C1	TIME: Selects goal relevant activities, ranks them, allocates time, and prepares and follows schedules.	2
C5	Acquires and evaluates information	2
C6	Organizes and maintains information	2
C7	Interprets and communicates information	2
C8	Uses computers to process information	2

Course Topics:

Lecture:

Database Concepts
Database Life Cycle
Database Design
Relational Database Model
Distributed Database Management Systems
Data Warehousing and Data Mining
Entity Relationship Diagrams (ERD)
Relational Schema
Normalization of Database Tables
Transaction Management and Concurrency
Report Generation
Database Administration
Database Optimization

Lab:

SQL and Oracle
Create practice Database using downloadable Oracle 11g Express Edition

SQL Commands to be discussed
DML Commands – Select, Insert, Update, Delete,
DDL Commands – Create Table, Drop Table, Create View, Alter, Grant
Transaction Commands – Commit, Rollback

Developer Tools
Explore Development tools such as SQL Developer