Class Hours: 3.0  Credit Hours: 4.0
Laboratory Hours: 3.0  Date Revised: Spring 03

NOTE: This course is not designed for transfer credit.

Catalog Course Description:

An introduction to database application programming using Oracle development tools including Oracle Forms, Oracle Reports, Oracle Graphics and advanced PL/SQL procedures. Hands-on training will include design and development of client-server and three-tiered 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. 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 2425 or departmental approval.

Corequisites:

Textbook(s) and Other Reference Materials Basic to the Course:

Required:
Course pack: a set of packaged handouts covering topics not included in the textbook.
Supplies: One box of 3-1/4" HD floppy diskettes or 2 zip disks.

Recommended:

I. Week/Unit/Topic Basis:
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1-2</td>
<td>Review of SQL*Plus, Oracle forms and reports wizards</td>
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<tr>
<td>3</td>
<td>Oracle form builder and object navigator</td>
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<tr>
<td>4</td>
<td>Form layout editor; property palette; menu and object editor</td>
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<tr>
<td>5</td>
<td>Creating program units using PL/SQL; Oracle objects</td>
</tr>
<tr>
<td>6-7</td>
<td>Oracle Developer form objects; GUI interface objects</td>
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<tr>
<td>8</td>
<td>Record structures; tool bars; menus</td>
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<tr>
<td>9</td>
<td>Forms triggers; PL/SQL libraries; server API’s</td>
</tr>
<tr>
<td>10-11</td>
<td>Oracle Reports and Graphics</td>
</tr>
<tr>
<td>12</td>
<td>Introduction to three-tiered application architecture</td>
</tr>
<tr>
<td>13</td>
<td>Oracle Developer Form’s three-tier architecture</td>
</tr>
<tr>
<td>14-15</td>
<td>Web forms; Java stored procedures; XML</td>
</tr>
<tr>
<td>16</td>
<td>Project presentations; FINAL EXAM</td>
</tr>
</tbody>
</table>

### II. Course Objectives*:

A. Develop a working understanding of the terminology associated with client-server, three-tiered, web-based, and object oriented application development.  III, VII, VIII, IX

B. Become familiar with, develop a working knowledge of, and demonstrate efficient use of: ORACLE Forms and Reports and the other Oracle Developer tools.  IV, VI, V, VII, VIII, IX, XII

C. Develop a working Oracle application consisting of a user interface layer, a business logic layer, and a relational database layer.  III, IV, VI

D. Create modular prototype database applications that can be run from the Web.  III, IV

E. Become familiar with issues related to data access, security, and database connectivity in the client server and n-tiered environments. III, VII, VIII, IX

*Roman numerals after course objectives reference goals of the CSIT program.

### III. Instructional Processes*:

Students will:

1. Use professional tools to produce software components and documentation. Technological Literacy, Personal Development, Transitional Strategy, Active Learning.


3. Practice elements of the work ethic such as punctuality, professionalism, dependability, cooperation, and contribution. Personal Development.
4. Use professionally accepted methods and materials in their approach to completion of applications. Technological Literacy, Personal Development, Transitional Strategy, Active Learning.


*Strategies and outcomes listed after instructional processes reference Pellissippi State’s goals for strengthening general education knowledge and skills, connecting coursework to experiences beyond the classroom, and encouraging students to take active and responsible roles in the educational process.

IV. Expectations for Student Performance*:

Upon successful completion of this course, the student should be able to:

1. Use terminology associated with computers, software and database applications products. (A,B,C,D,E,F)

2. Demonstrate an understanding of the use of hardware, firmware and systems terminology. (A,B,C,D,E,F)

3. Demonstrate effective use of various manuals, documentation, tutorials, on-line directives and trade journals. (A,B,C,D)

4. Demonstrate knowledge and use of the Oracle Developer tool set. (A,B,C,D,E)

5. Produce code that carries out the commands of a graphical user interface using intermediate to advanced PL/SQL programming constructs. (B,D,E)

6. Produce code that uses intermediate to advanced SQL queries. (B,D,E)

7. Create dynamic Web pages that can access an Oracle database. (B,D,E)

8. Demonstrate effective use of Oracle as a business tool. (A,B,C,D,E)

*Letters after performance expectations reference the course objectives listed above.

V. Evaluation:

A. Testing Procedures:

A minimum of three tests will be given. Tests may include multiple choice, true/false, matching, short answer, and essay questions. There will be no make-up tests unless prior arrangements are made with the instructor or the student produces documentation for a serious illness or family emergency.

B. Laboratory Expectations:

Lab attendance is required. Approximately 8-12 computer lab assignments will be given 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.

C. Field Work:

N/A
D. Other Evaluation Methods:

Homework and in class group activities will occasionally be assigned to reinforce lecture topics. Grades on these assignments may, at the instructor’s discretion, include a participation component. A final project integrating all concepts and techniques learned during the semester is required. Students will be given opportunities to work on this project throughout the semester.

E. Grading Scale:

Each instructor will explain the point system that he/she uses to arrive at the final grade. Grades will be assigned in accordance with the following scale:

- 93 – 100% of total pts. A
- 88 – 92% of total pts. B+
- 83 – 87% of total pts. B
- 78 – 82% of total pts. C+
- 73 – 77% of total pts. C
- 65 – 72% of total pts. D
- below 65% F

VI. 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 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.

C. Other Policies:

1. Makeup Exams
All exams are required, and make-ups will be allowed only in the rarest of cases. In the event that you have an emergency beyond your control, you must notify the instructor in advance. To do this, call the Business & Computer Technology office at 694-6656 and leave a message for your instructor. At the next lecture period, you must submit a written statement explaining why you missed the test.

2. Instructor Specific Policies
Each instructor will provide students with a syllabus supplement outlining his/her grading system and additional absence, assignment or test make-up policies. This addendum will include a breakdown of the weight that tests, labs, projects, homework assignments and class participation carry toward the final grade for the course.