Syllabus CIS 64B - Summer 2015

Description
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Introduction to Oracle, SQL, DML, processing techniques, DDL techniques, selecting and sorting data, Joins, SQL functions, Oracle object, Oracle data processing concepts to maintain large database systems.

Instructor Information: Sukhjit Singh
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I have over 15 years of experience in software engineering and executive consulting and have developed business-critical, scalable and reliable infrastructures for companies like @Road, Infospace and Oracle. Education: MS Software Engineering with focus on Program Management (Carnegie Mellon University), MS Education - focus on Online Learning Technologies (CSUH), BS Computer Science (CSUH).

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Office Location: F51e

Requirements
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Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Computer Information Systems 64A.

Objectives
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A. Review the basic features of databases.
B. Demonstrate usage of basic SQL statements to restrict and sort data.
C. Demonstrate usage of single-row functions for retrieving from database.
D. Illustrate usage of joins to get data from multiple tables.
E. Explain and apply data aggregation and sub-queries to fetch data from database.
F. Demonstrate how formatting output works to produce readable reports.
G. Create Database Objects using a database schema.
H. Define database security policy and create different levels of user access and variables in database schema.
I. Use Control Structures to implement decision making constructs in RDBMS.
J. Describe how cursors are implemented in databases.
K. Demonstrate usage of database utilities used for importing and exporting data from databases.

Textbook
Required Text
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ISBN-10: 0321444434
John L. Viescas (Author), Michael J. Hernandez (Author)

OR

ISBN-10: 0596518846
SQL in a nutshell (Latest Edition)

Recommendations for Reference Texts
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Oracle SQL Manuals for 12c from otn.oracle.com.
Oracle Server Concepts for Oracle 12c from otn.oracle.com

Media Availability
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Live lectures and recordings are available through www.cccconfer.org

Written Assignments
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Assignment Due dates
Programming Assignment 1  7/3/2015
Programming Assignment 2  7/8/2015
Programming Assignment 3  7/12/2015
Programming Assignment 4  7/16/2015
Midterm                  7/20/2015  6 p.m. to 8 p.m. Online
Programming Assignment 5  7/22/2015
Programming Assignment 6  7/27/2015
Programming Assignment 7  7/31/2015
Programming Assignment 8  8/5/2015
Final                    8/5/2015  6 p.m. to 8 p.m. Online
Handouts
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Available on class site

Final Grade
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Through myportal.deanza.edu

Additional Information
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Grading System for this course
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For Letter Grade:
Grade: A+ assigned with 97% or higher
Grade: A assigned with 93% or higher
Grade: A- assigned with 90% or higher
Grade: B+ assigned with 87% or higher
Grade: B assigned with 83% or higher
Grade: B- assigned with 80% or higher
Grade: C+ assigned with 77% or higher
Grade: C assigned with 73% or higher
Grade: D+ assigned with 70% or higher
Grade: D assigned with 63% or higher
Grade: D- assigned with 60% or higher
Grade: F assigned with 0% or higher

For Pass/No Pass:
Grade: Credit assigned with 70% or higher
Grade: No Credit assigned with 0% or higher

Incomplete
Audit
Withdrawal

Grading
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Final - 40% of the grade
Labs - 30% of the grade (Best 7 assignments)
Midterm - 30% of the grade

Class Topics
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Week 1
Oracle Architecture and Basics
Week 2
Basic Select Statement
Week 3
Joins
Week 4
SQL Functions, Group By and Having Clause
Week 5
Transaction Nuts and Bolts and other Misc Stuff
Week 6
DB Theory and Normalization
Week 7
Creating Tables
Week 8
Database Objects and Indexes
Week 9
Database Utilities
Week 10
Database Security

General information
Course description
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My Comments
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This course is taking a deeper approach in helping you understand
Oracle SQL. (However this might make you a better DBA). We get into
Oracle Internals and you will have a better appreciation of the
subject matter, if you have taken the background courses.

