**CMPE418 - Internet Programming**

<table>
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<tr>
<th>Department:</th>
<th>Computer Engineering</th>
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<td><strong>Program Name:</strong></td>
<td>Computer Engineering</td>
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<tr>
<td><strong>Course Number:</strong></td>
<td>CMPE 418</td>
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<tr>
<td><strong>Credits:</strong></td>
<td>4 Cr</td>
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<tr>
<td><strong>Year/Semester:</strong></td>
<td>2012-2013 Spring</td>
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<td><strong>Program Code:</strong></td>
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- **Prerequisite(s):** CMPE354 – Database Management Systems

**Catalog Description:**
This course is an introduction to the core technologies, tools, techniques and languages needed for the design and implementation of static and dynamic Web pages, as well as Web applications. Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), Extensible Markup Language (XML), Extensible Stylesheet Language transformations (XSLT), JavaScript and AJAX are covered for programming on the client side. The list of technologies covered may change as new technologies become available and current ones become obsolete. Web servers, XML Web services, a scripting language and a corresponding Web application framework are covered for programming on the server side. Issues that are dealt with concerning server side programming also include session tracking, authentication, authorization, and database connectivity.

**Course Web Page:**
http://cmpe.emu.edu.tr/bayram/courses/418/Teaching/Spring%202013/Main.htm

**Textbook:**

**Topics Covered and Class Schedule:**
(4 hours of lectures per week, 2 hours of laboratory per week)

- Week 1: Introduction to computers and the Internet
- Week 2: Introduction to HTML 5
- Weeks 3-4: Cascading Style Sheets
- Week 5: Javascript – Introduction, Built-in Objects
- Week 6: Javascript - Document Object Model, Events
- Week 7: Introduction to canvas
- Week 8: AJAX enabled rich Internet Applications (RIA), JQUERY
- Week 9: PHP - Introduction
- Week 10: PHP – Form Processing, Database connectivity
- Week 11: PHP - Session Tracking
- Week 12: PHP - Web Services
- Week 13: The ZEND framework

**Laboratory Schedule:**
(2 hours of laboratory per week, when there is a lab)

- Weeks 3-4  Web page design using HTML and CSS
- Weeks 5-6  Dynamic web page design using Javascript and JQUERY
- Weeks 7-8  Server side programming in PHP – Simple form processing
- Weeks 10-12 Server side programming in PHP – Database access, Web services

**Course Learning Outcomes:**

Upon completing the course successfully, students are expected to be able to

- Have an understanding of the Internet and World Wide Web architecture
- Design web pages and sites using HTML and CSS
- Include dynamism to Web pages using Javascript
• Use AJAX to improve responsiveness of web pages
• Write server side programs in PHP
• Access databases using PHP
• Implement web services and call web services in PHP
• Use JQUERY for compatibility with different browsers

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<tr>
<th>Assessment</th>
<th>Method</th>
<th>No.</th>
<th>Percentage</th>
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<tbody>
<tr>
<td></td>
<td>Midterm Exam</td>
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<tr>
<td></td>
<td>Labs</td>
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<td>Final Examination</td>
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<td>Attendance</td>
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**Contribution of Course to Criterion 5**
Credit Hours for:
Mathematics & Basic Science : 0
Engineering Sciences and Design : 4
General Education : 0

**Relationship of Course to Program Outcomes**
The course has been designed to contribute to the following program outcomes:
a) an ability to apply knowledge of mathematics, science, and engineering
e) an ability to identify, formulate, and solve engineering problems
k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

**Prepared by:** Assoc. Prof. Zeki Bayram  
**Date Prepared:** 14 February 2013