BIRZEIT UNIVERSITY
Computer Science Department

Web Application and Technologies (COMP 334)
Second Semester 2017/2018

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

Course outcomes

Upon completion of this course, students should be able to:
- able to define modern protocols and systems used on the Web (such as, HTTP, URLs, DNS)
- develop the skills needed to build responsive web pages using HTML and CSS.
- acquire the knowledge and the skills needed to develop web browser interfaces using JavaScript and Document Object Model (DOM).
- acquire the knowledge and skills needed to develop web-based server-side applications using PHP.

Course Outline

Week	Major Items	Topics	Reference
1		• Introduction to the WWW	Ch 1

2		• Intro to HTML
		   ○ Markup
		   ○ HTML history
		   ○ Request Response
		   ○ Tags
		   ○ Attributes
			Ch 2

3	Assignment 1		

3		• Intro to CSS
		   ○ Including CSS
		   ○ Basic CSS examples
		   ○ Attributes
		   ○ CSS Selectors
		   ○ Box Model
			Ch 3

4		• Advanced HTML
		   ○ HTML Tables
		   ○ HTML Forms
			Ch 4

5	Assignment 2		

5		• Advanced CSS
		   ○ Floating Layouts
		   ○ Responsive Design
			Ch 5

6		• JavaScript: Client-Side Scripting	Ch 6
7	Assignment 3 / Midterm		
7		• PHP Intro	Ch 8

8		• Intermediate PHP
		   ○ Arrays
		   ○ Superglobals
			Ch 9

9		• Advanced PHP
		   ○ Classes/Objects
		   ○ Page Based Design
			Ch 9, Ch 10

9	Assignment 4		
10		• Databases in PHP	Ch 11
11		• Error Handling	Ch 12
13		• Managing State ○ Cookies/Sessions	Ch 13
14	Project		
14		• Advanced JavaScript & jQuery	Ch 15
15		• XML Processing	Ch 17

Grading:

Midterm	20%
Project (Group of 3)	15%
Assignments (individual)	25%
Final	40%

Text:

Fundamentals of Web Development by Randy Connolly and Richard Hoar, ISBN10:0-13-340715-2, Pearson Publishers

References

1) Learning PHP, MySQL, & JavaScript, 4th 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, 3rd 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