

ITT Technical Institute

SD1340

Creating Websites Using HTML5, CSS3

and JavaScript

Onsite and Online Course

SYLLABUS

Credit hours: 4.5


Contact/Instructional hours: 56 (34 Theory Hours, 22 Lab Hours)

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

Prerequisite: SD1240 Creating Websites Using HTML and CSS or equivalent

Course Description:

This course introduces techniques used in building interactive Websites for mobile and desktop devices, using technologies such as HTML5, CSS3 and JavaScript.



COURSE SUMMARY

COURSE DESCRIPTION

This course introduces techniques used in building interactive Websites for mobile and desktop devices, using technologies such as HTML5, CSS3 and JavaScript.

MAJOR INSTRUCTIONAL AREAS

1. HTML5
2. CSS3
3. JavaScript
4. jQuery Framework
5. jQuery Mobile Framework
6. Mobile Device Website Development

COURSE LEARNING OBJECTIVES

By the end of this course, you should be able to:

1. Describe various components of the Open Web Platform.
2. Create a website using HTML5.
3. Create a website that is optimized for viewing on a mobile device.
4. Apply style to a website using CSS.
5. Describe the use of scripting when creating a website.
6. Create a dynamic website using JavaScript.
7. Create a website that uses the jQuery framework.
8. Create a mobile website that uses the jQuery Mobile framework.

COURSE OUTLINE

MODULE 1: USING HTML5

COURSE LEARNING OBJECTIVES COVERED

- Describe various components of the Open Web Platform.
- Create a website using HTML5.
- Create a website that is optimized for viewing on a mobile device.

TOPICS COVERED

- Introduction to HTML5
- Using the Open Web Standards
- Creating Websites and Mobile Applications Using HTML5
- Creating Websites Compatible for Viewing on Mobile Devices
- Correlating HTML, CSS, and JavaScript
- Testing Websites Using Web Browsers and Mobile Devices

MODULE LEARNING ACTIVITIES	GRADE D	OUT-OF- CLASS TIME
Reading: Kyrnin, Meloni, & Dutson, Chapters 1 and 2.	No	4 hr
Lesson: Study the lesson for this module.	No	2 hr
Discussion: Participate in the discussion titled “Building a Mobile-Friendly Website.”	Yes	1.5 hr
Lab: Complete the lab titled “Creating a Web Page Using HTML5.”	Yes	N/A
Project: Read and begin the project.	No	1 hr

Total Out-Of-Class Activities: 8.5 Hours

MODULE 2: USING CSS

COURSE LEARNING OBJECTIVES COVERED

- Create a website that is optimized for viewing on a mobile device.
- Apply style to a website using CSS.

TOPICS COVERED

- Using the CSS Box Model on Lists, Text, and Navigation

- Positioning Using CSS
- Creating Fixed, Liquid, and Hybrid Layouts

MODULE LEARNING ACTIVITIES	GRADE D	OUT-OF-CLASS TIME
Reading: Kyrnin, Meloni, & Dutson, Chapters 3, 4, 5, and 6.	No	8 hr
Lesson: Study the lesson for this module.	No	2.5 hr
Quiz: Prepare for Quiz 1.	No	2 hr
Exercise: Submit the exercise titled “Role of CSS3 in Mobile Web Development.”	Yes	3 hr
Lab 1: Complete the lab titled “Format a Web Page Using CSS.”	Yes	N/A
Lab 2: Complete the lab titled “Compare Fixed, Liquid, and Hybrid Layouts.”	Yes	N/A
Quiz: Take Quiz 1.	Yes	N/A
Project: Continue work on Project Part 1.	No	3 hr

Total Out-Of-Class Activities: 18.5 Hours

MODULE 3: WRITING JAVASCRIPT CODE

COURSE LEARNING OBJECTIVES COVERED

- Describe various components of the Open Web Platform.
- Create a website using HTML5.
- Apply style to a website using CSS.
- Describe the use of scripting when creating a website.
- Create a dynamic website using JavaScript.

TOPICS COVERED

- Including JavaScript in HTML
- Working with DOM and DOM Structure
- Creating Positionable Elements (Layers)
- Using JavaScript Functions and Objects
- Controlling Flow with Conditions and Loops

MODULE LEARNING ACTIVITIES	GRADE D	OUT-OF-CLASS TIME
Reading: Kyrnin, Meloni, & Dutson, Chapters 7, 8, 9, 10, and 11.	No	10 hr
Lesson: Study the lesson for this module.	No	2.5 hr
Discussion: Participate in the discussion titled “Conditional and Loop Statements.”	Yes	N/A
Exercise: Submit the exercise titled “Design a JavaScript Program.”	Yes	3 hr
Lab: Complete the lab titled “Writing and Testing JavaScript on Web Pages.”	Yes	N/A
Project: Submit Project Part 1.	Yes	4 hr

Total Out-Of-Class Activities: 19.5 Hours

MODULE 4: DESIGNING MOBILE WEBSITES

COURSE LEARNING OBJECTIVES COVERED

- Create a website that is optimized for viewing on a mobile device.
- Describe the use of scripting when creating a website.
- Create a dynamic website using JavaScript.

