



**Web Application and Technologies (COMP 334)**  
**1<sup>st</sup> Semester 2024/2025**

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This course is a survey of Web programming technologies. It begins with discussing what Web servers and clients are, how they interact, and how one sets them up. We then explore various Web technologies, including HTML, CSS, JavaScript, PHP, XML, and many related technologies. Our goal in this course is to provide a basic understanding and knowledge of how the Internet and the World Wide Web operate and the technical expertise required to establish and maintain a website and to develop and introduce new capabilities and features on such sites.

**Course outcomes:** Upon completion of this course, students should be able to:

- Define modern protocols and systems used on the Web (such as HTTP, DNS)
- Build responsive web pages using HTML and CSS.
- Implement basic JavaScript and interact with the Document Object Model (DOM).
- Develop the basic requirements of the server-side web-based applications using PHP and MySQL.

**Course Outline:**

Week	Major Items	Topics	Reference
1,2		<ul style="list-style-type: none"> <li>• Introduction to the WWW</li> </ul>	Ch 1and Ch2
3		<ul style="list-style-type: none"> <li>• Introduction to HTML                             <ul style="list-style-type: none"> <li>○ Markup</li> <li>○ HTML history</li> <li>○ Request Response</li> <li>○ Tags</li> <li>○ Attributes</li> </ul> </li> </ul>	Ch 3
4	Assignment 1	<ul style="list-style-type: none"> <li>• Domain Setup</li> </ul>	
4		<ul style="list-style-type: none"> <li>• Advanced HTML                             <ul style="list-style-type: none"> <li>○ HTML Tables</li> <li>○ HTML Forms</li> </ul> </li> </ul>	Ch 5
6	Assignment 2	<ul style="list-style-type: none"> <li>• HTML</li> </ul>	
5		<ul style="list-style-type: none"> <li>• Introduction to PHP</li> </ul>	Ch 12 12.1-12.5
6		<ul style="list-style-type: none"> <li>• Intermediate PHP                             <ul style="list-style-type: none"> <li>○ Arrays</li> <li>○ Superglobals</li> </ul> </li> </ul>	Ch 12 12.6-12.8
7		<ul style="list-style-type: none"> <li>• Databases in PHP</li> </ul>	Ch 14 14.4
8		<ul style="list-style-type: none"> <li>• Managing State (in PHP)                             <ul style="list-style-type: none"> <li>○ Cookies/Sessions</li> <li>○ Caching (if time permits)</li> </ul> </li> </ul>	Ch 15 15.1-15.4 15.5 (Optional)
8	Assignment 3	<ul style="list-style-type: none"> <li>• Dynamic Web Pages</li> </ul>	
9	Project / Midterm		
9,10		<ul style="list-style-type: none"> <li>• Introduction to CSS                             <ul style="list-style-type: none"> <li>○ Including CSS</li> <li>○ Basic CSS examples</li> <li>○ Attributes</li> <li>○ CSS Selectors</li> <li>○ Box Model</li> </ul> </li> </ul>	Ch 4
11		<ul style="list-style-type: none"> <li>• Advanced CSS                             <ul style="list-style-type: none"> <li>○ Floating Layouts</li> <li>○ Page Design</li> </ul> </li> </ul>	Ch 7 7.1 – 7.3
12	Assignment 4	<ul style="list-style-type: none"> <li>• Add style to Web Pages</li> </ul>	
12,13		<ul style="list-style-type: none"> <li>• Client-Side JavaScript</li> </ul>	Ch 8,9
14 & 15	(Optional)	<ul style="list-style-type: none"> <li>• Advanced JavaScript &amp; asynchronous code</li> </ul>	Ch 10

**Grading<sup>1</sup>:**

Project	25%
Assignments and Home works	15%
Exams (Midterm and Final)	60%

**Text:**

Fundamentals of Web Development by Randy Connolly and Ricardo Hoar, 3<sup>rd</sup> Edition, Pearson Publishers

**References:**

- 1) Learning PHP, MySQL, & JavaScript, 4<sup>th</sup> Edition, Robin Nixon, O'Reilly 2014, ISBN 978-1491918661
- 2) Core Web Programming, Second Edition, Marty Hall, Larry Brown, Prentice Hall, ISBN : 0-13-089793-0
- 3) Web Programming Building Internet Applications, 3<sup>rd</sup> Edition, Chris Bates, Wiley, 0-470-01775-9
- 4) Web Applications - Concepts and Real World Design by Craig Knuckles and David Yuen , Wiley, ISBN 0-471-42929-5
- 5) Dynamic Web Application Development using PHP and MySql, Simon Stobart and David Parsons, Course Technology- Cengage Learning, ISBN: 9781844807536

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<sup>1</sup> Assessment weights might be changed depending on progress of the course and teaching methods