

CS110

Introduction to Web Applications

[Onsite]

Course Description:

This course provides students with the foundation concepts and terminology necessary for Web development. Students build Web pages using HTML and XHTML, Cascading Style Sheets, and forms. Students will also practice how to write and present Web content to meet business requirements. They also examine concerns when choosing a Web host and learn how to build a Web site that is properly indexed in search engines.

Prerequisite(s) and/or Corequisite(s):

Prerequisite: TB133 Strategies for the Technical Professional or equivalent

Credit hours: 4

Contact hours: 50 (30 Theory Hours, 20 Lab Hours)

Syllabus: Introduction to Web Applications

Instructor: _____

Office hours: _____

Class hours: _____

Major Instructional Areas

1. Web protocols
2. Domain names
3. Web browsers and Web servers
4. Hypertext Markup Language (HTML)
5. Images
6. Extensible Hypertext Markup Language (XHTML)
7. Cascading Style Sheets (CSS)
8. Tables and forms
9. Web hosts

Course Objectives

1. Describe an overview of the Internet and the WWW.
2. Use HTML to define the structure of content.
3. Use Cascading Style Sheet (CSS) to format Web pages.
4. Use visual elements and graphics on Web pages
5. Describe recommended Web site design practices.
6. Use more CSS to format Web page layout.
7. Use more CSS on links, lists, and layout.

8. Use tables to organize information and configure page layout.
9. Describe the use of forms on Web pages.
10. Describe the system development life cycle.

SCANS Objectives

SCANS is an acronym for Secretary's Commission on Achieving Necessary Skills. The committee, created by the National Secretary of Labor in the early 1990s, created a list of skills and competencies that the committee feels are necessary for employees to function in a high-tech job market.

1. Acquire information.
2. Know how technological systems work and operate effectively.
3. Demonstrate competence in understanding systems.
4. Know how a system's structures relate to its goals.
5. Demonstrate competence in selecting technology, which includes determining desired outcomes and applicable constraints.
6. Demonstrate competence in applying technology to tasks.
7. Design and implement an application to solve business problems.
8. Identify appropriate technology to solve business problems.

Course Outline

Note: All graded activities, except the Project, are listed below in the pattern of <Unit Number>.<Assignment Number>. For example, Lab 3.2 refers to the 2nd lab activity in Unit 3.

Unit	Activities
1–Introducing the WWW	Content Covered: <i>Web Development and Design Foundations with XHTML:</i> Chapter 1, "Introduction to the Internet & WWW" Assignments: 1.1 Labs: 1.1

Unit	Activities
2–Starting XHTML	Read from <i>Web Development and Design Foundations with XHTML</i> : <p style="text-align: center;">Chapter 2, “XHTML Basics”</p> Assignments: 2.1 Labs: 2.1 Project: Part 1 submit
3–Working with CSS	Read from <i>Web Development and Design Foundations with XHTML</i> : <p style="text-align: center;">Chapter 3, “Configuring Color & Text with CSS”</p> <ul style="list-style-type: none"> • Assignments: 3.1 Labs: 3.1-3.2 Project: Part 2 submit
4–Working with Images	Read from <i>Web Development and Design Foundations with XHTML</i> : <ul style="list-style-type: none"> ○ Chapter 4, “Visual Element & Graphics” <ul style="list-style-type: none"> • Assignments:4.1 Labs: 4.1 Project: Part 3 submit Quizzes: 4.1
5–Web Design	Read from <i>Web Development and Design Foundations with XHTML</i> : <ul style="list-style-type: none"> ○ Chapter 5, “Web Design” <ul style="list-style-type: none"> • Assignments: 5.1 Labs: 5.1-5.2 Project: Part 4 submit

Unit	Activities
6—More CSS on Page Layout	Read from <i>Web Development and Design Foundations with XHTML</i> : <ul style="list-style-type: none"> ○ Chapter 6, “Page Layout with CSS” <ul style="list-style-type: none"> • Assignments: 6.1 Labs: 6.1 Project: Part 5 submit Exam I
7—More CSS on Lists and Links	Read from <i>Web Development and Design Foundations with XHTML</i> : <ul style="list-style-type: none"> ○ Chapter 7, “More on Links, Lists, and Layout” Assignments: 7.1 Labs: 7.1 Project: Part 6 submit
8—Making Tables	Read from <i>Web Development and Design Foundations with XHTML</i> : <p style="text-align: center;">Chapter 8, “Tables”</p> Assignments: 8.1 Labs: 8.1 Project: Part 7 submit Quizzes: 8.1
9—Building Forms	Read from <i>Web Development and Design Foundations with XHTML</i> : <p style="text-align: center;">Chapter 9, “XHTML Forms”</p> Assignments: 9.1 Labs: 9.1 Project: Part 8 submit