TOPICS COVERED

- Creating Event Handlers in Applications Using JavaScript
- Identifying the Appropriate HTML5 Elements for a Browser
- Identifying Android and iOS Support for HTML5
- Identifying Browsers That Support HTML5

- Building a Mobile Application Using HTML5
- Identifying the Appropriate Tools to Test Mobile Applications

MODULE LEARNING ACTIVITIES	GRADE D	OUT-OF-CLASS TIME
Reading: Kyrnin, Meloni, & Dutson, Chapters 12, 13, 14, and 15.	No	8 hr
Lesson: Study the lesson for this module.	No	2 hr
Quiz: Prepare for Quiz 2.	No	2 hr
Discussion: Participate in the discussion titled “Designing a Mobile Website.”	Yes	1 hr
Exercise: Submit the exercise titled “Research DOM Level 3 Versus DOM Level 2 Events.”	Yes	2 hr
Lab: Complete the lab titled “Program and Test Web Pages.”	Yes	N/A
Quiz: Take Quiz 2.	Yes	N/A
Project: Continue work on Project Part 2.	No	3 hr

Total Out-Of-Class Activities: 18 Hours

MODULE 5: USING HTML FORMS, THE <CANVAS> ELEMENT, AND JQUERY

COURSE LEARNING OBJECTIVES COVERED

- Create a website using HTML5.
- Create a website that uses the jQuery framework.
- Create a mobile website that uses the jQuery Mobile framework.

TOPICS COVERED

- Using the <canvas> Element
- Identifying Mobile Devices That Support the <canvas> Element
- Comparing the Features of <canvas> Elements with Flash and SVG
- Creating HTML Forms
- Including jQuery in a Website
- Using the jQuery Mobile Framework

MODULE LEARNING ACTIVITIES	GRADE D	OUT-OF-CLASS TIME
Reading: Kyrnin, Meloni, & Dutson, Chapters 16, 17, 20, and 21.	No	8 hr
Lesson: Study the lesson for this module.	No	2 hr
Quiz: Prepare for Quiz 3.	No	2 hr
Discussion: Participate in the discussion titled “HTML5 <canvas> Elements Versus Traditional JavaScript Programming.”	Yes	1 hr
Exercise: Submit the exercise titled “Using Canvas, Form Elements, and jQuery.”	Yes	2.5 hr
Lab: Complete the lab titled “Program and Test Web Pages.”	Yes	N/A
Quiz: Take Quiz 3.	Yes	N/A
Project: Continue work on Project Part 2.	No	4 hr

Total Out-Of-Class Activities: 19.5 Hours

MODULE 6: LINKS AND GEOLOCATION

COURSE LEARNING OBJECTIVES COVERED

- Create a website using HTML5.
- Create a website that is optimized for viewing on a mobile device.
- Describe the use of scripting when creating a website.
- Create a dynamic website using JavaScript.
- Create a website that uses the jQuery framework.
- Create a mobile website that uses the jQuery Mobile framework.

TOPICS COVERED

- Editing Hyperlinks Using <a> and <area> Elements
- Linking Elements on Web Pages and Adding Empty Links
- Detecting Location Data with the Geolocation API
- Handling Privacy Concerns with Geolocation

MODULE LEARNING ACTIVITIES	GRADE	OUT-OF-
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	D	CLASS TIME
Reading: Kyrnin, Meloni, & Dutson, Chapters 18 and 19.	No	4 hr
Lesson: Study the lesson for this module.	No	2 hr
Exercise: Submit the exercise titled "Map API Services."	Yes	2 hr
Lab: Complete the lab titled "Create a Web Page Using HTML5 Link Types and Geolocation API."	Yes	N/A
Project: Submit Project Part 2.	Yes	3 hr

Total Out-Of-Class Activities: 11 Hours

EVALUATION AND GRADING

EVALUATION CRITERIA

The graded assignments will be evaluated using the following weighted categories:

CATEGORY	WEIGHT
Discussion	15%
Exercise	15%
Lab	30%
Project	25%
Quiz	15%
TOTAL	100%

GRADE CONVERSION

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

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

LEARNING MATERIALS AND REFERENCES

REQUIRED RESOURCES

COMPLETE TEXTBOOK PACKAGE

- Kyrnin, J., Meloni, J. C., & Dutson, P. (2013). *Creating websites using HTML5, CSS3, and Javascript (Custom ed.)*. Boston, MA: Pearson Custom.
- Reese, R., & Lai, D. (2013). *Creating websites using HTML5, CSS3 and Javascript: Student lab manual (Custom ed.)*. Boston, MA: Pearson Custom.