As you will see below, my focus is on Oracleâ€™s approach for
creating an RDBMS. You will always have the SQL manual for reference
â€“ but the focus of this class is for a developer to know the inside
Oracle so well, that they can help a DBA to perform their job better.
Get ready to see databases in a whole new way.

Course Structure
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Lecture hours in schedule are about 2 hours. Two way discussion on
subject material is highly encouraged. You should spend 6 - 10 hours
per week to be able to finish your lab assignments. Team up with
peers in your class but submit your own work (It will add to your learning.)

Required Accounts:
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You will need an account on:
a. De Anza's Oracle Database (Account created by Instructor)
b. http://otn.oracle.com (Account created by you)
c. unix acnt to access database remotely (Account created by you - instructions at http://voyager.deanza.edu/voyagerAccount.pdf)
d. windows acnt to access database from the lab. (Account created by you. Pl. ask for instructions to create this account when you are physically in the lab).

Attendance
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Your attendance is expected in all lectures. You do not have to call me with an absent excuse, if you are going to be absent from the class.

Withdrawing
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Once you are added to the class it is your responsibility to withdraw. I will not drop you from the class. The earned grade will be assigned at the end of the quarter.

Adding the class and Late Adds
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At Instructor's discretion you may be assigned an addcode. you should add the class within normal dates provided in academic calendar on De Anza's website. If you do not add the class, during the scheduled time, no late adds will be processed by instructor.

Academic Dishonesty
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You are encouraged to discuss the ideas presented in the class. Copying or Cheating of work will result in zero grade for that assignment and may result in a failing grade. Basically I cannot tolerate cheating. You must work your solutions independently and all assignments and tests should be your own original work.

Submitting Lab Assignments
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On the lab assignment header, you should have the following information
Oracle SQL
Lab Assignment #
Your Name
Last four digits of your Student ID #
Due date
Date Handed in

You should turn in a soft copy of each program along with a text file that contains the test run of your source code. You should include a copy of design document as well.

All Assignments are emailed to me cislabs05@gmail.com

Subject with each submission should be stated as - "CIS 64B - Lab <#>" - Replace # with the assignment number you are submitting.

Adequately test your program using test data (depending on the program) Lab

Assignment Grading Due dates will be provided on the calendar.

Assignments turned in late will earn a maximum of 50% credit. No work will be accepted after the last lecture day

Cheating
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Policy on Copying and Cheating: Students who submit the work of others as their own or cheat on exams or other assignments will receive a failing grade in the course and will be reported to college authorities.

Catalyst Information
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This course utilizes Catalyst, De Anza's Online Learning Community. Please view the Catalyst website at https://catalyst.deanza.edu/ to login. Please note that you will be unable to login until the first day of class. Be sure you are using your correct username and password - do not use your social security number or international "99" number. If you need help logging in or finding your student ID, please view the short instructional video at: https://catalyst.deanza.edu/?pg=mod1. Additional instructions and assistance can be found on the Catalyst website.

De Anza College Bookstore Contact Information
Phone: 408-864-8455
http://books.deanza.edu/

LIBRARY SERVICES
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De Anza College Library Services are available for all students and faculty, both on and off campus. Please consult the library website for a complete description of the library services and hours:

De Anza College Library: http://www.deanza.edu/library/

Services of particular interest to off campus students include:
Access to the Library Catalog which includes books, DVDs, and course reserves. Here is a link to the library catalog:
Library Catalog: http://library.deanza.edu/uhtbin/webcat
Article Databases and Research Databases The library subscribes to several electronic databases which provide access to thousands of full-text journals, newspapers, and magazine articles. Research databases include: LEXIS NEXIS Academic, Encyclopedia Britannica Online and a Practice Test Database which contains Nursing Exams, TOEFL Preparation, College Entrance Exams, and many more.
To use the article or research databases from an off campus computer, log in with your 14 digit library number or eight digit student id number. These instructions are repeated on the first page of the library website along with descriptions of all the online resources provided.