INTERNET AND NEW HARDWARE/SOFTWARE PRODUCTS
CST 2470

Class Hours: 3.0  Credit Hours: 4.0
Laboratory Hours: 3.0  Date Revised: Spring 01

Catalog Course Description:
The history, growth and use of the Internet are explored, and major Internet protocols are discussed. Students learn the HTML language by creating their own web pages. Students work in teams to create web sites using Dynamic HTML techniques and learn about the "real world" of Internet software development.

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:
CST 1010 or CST 1110 or departmental approval

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


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, History of Internet</td>
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<tr>
<td>2</td>
<td>WWW and Internet protocols</td>
</tr>
<tr>
<td>3</td>
<td>Basic HTML</td>
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<tr>
<td>4</td>
<td>Intermediate HTML</td>
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<tr>
<td>5</td>
<td>Exam I</td>
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<tr>
<td>6</td>
<td>Introduction to JavaScript</td>
</tr>
<tr>
<td>7</td>
<td>JavaScript Control Structures</td>
</tr>
<tr>
<td>8</td>
<td>JavaScript Control Structures II</td>
</tr>
<tr>
<td>9</td>
<td>JavaScript Functions</td>
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</tbody>
</table>
II. Course Objectives*:

A. Discuss the evolution of the Internet along with its structure, use, and importance. I III IV

B. Recognize the advantages of standardized protocols by examining the functionality of ones currently in use on the Internet. III

C. Describe the process involved in creating a set of pages on the World-Wide Web. I III

D. Discuss in detail the HTML language, along with how web pages are stored, transmitted, and processed on the Internet. III V IX

E. Discuss in detail the JavaScript language, along with how it is used to add interactivity to web pages. III V IX

F. Develop an interesting set of WWW pages utilizing HTML and Javascript. I II IV V VI IX XII

G. Work together to plan, develop, and integrate WWW pages with a high-level language CGI program. I II III IV V VI VII IX X XII

H. Discuss the integration of more advanced WWW constructs such as cascading style sheets, forms, CGI, and the DHTML object model. I IV IX

I. Discuss advanced WWW topics including network security and e-commerce. I II IV V X

*Roman numerals after course objectives reference goals of the Computer Science Technology program.

III. Instructional Processes*:

Students will:

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

2. Create an individual web page based upon their own interests. Communication Outcome, Problem Solving and Decision Making Outcome, Technological Literacy Outcome, Information Literacy Outcome, Transitional Strategy

3. Participate in a software development team to create a web application. Communication Outcome, Problem Solving and Decision Making Outcome, Transitional Strategy, Active Learning Strategy
4. Practice elements of the work ethic such as punctuality, professionalism, dependability, cooperation, and contribution. *Personal Development Outcome*

5. Present finished products to the class. *Communication Outcome, Active Learning Strategy*

6. Participate in a peer review of individual and group projects. *Problem Solving and Decision Making Outcome, Communication Outcome, Transitional Strategy, Active Learning Strategy*

7. Use professionally accepted methods and materials in completion of applications. *Technological Literacy Outcome, Personal Development Outcome, Transitional Strategy, Active Learning 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. Recognize basic protocols in use on the Internet. A B C

2. Utilize applications that implement basic Internet Protocols. B C

3. Recognize and use basic HTML tags. D E F

4. Use intelligent techniques to create, modify, and upload web pages. C D E F

5. Design and create a set of web pages. D E F

6. Participate as a group leader in the development of a complex web application. G H

7. Integrate application component modules into a complex application. H I

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

V. Evaluation:

A. Testing Procedures: 40% of grade

Exams will comprise 40% of the final grade. Two exams will be given during the course of the semester. Dates will be announced in class and each exam will count for 200 points of the final grade. There will be no make-up tests unless prior arrangements have been made with the instructor.

B. Laboratory Expectations: 10% of grade

Lab assignments will be made during the course of the semester. A late penalty will be imposed on any overdue assignment. Failure to satisfactorily complete all labs may result in a grade of F in the course. Labs will count for 100 points (10%) of the final grade.

C. Individual Project: 25% of grade

One project consisting of a set of WWW pages based upon individual student interests will be assigned. This project is intended to familiarize students with the basic HTML language and overall page layout and design. Failure to satisfactorily complete the individual project will
result in a grade of F for the course. This project will count for 250 points (25%) of the final grade. A portion of the project grade will be determined by peer evaluation.

D. Group Project: 25% of grade

One extensive group project will be assigned to create a complete web application based upon instructor specifications. This project is intended to familiarize students with more advanced HTML features. It also provides an opportunity for participating in a group application development and integration effort. Failure to satisfactorily complete the group project may result in a grade of F for the course. This project will count for 250 points (25%) of the final grade. A portion of the project grade will be determined by class peer evaluation and another portion by project group peer evaluation.

E. Grading Scale:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>900 - 1000</td>
<td>A</td>
</tr>
<tr>
<td>800 - 899</td>
<td>B</td>
</tr>
<tr>
<td>700 - 799</td>
<td>C</td>
</tr>
<tr>
<td>600 - 699</td>
<td>D</td>
</tr>
<tr>
<td>Below 600</td>
<td>F</td>
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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.

B. Academic Dishonesty:

Plagiarism, cheating, software piracy, non-educational use of computer systems and other forms of academic dishonesty are strictly prohibited.