

Pellissippi State Community College
Master Syllabus

**ORACLE APPLICATIONS DEVELOPMENT
CSIT 2445**

Class Hours: 3.0
Credit Hours: 4.0
Laboratory Hours: 3.0
Revised: December 2010

Instructor:
Office:
Phone:
Email:

Catalog Course Description:

An introduction to database application programming using Oracle application development tools. Topics include software development in a multi-tiered environment, PL/SQL programming, design development and integration of application components, with an emphasis on forms and custom reports. Hands-on training includes design and development of event-driven, client-server and Web applications.

Entry Level Standards:

The student must have an understanding of database concepts, including entity-relationship modeling, normalization and relational operations. The student must also have experience applying theoretical principles to database application development. A minimum amount of previous experience with Oracle and SQL is required. The student must have math, writing, verbal and English language skills at the college entry level and should be able to use a standard computer keyboard with an error-free typing rate of approximately 28 words per minute.

Prerequisites: CSIT 1810 and one programming language.

Corequisites: CSIT 2425 or departmental approval.

Textbook(s) and Other Course Materials:

- Required Textbook: Beginning Oracle Application Express by R. Greenwald, Wiley Publishing, 2009. ISBN: 470388372
- Recommended Text: Oracle Database 11g PL/SQL Programming, by Michael McLaughlin, McGraw-Hill, 2008. ISBN. 0071493697
- Removable storage device such as a USB flash drive.

I. Week/Unit/Topic Basis:

Week	Topic
1	Review of client/server and relational database concepts; review of SQL*Plus; review of SQL data definition and modification commands
2	Introduction to Oracle Application Development tools and grid computing; form wizards; installation of sample databases
3	PL/SQL code blocks and programming concepts
4-5	Form wizards; Forms Builder menus, object navigator, and property palette
5-6	Custom Forms; Control blocks, LOV Wizard, layout editor, GUI items and controls
7	Building relations, visual attributes; record groups; alerts; parameter canvases, frames and windows;
8	Oracle Report Wizard
9-10	Report layout objects; multiple block reports; matrix reports
11	Building integrated database applications; custom menus

Week	Topic
12	Advanced SQL and PL/SQL topics; triggers
13	Advanced form builder and database administration topics
14	Application-side triggers; use of built-ins; alternate Oracle form and report creation tools
15	Final Exam

II. Course Goals*:

The course will:

- A. Increase student understanding of terminology associated with client-server, multi-tiered, web-based, and object oriented application development. (III)
- B. Expand the student's familiarity with, working knowledge of, and effective use of Oracle application development tools, PL/SQL and Oracle Technology Network resources. (II, IV)
- C. Build the skills necessary to create interactive forms and reports that can store and retrieve data from Oracle databases. (IV, V)
- D. Increase the student's familiarity with issues related to data access, security, and database connectivity in a client server or n-tiered environments. (III, VI)
- E. Develop the skills necessary to solicit application requirements, design solutions based on those requirements, and rapidly implement appropriate application components based on real world client needs or case study analysis. (I, III, IV, V)
- F. Provide opportunities for students to work individually and in teams to design and implement problem solutions. (I, V)

*Roman numerals after course objectives reference goals of the Computer Science and Information Technology program (Career Program Goals and General Education Goals are listed http://www.pstcc.edu/departments/curriculum_and_instruction/syllabi/).

III. Expected Student Learning Outcomes*:

Students will be able to:

1. Use terminology associated with computers, software and database applications in proper context. (A)
2. Demonstrate effective use of documentation, tutorials, on-line resources and trade journals. (A, B)
3. Demonstrate knowledge and effective use of Oracle application software. (B, C)
4. Apply data access and security concepts to specify and implement object access in database applications. (D, F)
5. Produce code that carries out the commands of a graphical user interface using intermediate to advanced PL/SQL programming constructs. (B, E)
6. Create dynamic Web pages that can access an Oracle database. (B, C, E, F)
7. Demonstrate effective use of Oracle software as a tool for building enterprise solutions. (B, C, D, E, F)

* Capital letters after Expected Student Learning Outcomes reference the course goals listed above.

IV. Evaluation:

- A. Testing Procedures: 50% of grade

A minimum of two tests will be administered. Tests will cover material discussed in class, assigned reading and research, and skills practiced during assigned labs. Tests may not to be missed without a valid, documented excuse. Each instructor will include details of his/her testing procedures in a syllabus addendum.

- B. Laboratory Expectations: 40% of grade
Lab attendance is required. Approximately 10 computer labs be assigned and must be completed and handed in at the indicated date and time. Assignments turned in late will receive a deduction from the total points awarded. A case study integrating all concepts and techniques learned during the semester shall be completed by the end of the semester. Students will be given opportunities to work on the components of the case study throughout the semester.
- C. Field Work: N/A
- D. Other Evaluation Methods: 10% of grade
Class participation, research and homework will also comprise a portion of the final grade for the course. Class participation includes elements of a professional work ethic such as regular attendance, arriving on-time, and appropriate interaction with peers during group activities.
- E. Grading Scale:
- | | |
|----------|----|
| 93 – 100 | A |
| 88 – 92 | B+ |
| 83 – 87 | B |
| 78 – 82 | C+ |
| 73 – 77 | C |
| 65 – 72 | D |
| Below 65 | F |

V. Policies:

- A. Attendance Policy:
Pellissippi State Technical Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. (Pellissippi State Online Catalog)
- B. Academic Dishonesty:
Plagiarism, cheating and other forms of academic dishonesty are prohibited. A student guilty of academic misconduct, either directly or indirectly through participation or assistance, is immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions that may be imposed through the regular Pellissippi State procedures as a result of academic misconduct, the instructor has the authority to assign an F or a zero for the exercise or examination or to assign an F in the course. (*Pellissippi State Online Catalog*)
- C. Accommodations for disabilities:
Students who need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins 127, 132, 134, 135, 131 or by phone: 539-7153 or TTY 694-6429. More information is available at www.pstcc.edu/departments/swd/.

D. Other Policies:

1. Make-up exams: All exams are required, and make-ups will be allowed only in the rarest of cases. In the event of an emergency, notification of the instructor must be made in advance.
2. It is the student's responsibility to request help from the instructor prior to an assignment's due date.