Spring 2013

CS 3700-01: Introduction to Oracle/SQL Databases

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SYLLABUS

CS 3700-01 Introduction to Oracle/SQL Databases
Department of Computer Science and Engineering
College of Engineering and Computer Science
Spring 2013

General Course Information

Senior Lecturer:	Karen Meyer
Office Location:	344 Russ Center
Class Times:	MW 1:25 – 2:45 PM, 346 RC
Office Hours:	MW 9:00 – 10:00 am and by appointment
Advising Hours:	You are welcome to see me during advising hours. Please call (937)775-5131 to make an appointment. The advising office is located in 303 Russ
Office Phone:	(937)775-5131
E-mail:	karen.meyer@wright.edu **Please contact me using this e-mail address (rather than the Pilot mail)**
Course Web site:	http://pilot.wright.edu
Course Description:	Relational client server database design and access techniques. Includes designing, normalizing and building database tables, writing SQL statements and PL/SQL programs. 3 semester hours.
Prerequisite:	CS 1180 or CS 1160 or CEG 2170
Textbooks:	Casteel, Joan, Oracle 11g: SQL, ISBN: 13:978-1-4390-4128-4 Pratt/Adamski, Concepts of Database Management, Chs 5 and 6 ONLY, Order **e-chapters** from cengagebrain.com-search by ISBN 978-1-111-82591-1 PL/SQL Programming. Excerpts from Oracle 10g Developer: PL/SQL Programiing, Casteel, A pdf file is available on Pilot.
Software:	A complete installation of Oracle 11g is available in 346 RC and in 152 C RC. Instructions for downloading Oracle software for personal use can be found in your book and online.
Other Supplies:	Thumb drive to store your files.

Course Objectives

1. To be able to design, create and maintain a relational database using SQL.
2. To understand the purpose of an entity-relationship model and use it to design a relational database.
3. To be able to normalize a database to 3 NF.
4. To learn critical-thinking techniques for solving unstructured problems by identifying and analyzing an information systems problem and designing a working database system to solve the problem.
5. To understand the PL/SQL procedural programming language and how it is integrated with SQL commands.

Topics Covered

1. Normalization and E-R Models
2. SQL commands and constructs
3. PL/SQL programming
4. Creating and Managing Objects including User Creation and Management

Grading and Evaluation Criteria

Exams

- 15 % Exam 1
- 15 % Exam 2
- 20 % Exam 3 – comprehensive with emphasis on material covered since exam 2
  Examinations are a combination of multiple-choice, true/false and short answer questions. They will be administered using Pilot.

In Class

- 15 % In-Class Assignments
  These may **not** be made up.

Outside Class Assignments

- 15 % Exercises and Lab Assignments

Final Project

- 20 % - Final Project. You will complete a comprehensive database project. This includes the design, normalization, creation of tables, data insertion, management and selected queries.
  You will present an overview of the design component of the project during week 15. You will work with a class mate on the presentation and design only. You will code the database individually.

You will have card access to this lab and may use the lab when there is not another class in session. The schedule is posted on the door of 346 RC.

Academic Integrity

It is the policy of Wright State University to uphold and support standards of personal honesty and integrity for all students consistent with the goals of a community of scholars and students seeking knowledge and truth. Furthermore, it is the policy of the university to enforce these standards through fair and objective procedures governing instances of alleged dishonesty, cheating, and other academic misconduct. This information was obtained form Wright State's Office of Judicial Affairs. Complete information may be referenced at: http://www.wright.edu/students/judicial/integrity.html

Course and Laboratory Policies

1. From this lab, you may only access Internet sites related to this course. Refer to the Responsible Use of Information Technology Guidelines for complete information.

   http://www.wright.edu/cwis/policies/itpolicy.html

2. If you miss class, you are responsible for getting assignment information. You are welcome to visit me during office and advising hours. Please check Pilot email and discussions for notes and announcements.
3. 30 % will be deducted per day for late assignments. Overdue assignments will not be accepted after 1 week.
4. Let me know in advance if you will miss an exam. With proper notice and reason, it may be taken early. Otherwise, contact me immediately after you miss an exam. Present documentation for the absence in order to discuss a make-up opportunity..
5. In-class assignments will be tracked and recorded for unassigned in-class work. Quizzes, assignments, cases and discussions done in class may not be made up.
6. Please turn off your cell phone before entering the classroom.
7. If you are tired and plan to sleep in class, it is best that you not attend.
8. Before you leave the lab, perform a system shutdown and power off the PC and monitor. Make sure to eject your thumb drive.

Tentative Course Schedule

Complete lab assignment information is posted on Pilot. **The lab assignments due dates will be listed on Pilot.**
Some topics will be omitted from the selected chapters. See your PowerPoint slides for the topic outline.
Book Legend:
Casteel-Oracle 11g SQL
Pratt-ebook, Concepts of DB Management
PL/SQL- pdf file on Pilot
All reading assignments are from Casteel unless otherwise specified

Topics	Chapter Readings	Assignments
Week One: Jan. 7 Course Introduction, DB Concepts Relational Databases	Chapter 1 Course Notes	Review Scenario Databases
Week Two: Jan. 14 E-R Models and Database Design	Chapter 1, pp 4-5 and Pratt Chapter 6	Exercise 1
Week Three: Jan. 21 **No Class, MLK Day** Normalization	Chapter 1 pp 6-10 Pratt Chapter 5	Exercise 2
Week Four: Jan. 28 Finish, Normalization, Basic SQL Table Creation and Constraints	Chapter 2 Chapters 3, 4	Lab 1
Week Five: Feb. 4 Table Creation and Constraints, cont. Using SQL Developer Application, Review	Appendix B	Lab 2
Week Six: Feb. 11 **EXAM 1** Data Manipulation and Trans Control	Chapter 5	
Week Seven Sequences, Indexes, Synonyms Restricting Rows, Sorting Data	Chapter 6 Chapter 8	Lab3
Week Eight: Joins	Chapter 9	Lab 4
Week Nine:		

