SAN DIEGO COMMUNITY COLLEGE DISTRICT
CONTINUING EDUCATION
COURSE OUTLINE

SECTION I

SUBJECT AREA AND COURSE NUMBER

OFSY 615

COURSE TITLE

WEB DATABASES

TYPE COURSE

NON-FEE   VOCATIONAL

CATALOG COURSE DESCRIPTION

This course describes the fundamentals of web databases. Through theory and hands on application, students will receive an overview of types, use and syntax of data. Students will learn how to publish a database on the web. Students will learn to create dynamic web pages that pull information from databases to be combined onto the finished page for the web site visitor. (FT)

LECTURE/LABORATORY HOURS

   60

ADVISORY

NONE

RECOMMENDED SKILL LEVEL

Possess a 10th grade reading level; ability to communicate effectively in the English language; knowledge of math concepts at the 8th grade level; ability to use a mouse, menus, open and close windows and save files within the Macintosh or Windows operating system; and ability to use an internet browser.

INSTITUTIONAL STUDENT LEARNING OUTCOMES

1.   Social Responsibility
     SDCE students demonstrate interpersonal skills by learning and working cooperatively in a diverse environment.
2.   Effective Communication
     SDCE students demonstrate effective communication skills.

INSTITUTIONAL STUDENT LEARNING OUTCOMES (CONTINUED)

3. Critical Thinking
   SDCE students critically process information, make decisions, and solve problems independently or cooperatively.
4. Personal and Professional Development
   SDCE students pursue short term and life-long learning goals, mastering necessary skills and using resource management and self-advocacy skills to cope with changing situations in their lives.

COURSE GOALS

To provide instruction in using and implementing web databases. Students will learn how databases work and will understand data types and terminology. They will learn the proper syntax and use of data and how to optimize queries. Students will learn how to demonstrate their knowledge of publishing databases on the web.

COURSE OBJECTIVES

Upon successful completion of this course, students will demonstrate through theory and practical application, problem solving, critical thinking, written and oral communication and mathematical ability that they are able to:

1. Demonstrate knowledge of how web databases work.
2. Describe web data types and terminology.
3. Describe data syntax and use.
4. Describe query optimization.
5. Demonstrate how to publish databases on the web.

SECTION II

COURSE CONTENT AND SCOPE

1. Introduction to Web Databases
   1.1. Database samples
   1.2. Basic database terminology
   1.3. Structured query language
2. Data Types and Terminology
   2.1. Data types
   2.2. Column types
   2.3. Expression evaluation and type conversion
3. Syntax and Use
   3.1. Naming rules
   3.2. Creating, dropping and selecting databases
   3.3. Creating, dropping, indexing and altering tables
   3.4. Getting information about databases and tables
   3.5. Retrieving records

COURSE CONTENT AND SCOPE (CONTINUED)

    3.6.   Writing comments
4.   Query Optimization
    4.1.   Using indexes
    4.2.   Query optimizing
    4.3.   Column type choices
    4.4.   Query efficiency
    4.5.   Loading data
    4.6.   Scheduling and locking issues
5.   Publishing Databases on the Web
    5.1.   Choosing database web interface
    5.2.   Connecting to the server
    5.3.   Error checking
    5.4.   Making the connection code modular
    5.5.   Processing queries
    5.6.   Interactive query program

APPROPRIATE READINGS

Appropriate readings may include, but are not limited to, periodicals, magazines, instructor-written materials, manuals, computer based training on CD-ROMS (CBT), Web based training (WBT), instructor selected URLs and other publications related to the design and implementation of Web servers and the workings of the Web.

WRITING ASSIGNMENTS

Appropriate writing assignments may include, but are not limited to, preparing text for an assigned project, keeping a journal on all laboratory and project work, creating Web pages, completing all assigned reports, performing mathematical calculations as assigned, and completing all written assignments.

OUTSIDE ASSIGNMENTS

Outside assignments may include, but are not limited to, reading texts, reference resources or handouts; Internet sites, computer based training on CD-ROMS (CBT), Web based training (WBT), and research as needed to complete projects; and organizing and preparing written answers to assigned questions.

APPROPRIATE ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING

Assignments which demonstrate critical thinking may include, but are not limited to, analysis and evaluation of reading assigned text and computer based training on CD-ROMS (CBT), Web based training (WBT) materials and utilize this analysis in classroom discussions, writing assignments, and in performing laboratory activities. Students must select and use appropriate methods and materials needed to complete laboratory assignments.

EVALUATION

A student's grade will be based on multiple measures of performance. The assessment will measure development of independent critical thinking skills and will include evaluation of student's ability to:

1. Apply theory to assignments.
2. Complete all lessons, which may include CBT, WBT, and laboratory assignments.
3. Successfully complete all exams, including any online exams.
4. Perform on written, oral, or practical examinations.
5. Contribute to class discussions.
6. Maintain attendance per current policy.
7. Demonstrate ability to work independently and as a team member.
8. Demonstrate troubleshooting skills.
9. Demonstrate ability to help others learn.

Satisfactory completion of the course requires completion of a culminating activity, which may include, but is not limited to, one of the following:

1. Publish a simple web database.
2. Practical lab projects.

Upon successful completion of each individual course a Certificate of Course Completion will be issued. Upon successful completion of all courses included in the program a Certificate of Program Completion will be issued.

METHOD OF INSTRUCTION

Methods of instruction may include, but is not limited to, lecture, computer based training on CD-ROMS (CBT), Web based training (WBT), self-paced lab, demonstration, individualized study, use of audio-visual aids, group/team work, tutorials, outside assignments, guest lectures, field trips, and guided student job assignments. This course, or sections of this course, may be offered through distance education.

TEXTS AND SUPPLIES

Texts:

MySQL Cookbook, Paul DuBois, O'Reilly Media (2nd edition) ISBN-10: 059652708X
CGI Programming on the World Wide Web, Gundavaram, O'Reilly Publishers,
    ISBN: 1-56592-168-2
Learning Perl, Fourth Edition, Randal L. Schwartz, Tom Phoenix, and Brian d Foy, O'Reilly
    Media, ISBN-10: 0596101058
Webmaster in a Nutshell, Third Edition, Stephen Spainhour and Robert Eckstein, O'Reilly
    Media, ISBN-10: 0596003579
Macromedia Dreamweaver 8 Unleashed, Zak Ruvalcaba, Sams; 3Rev Ed edition,
    ISBN-10: 0672327600

TEXTS AND SUPPLIES (CONTINUED)
URLs:

http://www.phptr.com/phptrinteractive
http://php.net/
http://www.mysql.com/
http://www.phpmyadmin.net/home_page/index.php
http://www.oracle.com
http://ils.unc.edu/~ryank/webdb/webdb.html
http://slacvx.slac.stanford.edu/HELP/SQL
http://w3.one.net/~jhoffman/sqltut.htm

Supplies:

Pen, journal (composition book), notebook paper and a soft 3-ring binder, or a one-subject 110 sheet college ruled notebook, and appropriate storage media such as a USB Drive or Zip disk.

PREPARED BY: Karen Owen and Sharian Lott   DATE   3/21/2000

REVISED BY: Paul Richard   DATE   2/22/2007

REVISED BY: Instructional Services, SLOs added   DATE March 7, 2017

Instructors must meet all requirements stated in Policy 3100 (Student Rights, Responsibilities and Administrative Due Process), and the Attendance Policy set forth in the Continuing Education Catalog.

REFERENCES:

San Diego Community College District Policy 3100
California Community Colleges, Title 5, Section 55002
Continuing Education Catalog