

**Tompkins Cortland Community College**  
**Master Course Syllabus**

**Course Discipline and Number: WD 157**  
**Course Title: Web and Mobile Design**

**Year: 2022-2023**  
**Credit Hours: 3**

**Attendance Policy:** *To maintain good grades, regular attendance in class is necessary. Absence from class is considered a serious matter and absence never excuses a student from class work. It is the responsibility of all instructors to distribute reasonable attendance policies in writing during the first week of class. Students are required to comply with the attendance policy set by each of their instructors. Students are not penalized if they are unable to attend classes or participate in exams on particular days because of religious beliefs, in accordance with Chapter 161, Section 224-a of the Education Law of the State of New York. Students who plan to be absent from classroom activity for religious reasons should discuss the absence in advance with their instructors. See college catalog for more information.*

**Services for Students with Disabilities:** *It is the College's policy to provide, on an individual basis, appropriate academic adjustments for students with disabilities, which may affect their ability to fully participate in program or course activities or to meet course requirements. Students with disabilities should contact the Coordinator of Access and Equity Services, to discuss their particular need for accommodations. All course materials are available in alternate formats upon request.*

### **Course Description**

An introduction to the development of Web pages for the Internet including mobile devices. Topics include device independent HTML5, CSS3, and JavaScript including content-specific elements, links, multimedia, 2D/3D graphics, and JavaScript. This course is designed for the student who would like to learn how to use the JavaScript programming language to add dynamic interactivity and other advanced features to his/her Web pages, and to enhance his/her ability to create practical and compelling device independent Web sites. Prerequisites: Prior completion or concurrent enrollment in ENGL 099, MATH 095, and RDNG 099 if required by placement testing. 3 Credits ( 2 Lec., 2 Lab) Occasionally.

### **Course Context/Audience**

This is an introductory course in the development of Web pages for the Internet including mobile devices. It is a required course in the Web and Mobile Design A.A.S. degree program.

### **Basic Skills/Entry Level Expectations**

- Writing:** W1 Student should be taking ENGL 099 (if needed). The course requires very limited writing, e.g., Web page titles, image labels, heading titles, bulleted lists, and a short written content paragraph.
- Math:** M3 Taking MATH 095 (if needed) – Course requires the use of basic mathematical skills plus very limited basic algebra skills.
- Reading:** R1 Course may be taken concurrently with RDNG 099.

### **Course Goals**

Upon successful completion of the course, the student should be able to design and develop device independent Web pages that incorporate basic mobile functions. Students will learn HTML5 markup language, CSS3 styling, and the JavaScript programming language.

1. Develop device independent Web page content using HTML5 markup language.
2. Develop device independent Web page formatting using CSS3.

3. Plan and produce a device independent Web site, or re-evaluate an existing Web site using the concepts learned in this course. Students may be required to use a free hosting service like brinkster.com.
4. Use effective methods to solve device independent Web site development problems by adding JavaScript features that enhance both the appearance and the usability of their pages.
5. Recognize the stated purpose in the reading material and determine those details which relate to the point of the material. The student will be required to read and interpret the information in order to correctly complete the lab (assignment).
6. Recognize implicit points and implied relationships in the reading material. Solutions and appropriate solution methods will not always be explicitly stated.
7. Creatively integrate features provided in JavaScript with their own understanding of good device independent Web page design.
8. Continue their learning of this and related subjects.

### Course Objectives/Topics

Objective/Topic	# of Class Hours OR % Course
Students will be able to express an understanding of the basic concepts underlying the difference between structure and content of Web sites.	10%
Planning a Web Site: Audiences, Purposes, Structure	10%
Designing the Site: Displaying information, Navigating, Interactivity, Adding Graphics/Multi-Media	10%
Students will understand the structure and the components of HTML5, CSS3, and JavaScript.	80%
Students will be able to use HTML5 to implement device independent content structure including multi-media.	30%
Students will be able to use CSS3 to implement device independent formatting including consistent style and layout.	30%
Students will be able to use JavaScript to implement device independent Navigation, Geolocation, WebStorage, and User Interaction/Experience.	40%
Students will learn to distinguish between problems that can be solved by HTML5 and CSS3, and those which require Web-based programming languages such as JavaScript to solve.	10%
Students will be able to apply pre-written JavaScript code from free online libraries and use the code on their pages, changing specific code parameters to meet their needs.	10%
Students will be able to design and develop a device independent Web site using HTML5, CSS3, and JavaScript concepts learned in the course.	100%
*NOTE: The sum of the percentages assigned to each topic will not equal 100%, as many of the goals overlap; in some cases requiring the same activity to accomplish several goals.	

