### Course Description

This course provides computer science majors with an introduction to fundamental Web programming technology and techniques. Topics covered include advanced HTML including HTML5 and CSS3; JavaScript including jQuery; XML including DTDs and XSL; server-side programming; security issues and encryption-based security mechanisms. Prerequisite: CS 121 with a C- or better.

### Learning Objectives

By the end of the semester, students should be able to:

- List and explain common HTML elements and CSS styles.
- Create dynamic, interactive web pages using JavaScript and jQuery.
- Explain the Document Object Model (DOM) tree.
- Use JavaScript and HTML5 Canvas to draw 2-d graphics on webpages.
- Create and parse XML files.
- Create a simple AJAX application.
- Create a simple web application with both server-side scripts and a database connection using PHP and/or ASP.NET with C#.
- Understand key web programming concepts and technical mechanisms.

### Resources


**Blackboard:** Announcements, assignments, quizzes and scores will be posted on Blackboard.

**Homepage:** Additional resources will be posted at www.cs.bsu.edu/~bsshutters/cs310.

### Tentative Schedule

The schedule below serves as a high-level overview of how the course will go. A more detailed daily schedule will be kept on the course homepage.

<table>
<thead>
<tr>
<th>Weeks</th>
<th>Topics Covered</th>
<th>Textbook Chapters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1–2</td>
<td>HTML and CSS</td>
<td>Chapters 2–5</td>
</tr>
<tr>
<td>3–5</td>
<td>JavaScript</td>
<td>Chapters 6–14</td>
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<td>6–9</td>
<td>XML and Ajax</td>
<td>Chapters 15–16</td>
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<td>10–11</td>
<td>Web Servers, SQL and CGI</td>
<td>Chapters 17–18</td>
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<tr>
<td>12–13</td>
<td>PHP</td>
<td>Chapter 19</td>
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<tr>
<td>14-15</td>
<td>ASP.NET with C#</td>
<td>Chapters 20–21</td>
</tr>
</tbody>
</table>

### Grading and Assessment

**Assessment of Learning Outcomes**

The degree to which you have met the learning objectives above will be assessed through quizzes, assignments and exams. Your final score is out of 1000 points and is broken down as follows:

- **Assignments (45% – 450 points):** The assignments will require you to apply what you have learned to design dynamic, interactive webpages and data-driven web applications.
- **Quizzes (15% – 150 points):** The quizzes will be given on Blackboard and are designed to reinforce the material given in lectures and readings.
- **Exams (40% – 400 points):** There will be two exams designed to test your understanding of the languages covered as well as key web programming concepts and technical mechanisms.
  - **Midterm Exam (15% – 150 points):** Held in class on Friday, October 13th.
  - **Final exam (25% – 250 points):** Cumulative and held during finals week.
Final Letter Grade

Your final score will be converted to your final letter grade using the following scale:

- A 930+
- B+ 870+
- B- 800+
- C 730+
- D+ 670+
- D- 600+
- A- 900+
- B 830+
- C+ 770+
- C- 700+
- D 630+
- F <600

How to do Well in this Course

In addition to attending all lectures, doing the following will help you to do well in this course:

- Keep up with the assigned readings. Read each section three times: once before it is covered in lecture, once after it is covered in lecture, and a final time when reviewing for the exam.
- Come to office hours with a specific part of the material with which you are struggling.
- Work with other students in the class by forming study groups. Just make sure that you follow the Academic Integrity Policy given below.
- Begin the assignments as soon as possible. If you wait until a few days before an assignment is due to start, it may be too late to get help if you need it.

Course Policies

Attendance: Formal attendance is not taken but you are expected to attend all classes. You are responsible for knowing all material given in lectures. If you miss a class, it is your responsibility to find out what you missed from a classmate. I will not repeat or summarize myself over email or in person. If you have a conflict with a scheduled exam, it is your responsibility to let me know as soon as possible. Make-up exams are given at my discretion.

Late Work: Assignments submitted late will be penalized 1% for every full hour late. Quizzes must be completed by the published deadline for credit. Exams must be taken at the scheduled time unless alternate arrangements have been made ahead of time.

Office Hours: I serve students during office hours on a one-on-one, first-come-first-serve basis. If I am currently meeting with someone, please wait quietly and patiently in the hallway until I am free. When busy, I may limit our time to 10 minutes. Appointments can be made by sending me an email 24-hours in advance with a list of several times that you are available.

Email: I do not find it productive to help students with course material over email. Email should be used only for things like setting up an appointment, arranging a make-up exam, etc. I only respond to student emails from a BSU-affiliated email address. I generally respond to emails Monday-Friday, 8am-5pm. I get a lot of email, so please allow a day for my response.

Academic Integrity: I encourage you to discuss material with your classmates and to use the Web as a resource. However, copying or modifying a solution from any source inside or outside of class will result in a failing grade or worse. You must be able to explain in great detail all code and reasoning used for any and all work submitted for grading. All students and faculty are bound by the Student Academic Ethics Policy of the Code of Student Rights and Responsibilities.

Courtesy: All members of the class are expected to follow rules of common courtesy. You should be in your seat and ready to begin at the start of class. If you arrive late, do not be disruptive. Packing up your things early is disruptive to everybody around you. With the exception of laptops used for note-taking or in-class activities, all electronic devices should be turned off.

Diversity Statement: Ball State University aspires to be a university that attracts and retains a diverse faculty, staff, and student body. We are committed to ensuring that all members of the community are welcome, through valuing the various experiences and world views represented at Ball State and among those we serve. We promote a culture of respect and civil discourse as expressed in our Beneficence Pledge and through university resources found at http://cms.bsu.edu/campuslife/multiculturalcenter.

Special Needs: If you need course adaptations or accommodations because of a disability, please contact me as soon as possible. Ball State’s Disability Services office coordinates services for students with disabilities; documentation of a disability needs to be on file in that office before any accommodations can be provided. Disability Services can be contacted at 765-285-5293 or dsd@bsu.edu.