OTHER ITEMS

- ITT-Lab (Android) virtual machine
- Update the virtual machine to include:

- HTML-Kit version 292 (<http://www.htmlkit.com>)
- The jQuery framework jquery-1.10.1.min.js (<http://jquery.com>)
- The jQuery Mobile framework jquery.mobile-1.3.1.min.js and jquery.mobile-1.3.1.min.css (<http://jquerymobile.com>).
- VMware Player 5.01 (or later)

RECOMMENDED RESOURCES

- Books and Professional Journals
 - Smashing Magazine (<http://www.smashingmagazine.com>)
 - Speckyboy Design Magazine (<http://speckyboy.com>)
 - Spyrestudios (<http://spyrestudios.com>)
- Professional Associations
 - HTML Writers Guild (<http://www.hwg.org/>)
 - International Webmasters Association (IWA) (<http://www.iwanet.org/>)
 - Web Professionals (<http://webprofessionals.org/>)

- ITT Tech Virtual Library (accessed via Student Portal | <https://studentportal.itt-tech.edu>)
 - Basic Search>
 - Castledine, E., Eftos, M., & Wheeler, M. (2011). *Build mobile websites and apps for smart devices*. Australia: SitePoint Pty. Ltd.
 - Castledine, E., & Sharkie, C. (2012). *jQuery: Novice to ninja (2nd ed.)*. Australia: SitePoint Pty. Ltd.
 - Franklin, J. (2013). *Beginning jQuery*. New York, NY: Apress.
 - Freeman, A. (2011). *The definitive guide to HTML5*. Apress.
 - Goodman, D., Morrison, M., Novitski, P., & Rayl, T.G. (2010). *JavaScript bible, seventh edition*. Indianapolis, IN: Wiley Publishing, Inc.
 - Harrel, W. (2011). *HTML, CSS, and JavaScript mobile development for dummies*. Hoboken, NJ: John Wiley & Sons, Inc.
 - Jenkins, S. (2009). *Web design all-in-one for dummies*. Hoboken, NJ: Wiley Publishing, Inc.
 - Meyer, E. (2011). *Smashing CSS: Professional techniques for modern layout*. John Wiley & Sons.
 - Sikos, L. (2011). *Web standards: Mastering HTML5, CSS3, and XML*. New York, NY: Apress.
 - Wagner, R. (2012). *Beginning iOS application development with HTML and JavaScript*. Indianapolis, IN: John Wiley & Sons, Inc.
 - Zakas, N.C. (2009). *Professional JavaScript for web developers (2nd ed.)*. Indianapolis, IN: Wiley Publishing, Inc.

INSTRUCTIONAL METHODS AND TEACHING STRATEGIES

The curriculum employs a variety of instructional methods that support the course objectives while fostering higher cognitive skills. These methods are designed to encourage and engage you in the learning process in order to maximize learning opportunities. The instructional methods include but are not limited to lectures, collaborative learning options, use of technology, and hands-on activities.

To implement the above-mentioned instructional methods, this course uses several teaching strategies, such as lessons and hands on labs. Your progress will be regularly assessed through a variety of assessment tools including discussions, exercises, labs, quizzes, and project.

OUT-OF-CLASS WORK

For purposes of defining an academic credit hour for Title IV funding purposes, ITT Technical Institute considers a quarter credit hour to be the equivalent of: (a) at least 10 clock hours of classroom activities and at least 20 clock hours of outside preparation; (b) at least 20 clock hours of laboratory activities; or (c) at least 30 clock hours of externship, practicum or clinical activities. ITT Technical Institute utilizes a “time-based option” for establishing out-of-class activities, which would equate to two hours of out-of-class activities for every one hour of classroom time. The procedure for determining credit hours for Title IV funding purposes is to divide the total number of classroom, laboratory, externship, practicum and clinical hours by the conversion ratios specified above. A clock hour is 50 minutes.

A credit hour is an artificial measurement of the amount of learning that can occur in a program course based on a specified amount of time spent on class activities and student preparation during the program course. In conformity with commonly accepted practice in higher education, ITT Technical Institute has institutionally established and determined that credit hours awarded for coursework in this program course (including out-of-class assignments and learning activities described in the “Course Outline” section of this syllabus) are in accordance with the time-based option for awarding academic credit described in the immediately preceding paragraph.

ACADEMIC INTEGRITY

All students must comply with the policies that regulate all forms of academic dishonesty or academic misconduct. For more information on the academic honesty policies, refer to the Student Handbook and the School Catalog.

INSTRUCTOR DETAILS

Instructor Name	
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Office Hours	
Contact Details	

(End of Syllabus)