PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE
MASTER SYLLABUS

DATABASE WEB DEVELOPMENT
WEB 2800

Class Hours: 3.0  Credit Hours: 3.0
Laboratory Hours: 0.0  Date Revised: Fall 2001

NOTE: This course is not designed for transfer credit.

Catalog Course Description:
This course provides the learner with different approaches for creating Web pages that interact with a database. Hands-on projects, coupled with learning modules, are used to understand concepts, develop database access Web pages, develop programs, design databases, and interact with a database using client-side scripts, server-side scripts and compiled programs.

Entry Level Standards:
The entering student should have a familiarity with the Windows operating. The student is expected to have moderate programming abilities in a Visual Basic. Problem solving skills will be essential. The student should be able to keyboard at least 23 words per minute.

Prerequisite:
WEB 2300

Corequisite:
WEB 2700

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

Database-Driven Web Sites; Mike Morrison and Joline Morrison, Course Technology, 2000.

I. Week/Unit/Topic Basis:

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<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction to Web Database Processing</td>
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<td>2</td>
<td>Relational Database Concepts</td>
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<td>3</td>
<td>Introduction to Microsoft Access</td>
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<td>4</td>
<td>Standard Query Language (SQL)</td>
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<td>5</td>
<td>Introduction to HTML</td>
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<td>6</td>
<td>Web Servers</td>
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<tr>
<td>7</td>
<td>Introduction to Visual Basic</td>
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II. Course Objectives*:

A. Understand the process of database analysis and design. I
B. Use Standard Query Language (SQL) for database manipulation. I,II,III,IV
C. Demonstrate proficiency with HTML. I,II,III
D. Understand the structure and functionality of web servers. I,IV,VI
E. Use Visual Basic to access a database. I,II,III
F. Use VBScript to write client-side scripts. I,II,III
G. Understand the functionality of Active Server Pages for creating server-side scripts. I,III,IV
H. Create compiled server programs using Common Gateway Interface (CGI) and Data Link Libraries (DLLs). I,III,IV

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

III. Instructional Processes*:

Students will:

1. Use professional tools to produce software components and documentation. Technological Literacy Outcome, Personal Development Outcome, Transitional Strategy
2. Learn to analyze and solve problems using structured analytical techniques. Technological Literacy Outcome, Numerical Literacy Outcome, Personal Development Outcome, Problem Solving and Decision Making Outcome, Active Learning Strategy
3. Use professionally accepted methods and materials in completion of applications. Technological Literacy Outcome, Personal Development Outcome, Transitional Strategy
4. Practice elements of the work ethic such as punctuality, professionalism, dependability, cooperation, and contribution. Personal Development, Transitional Strategy

*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. Create a database and database tables using Microsoft Access. A
2. Write SQL statements to query, insert, update and delete database records. B
3. Develop web pages that interact with a database. A,E
4. Install and configure Microsoft’s Personal Web Server. D
5. Create a Visual Basic application that updates a database. E
6. Write client-side scripts using VBScript that validate HTML forms and manipulate cookies. F
7. Develop ASP scripts to update a database. G
8. Write CGI programs and DLLs using Visual Basic. H

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

V. Evaluation:

A. Testing Procedures: 70% of grade

Three comprehensive exams will be given during the course of the semester. Dates will be announced in class and each test will account for 200 points of your final grade -- 600 points total. During summer semester, two 300 point exams will be given.

Quizzes and Homework Assignments: Unannounced quizzes and homework assignments will be given. These will account for 100 points of your final grade.

B. Laboratory Expectations: 30% of grade

Several lab assignments will be made during the course of the semester. A late penalty may be imposed on any overdue assignment. Individual and/or group projects may be assigned to emphasize practical solutions to database problems. Failure to satisfactorily complete any assigned projects may result in a grade of F for the course. Lab projects will account for 300 points of your final grade.

C. Field Work:

N/A

D. Other Evaluation Methods:

This information, if applicable, will be provided by the instructor in full detail during the first week of class via syllabus supplement.

E. Grading Scale:

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<tbody>
<tr>
<td>First Exam</td>
<td>200</td>
<td>(20%)</td>
<td>900-1000</td>
<td>A</td>
</tr>
<tr>
<td>Second Exam</td>
<td>200</td>
<td>(20%)</td>
<td>800-899</td>
<td>B</td>
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VI. Policies:

A. Attendance Policy:

Class attendance may affect your grade. Pellissippi State Technical Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding videotape and Web 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. Students guilty of academic misconduct, either directly or indirectly through participation or assistance, are immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions which 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 Catalog)

C. Other Policies:

**Communication:** 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. It is the student's responsibility to request help from the instructor prior to an assignment's due date.

**Facilities:** Students must have a valid Pellissippi ID to be presented on demand to gain access to Pellissippi facilities.

**Americans with Disabilities Policy:**
ADA Contact Information
Pellissippi State Technical Community College
P. O. Box 22990 Knoxville, TN 37933-0990
Phone 865-694-6400
Email comments to: asatkowiak@pstcc.cc.tn.us
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URL: http://www.pstcc.cc.tn.us/departments/swd/index.html