INTRODUCTION TO INTERNET SOFTWARE DEVELOPMENT
CSIT 2645

Class Hours: 3.0  Credit Hours: 4.0
Laboratory Hours: 3.0  Revised: Spring 2011

NOTE: This course is not designed for transfer credit.

Catalog Course Description:

The history, growth and use of the Internet are explored, and major internet protocols are discussed. Students use CSS, JavaScript, Perl, PHP and other techniques to create dynamic Web content.

Entry Level Standards:

The entering student should have a familiarity with the DOS PC operating system and the Windows environment. The entering student should be able to type at least 23 words per minute with 5 or fewer errors.

Prerequisites:

One programming course

Textbook(s) and Other Course Materials:


I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction and History</td>
</tr>
<tr>
<td>2</td>
<td>Cascading Style Sheets (CSS)</td>
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<tr>
<td>3</td>
<td>JavaScript</td>
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<tr>
<td>4</td>
<td>Document Object Model (DOM)</td>
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<tr>
<td>5</td>
<td>Exam 1</td>
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<tr>
<td>6</td>
<td>Dynamic Documents with JavaScript</td>
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<tr>
<td>7</td>
<td>XML</td>
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<td>8</td>
<td>Introduction to Flash</td>
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<tr>
<td>9</td>
<td>Java Applets</td>
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<tr>
<td>10</td>
<td>Exam 2</td>
</tr>
<tr>
<td>11</td>
<td>Introduction to PHP</td>
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</tbody>
</table>
II. Course Goals*:

The course will:

A. Enhance student understanding of the history of computer technology (particularly communication technology) and the role it plays in daily life. (II, III, X)

B. Provide students with an understanding of the use of Cascading Style Sheets. (II, III)

C. Introduce students to the JavaScript programming language. (II, III)

D. Provide students the information they need to understand and create programs using the Document Object Model (DOM), the primary data structures underlying web pages. (I, II, IV, V, VI)

E. Enhance student ability to create evocative web pages by showing how to create dynamic documents using JavaScript to access and manipulate the DOM. (I, II, IV, VI, VII, VIII, IX, XII)

F. Introduce Extensible Markup Language (XML) and provide students with an understanding of its use as a markup language creator for creating human-readable, easily sharable data files. (I, II, III, IV, VI, VI, IX).

G. Provide students with an understanding of the use of Flash to create custom graphics for web pages and other forms of media. (I, II, IV, V, IX, X, XII)

H. Enhance student understanding of the Java language through their creation of Java applets for use on web pages. (I, II, IV, V, VI, VII, IX, XII).

I. Introduce students to programming in the PHP language and reveal its ease of use in the web environment. (I, II, IV, V, VI, VII)

J. Provide students with an understanding of the Ajax technology for building programs requiring asynchronous web communication. (I, II, IV, V, VI, VII)

K. Enhance student understanding of the Java language by using Java and the Netbeans environment to facilitate web program development. (I, II, IV, V, VI, VII, XI)

L. Provide students with a current state of the art overview of the field of web development and enough hands-on practice with currently used tools to allow students to begin earning money in the field after successful integration of the course material. (II, III, IV, X, XI, XII)

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

III. Expected Student Learning Outcomes*:

The student will be able to:
1. Intelligently discuss the history of computer technology with emphasis on communication technologies. (A)

2. Create a web page using only a text editor and browser. (A)

3. Know how to use HTML effectively and how to design a decent web page. (A)

4. Use Cascading Style Sheets (CSS) and define the style of individual HTML tags, sets of tags, or groups of pages. (A, B)

5. Create complex programs using the JavaScript language. (A, B, C)


7. Use JavaScript to access the Document Object Model and add or modify objects. (A, B, C, D)

8. Read and create Extensible Markup Language (XML) files. (A, F)

9. Create their own markup language using XML. (A, B, C, F)

10. Create a Flash animation that utilizes both text and graphics. (G)

11. Include Flash animation in web pages. (A, B, E, G)

12. Create Java applets and include them in web pages. (A, H)

13. Understand the basics of the PHP language and its use in creating web applications. (I)

14. Use PHP to create a simple web program. (A, B, C, D, E, F, I)

15. Understand the use of Ajax for asynchronous communication. (J)

16. Create a simple Ajax web program that performs asynchronous communication. (A, B, C, D, E, F, J)

17. Use Netbeans to effectively create web-based programs. (A, K)

18. Intelligently discuss the current state of the art in web-based computer programming at a high level and understand in detail the tools used in the class. (A, B, C, D, E, F, G, H, I, J, K, L)

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

**IV. Evaluation:**

A. Testing Procedures: 33% of grade

   3 exams @ 100 points each = 300 total points

B. Laboratory Expectations: 33% of grade

   15 laboratory assignments = 300 total points

C. Field Work: 33% of grade
10 assignments for a total of 300 points

D. Other Evaluation Methods:

If applicable, this information will be provided by the individual instructors.

E. Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score Range</th>
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<tbody>
<tr>
<td>A</td>
<td>&gt; 900</td>
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<tr>
<td>B</td>
<td>800-899</td>
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<tr>
<td>C</td>
<td>700-799</td>
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<tr>
<td>D</td>
<td>600-699</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 600</td>
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V. Policies:

A. Attendance Policy:

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning courses) must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of the Learning Division, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of the Learning Division.

B. Academic Dishonesty:

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices:

- Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments.
- Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services, without proper documentation of the original source.
- Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one’s own work.
- Taking an exam for another student.
- Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
- Any of the above occurring within the Web or distance learning environment.

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:

**Computer Usage Guidelines:**
College-owned or -operated computing resources are provided for use by students of Pellissippi State. All students are responsible for the usage of Pellissippi State’s computing resources in an effective, efficient, ethical and lawful manner.

**Make-Up Work:**
Students are expected to promptly attend all lecture and lab classes as assigned. If a class is missed, student must make up all work and get notes and/or handouts.