

CourseITSS 4380 Advanced Database ManagementInstructorDawn OwensTermSpring 2017MeetingsTuesday, 7-9:45 p.m.

Instructor	Dr. Dawn Owens	Office	JSOM 3.707
Email	dawn.owens@utdallas.edu Please include your course number and section number in all email	Office Hours	Tues/Thur. 10:00 AM – 11:00 AM; Tues. 5:30PM-6:30 PM;
Phone	correspondence. 972-883-4901	Schedule an appointment:	http://itss.genbook.com

# Prerequisites

MIS 4300 Database Fundamentals

#### **Course Description**

To provide the student with an in-depth knowledge of advanced topics relating to database administration, database design, and database manipulation. Students will learn advanced SQL techniques and database administration techniques. At the end of the course, student will be able to effectively write advanced SQL queries and understand the tasks required to support a relational database. (3 semester hours)

## Learning Outcomes

- 1. Explain the structure of a relational database.
- 2. Apply database administration functions to a relational database.
- 3. Construct SQL queries to extract and report information from a relational database.
- 4. Perform advanced database processing such as OLAP, triggers, and stored procedures on a relational database.

## Required Texts & Materials

#### **Recommended Textbooks:**

*Database System: Design, Implementation, and Management* by Carlos Coronel, Steven Morris, Peter Rob, Course Technology, 10th Edition.

In order to understand SQL and be able to apply advanced SQL you should obtain a book specific to SQL such as: Oracle SQL and PL/SQL Handbook: A Guide for Data Administrators, Developers, and Business Analysts John Adolph Palinski

SQL Queries for Mere Mortals: A Hands-On Guide to Data Manipulation in SQL (2nd Edition),

John L. Viescas, Addison-Wesley Professional

Other recommended textbooks for those interested in Oracle Certification:

Database Systems Using Oracle, 2/E, Nilesh Shah, Prentice Hall

OCA: Oracle Database 11g Administrator Certified Associate Study Guide: (Exams1Z0-051 and 1Z0-052), Biju Thomas

OCA Oracle Database 12c SQL Fundamentals I Exam Guide (Exam 1Z0-061): Roopesh Ramklass

# **Assignment Guidelines**

- All reading is to be completed before class on the date posted.
- All assignments must be submitted at the beginning of class. Late assignments are NOT accepted.
- Written assignments must adhere to the APA style guide of formatting, citing, and referencing.
- Descriptions of assignments will be posted as they are assigned.
- No extra credit assignments are available
- General grading criteria can be found in eLearning. Assignment specific grading criteria will be included with the assignment instructions.
- All assignments will be submitted via eLearning. I do *NOT* accept assignments via email. If you submit an incorrect assignment or need to resubmit your assignment in eLearning you will be allowed to resubmit as long as it is before the due date. Send me an email <u>12 hours</u> prior to the due date and I will clear your submission. Upon doing so, you will be able to resubmit.
- DO NOT CHEAT and DO NOT PLAGIARIZE. DO NOT CHEAT and DO NOT PLAGIARIZE. All homework and exams are to be individual efforts. You are not to collaborate with other students, or to discuss homework or assignments with other students prior to submission. Copying of homework, assignments, or exams, in whole or in part, from other students or from assignments from previous semesters will be considered to be an act of academic dishonesty.
- You are encouraged to ask questions, raise issues and make observations about homework; please be advised that if you have a question or issue with your assignment grade, your entire assignment is subject to re-review (re-grading) which may or may not result in additional point deductions.

## Grading

This course will feature a mix of activities and written and verbal assignments that may be in class or on campus. Homework will include readings from the text, assignments, and activities that usually require the student to complete some type of task. The instructor will provide detailed instructions as well as the grading criteria for each assignment. Please consult the course schedule for deadlines.

Scoring			
Grade Component			
Assignments – 250 points			
Projects – 300 points			
Quizzes (Unscheduled) – 110 points			
Labs - 60 points			
Attendance* - 30 points			
*Each class is worth 2 points			
Total 750 points			

Grading Scheme			
<b>Final Point Total</b>	Letter Grade		
Α	93-100		
A-	90-92		
B+	87-89		
В	83-86		
В-	80-82		
C+	77-79		
С	73-76		
C-	70-72		
D+	67-69		
D	63-66		
D-	60-62		
F	59 & below		

# Course & Instructor Policies

**eLearning** will be used for class content (e.g., class slides and assignment descriptions) and the recording of grades. Slides will be posted in before class is held. Class announcements (e.g., change in assignment dates) will be sent to the student email on record in eLearning. It is the students' responsibility to regularly check their email accounts.