Unit	Activities
10–Developing Web Sites	Read from <i>Web Development and Design Foundations with XHTML</i> : Chapter 10, “Web Site Development” Assignments: 10.1 Labs: 10.1 Project: Part 9 submit
11–Course Review and Exam II	Exam II

Instructional Methods

The Web has become an integral part of our lives. Many of you may be curious about the technologies that make Web sites work. This course will begin with a brief discussion on how the Internet works and will introduce key terminology involved in Web technologies and applications. The course will also explain how to use HTML and XHTML to display content on a Web page. You will examine how to add visual elements and styles to your Web pages, which includes controlling the look of a Web site by using cascading style sheets (CSS). In addition, you will learn how to design a Web site that contains multiple pages, how to add tables to a Web site, and how to design forms. The course will also cover fundamental issues related to choosing a host and registering a domain name.

Classroom activities will allow you to participate on a team to identify the structure of a Web page or create a visual design. You will also be expected to complete assignments and labs in every unit.

The project will be a team-based project. You will work with one or two other students to write the content and create a site structure, a visual design, and a deployment plan for a Web site. You will implement your design using XHTML and CSS.

Instructional Materials and References

Student Textbook Package

Terry Felke-Morris. *Web Development and Design Foundations with XHTML*. 5th ed.

Boston: Addison-Wesley, 2010.

References

ITT Tech Virtual Library

Log on to the ITT Tech Virtual Library at <http://www.library.itt-tech.edu/> to access online books, journals, and other reference resources selected to support ITT Tech curricula.

Books

You may click “Books” or use the Library Catalog on the home page to find the following books.

- Books 24x7
 - DeBolt, Virginia. *Mastering Integrated HTML and CSS*. Indianapolis, IN: Wiley Publishing, Inc., 2007.
 - Haine, Paul. *HTML Mastery: Semantics, Standards, and Styling*. Berkeley, CA: Friends of Ed, 2006.
 - Lloyd, Ian. *The Ultimate HTML Reference*. Victoria, Australia: SitePoint Pty Ltd, 2008.
 - Murdock, Kelly. *Master Visually HTML 4 and XHTML 1*. Foster City, CA: IDG Books Worldwide, Inc., 2000.
 - Powell, Thomas A. *HTML: The Complete Reference*. Berkeley, CA: McGraw-Hill/Osborne, 1998.
 - Schafer, Steven M. *HTML, XHTML, and CSS Bible*. 4th ed. Indianapolis, IN: Wiley Publishing, Inc., 2008.
 - Schultz, David, and Craig Cook. *Beginning HTML with CSS and XHTML: Modern Guide and Reference*. Berkeley, CA: Apress, 2007.
 - Shafer, Dan, and Rachel Andrew. *HTML Utopia: Designing Without Tables Using CSS*. 2nd ed. Victoria, Australia: SitePoint Pty. Ltd., 2006.
 - Wempen, Faithe. *HTML and XHTML Step by Step*. Redmond, WA: Microsoft Press, 2006.

- NetLibrary
 - Charuhas, Chris. *The Visibooks Guide to HTML & CSS*. Frederick, MD: Visibooks, 2006.
 - DeBolt, Virginia. *Integrated HTML and CSS: A Smarter, Faster Way to Learn*. San Francisco: Sybex Books, 2005.
 - Smith, Bud E., and Arthur Bebak. *Creating Web Pages for Dummies*. 8th ed. Hoboken, NJ: John Wiley & Sons, Inc., 2007.
 - Tittel, Ed, and Mary C. Burmeister. *HTML 4 for Dummies*. 5th ed. Hoboken, NJ: Wiley Publishing, Inc., 2005.

Other References

The following resources may be found **outside** of the ITT Tech Virtual Library.

Web site

- The W3C Markup Validation Service
<http://validator.w3.org> (accessed May 17, 2010)
This Web page will be referred to in classroom demonstrations and labs to validate an HTML document against a specific standard such as HTML 4.01 and XHTML.

All links to Web references outside of the ITT Tech Virtual Library are always subject to change without prior notice.

Course Evaluation and Grading

Evaluation Criteria Table

The final grades will be based on the following categories:

CATEGORY	WEIGHT
Assignments	10%
Labs	25%
Project	15%
Quizzes	10%
Exam I	20%
Exam II	20%
Total	100%

Note: Students are responsible for abiding by the Plagiarism Policy.

Grade Conversion Table

The final grades will be calculated from the percentages earned in the course, as follows:

A	90-100%	4.0
B+	85-89%	3.5
B	80-84%	3.0
C+	75-79%	2.5
C	70-74%	2.0
D+	65-69%	1.5
D	60-64%	1.0
F	<60%	0.0

(End of Syllabus)