Topics	Chapter Readings	Assignments
Single Row Functions Group Functions	Chapter 10 Chapter 11	
Week Ten: Subqueries and Merge Statements Views, Review	Chapter 12	Lab 5
Week Eleven: **Exam 2** PL/SQL, Intro, Basic PL/SQL Structures	PL/SQL, pp12-15, Ch 2.	Lab 6
Week Twelve: Handling Data in PL/SQL blocks Cursors and Exception Handling	PL/SQL Ch. 3 PL/SQL , Ch. 4	
Week Thirteen: User Creation and Management Security	Chapter 7	
Week Fourteen: April 8 Wrap Up/Lab Time Project Presentations		
Week Fifteen: April 15 Project Presentations Review, Project due April 17th		
Final Exam Monday, April 22nd 12:30 – 2:30 pm	Comprehensive, with emphasis on material covered since exam 1	

Connecting to the Oracle Database in 346 RC and 152 C RC

.To Connect to Oracle 11g Database using Windows 7 OS and run the SQLPlus program, type at command line: SQLCONNECT username (This script will prompt for your password and mask password)

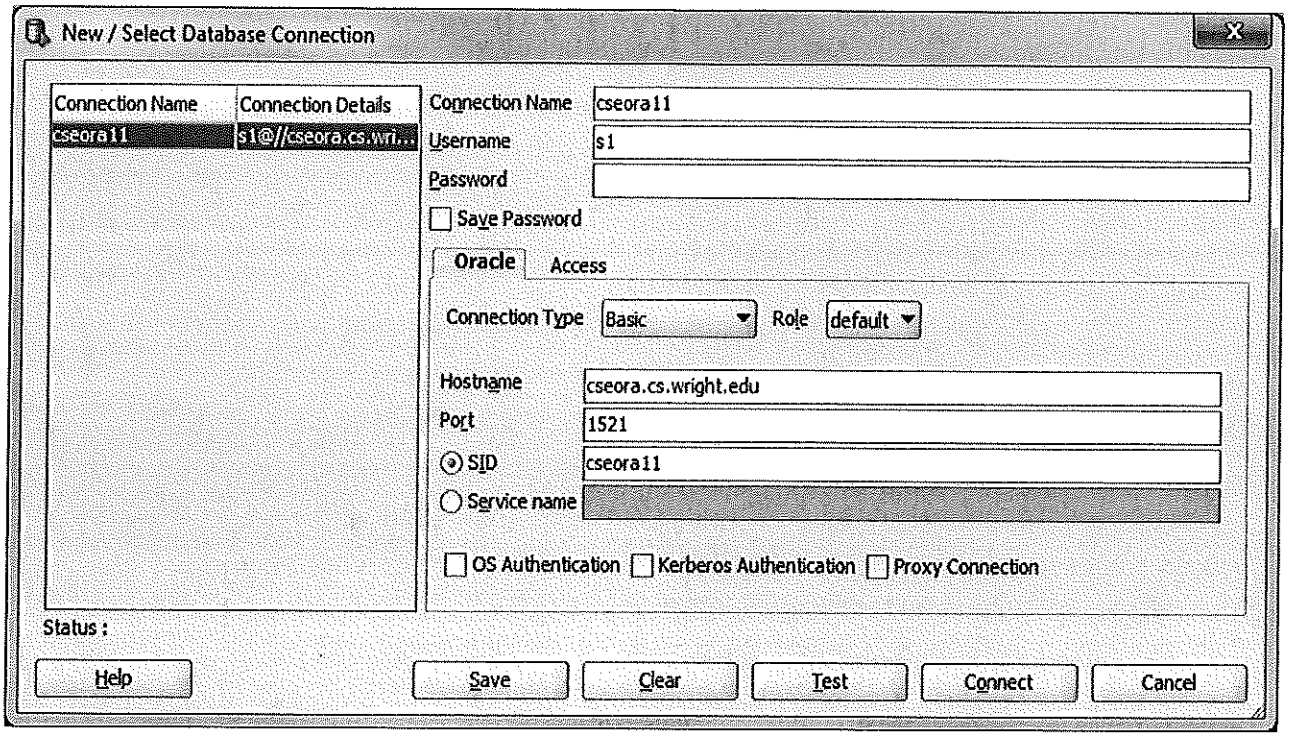
Alternative Procedure to run SQLPlus from command line:

1. Run command prompt
2. Type at command prompt: sqlplus myusername/mypassword@cseora/cseora11
3. Example: C:\Users\student>sqlplus s1/tiger9@cseora/cseora11
4. Where cseora is server and cseora11 is database name

Type exit to exit the application.

SQL Developer Connection

Run SQL Developer from the shortcut menu. Supply your username and password as below.



SQL Labs Turn In Procedure
All SQL labs should be spooled to a file. This means that the file will contain the SQL commands as well as the system response. **In the file that you turn in, I need to see the system response as well as your SQL statements.**

To create the spool file:
Open Notepad
Type at the top of page:

```
SPOOL d:filename.lst;
..... type commands here.....
SPOOL OFF;
```

Note that d indicates the drive letter(example G:) It will be the drive letter assigned to your thumb drive. Note that the file is not written until after the SPOOL OFF command is executed.

Alternative to spooling: Copy the executed code **and results** into a text editor (like Notepad) and save the file.