**Instructor Response Policy:** The instructor will respond to all student inquiries (emails, voice messages, etc.) within 48 hours (excluding holidays and weekends).

Attendance Policy: Attendance is extremely important. Students are expected to attend all classes in order to achieve maximum success. Attendance will be taken and used in consideration for the Participation grade; however, this grade will also reflect the instructor's judgment of the value of contributions to class discussion. There is no makeup for missed in-class assignments.

Late Work: All assignments are due at the beginning of class (not during and not after), on the specified date. I do not accept late assignments unless *prior* arrangements have been made with the instructor. A penalty of 20% per day (including weekends) will be assessed on late assignments.

Academic Integrity: The University is committed to academic excellence and expects academic honesty from all members of the University community and believes that it is essential for academic excellence and integrity. Academic honesty includes adherence to guidelines established by the instructor in a particular course for both individual and group work. It prohibits representing the work of others to be one's own (plagiarism); receiving unauthorized aid on an assignment (cheating); and using similar papers or other work products to fulfill the obligations of different classes without the instructor's permission. Penalties for academic dishonesty may include a grade of "F" on the work in question or for the course. In addition, any student engaged in academic dishonesty will be subject to disciplinary action. Please refer to the General Polices website (see below) for detailed information pertaining to academic dishonesty, including procedures for determining disciplinary action.

#### **General Policies & Procedures**

For information regarding general University policies and procedures, please go to <u>http://go.utdallas.edu/syllabus-policies</u>. These policies include the following:

- Technical Support
- Field Trip Policies, Off-Campus Instruction and Course Activities
- Student Conduct and Discipline
- Academic Integrity
- Copyright Notice
- Email Use
- Withdrawal from Class
- Student Grievance Procedures
- Incomplete Grade Policy
- Disability Services
- Religious Holy Days
- Avoiding Plagiarism

# Course Schedule, Assignments, and Due Dates

This is a tentative class schedule; changes to the schedule will be posted in eLearning.

WEEK	CONTENT / READINGS	ASSIGNMENTS
Week 1 1/10	Introduction to the course & Review: Relational Database Concepts	
Week 2 1/17	Logical Database Design - ERD, normalization, data integrity, keys Physical Database Design – Relational schema; SQL DDL DB Textbook* Chapters 2,3,4	
Week 3 1/24	Oracle Physical Database Structure: schemas, tablespaces, data dictionary	Project Milestone 1
Week 4 1/31	Database Manipulation: SQL I – SQL Fundamentals DB Textbook* Chapter 7	Assignment 1
Week 5 2/7	Database Manipulation: SQL II Advanced SQL DB Textbook* Chapters 8	
Week 6 2/14	Database Manipulation: SQL III Advanced SQL DB Textbook* Chapter 8	Project Milestone 2
Week 7 2/21	Database Manipulation: SQL III Advanced SQL DB Textbook* Chapter 8	
Week 8 2/28	Database Manipulation: SQL IV Stored Procedures DB Textbook* Chapters 8	Assignment 2
Week 9 3/7	Database Manipulation: SQL V Triggers and Views DB Textbook* Chapter 8	Project Milestone 3
3/14	SPRING BREAK 3/13 – 3/18 NO Class Tuesday 3/14	
Week 10 3/21	DB Database Manipulation: SQL Stored Procedures, Triggers and Views DB Textbook* Chapter 8	Project Milestone 4
Week 11 3/28	DB Database Manipulation: SQL VI Analytical Processing DB Textbook* Chapter 13	Assignment 3
Week 12 4/4	DB Administration: Transaction Management, Database Performance Tuning, Security, and Auditing DB Textbook* Chapters 11, 15	Project Milestone 5
Week 13 4/11	Database Reporting	Assignment 4
Week 14 4/18	Analytics	Assignment 5
Week 15 4/25	Project Presentations	Project Milestone 6

\* Database System: Design, Implementation, and Management by Carlos Coronel, Steven Morris, Peter Rob, Course Technology, 10th Edition.