## General Education Goals - Critical Thinking & Social/Global Awareness

<b>CRITICAL THINKING OUTCOMES</b>	<b>HOW DOES THE COURSE ADDRESS THE OUTCOMES</b> (Include required or recommended instructional resources, strategies, learning activities, assignments, etc., that must or could be used to address the goal/outcomes)
<p>Students will be able to</p> <ul style="list-style-type: none"> <li>➤ develop meaningful questions to address problems or issues.</li> <li>➤ gather, interpret, and evaluate relevant sources of information.</li> <li>➤ reach informed conclusions and solutions.</li> <li>➤ consider analytically the viewpoints of self and others.</li> </ul>	<p>Students will discuss current issues in device independent Web page design.</p> <p>They will have to analyze information from various sources and make Web page design recommendations and decisions based on the results. Projects and/or discussion topics will be assigned.</p> <p>Students will gather information from various sources for projects, then compare and contract their findings.</p> <p>Group discussion and/or projects will allow students to develop the ability to solve problems effectively and creatively. Projects and/or discussion topics will be assigned.</p>
<b>SOCIAL/GLOBAL AWARENESS OUTCOMES</b>	<b>HOW DOES THE COURSE ADDRESS THE OUTCOMES</b> (Include required or recommended instructional resources, strategies, learning activities, assignments, etc., that must or could be used to address the goal/outcomes)
<ul style="list-style-type: none"> <li>➤ Students will begin to understand how their lives are shaped by the complex world in which they live.</li> <li>➤ Students will understand that their actions have social, economic and environmental consequences.</li> </ul>	<p>Students will compare various opinions regarding globalization, internationalization, accessibility and/or sustainability.</p> <p>Not addressed.</p>

### Instructional Methods

This course is designed to be taught for 15 weeks in a lecture/lab format with approximately 2 hours per week of lecture and 2 hours of lab. The instructor should interact with students and assist them with problems they may have in completing the assignments. Web-based sections require that the instructor is available for questions and student interaction. Instructors should post and maintain regular or "virtual" office hours each week when they can respond to student questions.

Sequence of Web technologies:

1. HTML5
2. CSS3
3. JavaScript

Teaching Methods:

Students will work on desktop computers in a hands-on manner. Lectures will be provided along with textbook readings and online assignments. Free software download links (NotePad++ and Google Chrome browser) will be provided to allow students to work from multiples locations. Students will work creatively on the computer to design and implement a new or enhanced Web site, using device independent HTML5, CSS3 and JavaScript.

#### Additional Materials:

Students will be encouraged to draw upon the many Web based resources (existing sites, software, articles, tutorials, etc.) that are available both to demonstrate the use of the tools and methods taught, and to acquire technical information about the course content. It is expected that this course will provide students with the ability to continue their learning after the course is completed.

#### Methods of Assessment/Evaluation

Method	% Course Grade
Assignments, quizzes, and/or written work	40-60%
Final Project	30-50%
Class Participation	10%

#### Text(s)

Free Online Resources:

W3Schools.com

HTML5: [http://w3schools.com/html/html5\\_intro.asp](http://w3schools.com/html/html5_intro.asp)

CSS3: <http://w3schools.com/css3/default.asp>

JavaScript: <http://w3schools.com/js/default.asp>

Basics of Web Design: HTML5 & CSS3, 2/E, Felke-Morris, Terry. Pearson © 2013.

ISBN-10: 0133128911 • ISBN-13: 9780133128918 Paperback, 432 pages

HTML5 and CSS3, Illustrated Complete, 1st Edition, Vodnik, Sasha. Course Technology © 2012.

ISBN-10: 1111527989 ISBN-13: 9781111527983 Paperback, 432 Pages

#### Bibliography

Basics of Web Design: HTML5 & CSS3, 2/E, Felke-Morris, Terry. Pearson © 2013.

HTML5 and CSS3, Illustrated Complete, 1st Edition, Vodnik, Sasha. Course Technology © 2012.

HTML5 & CSS3 For The Real World, Weyl, Estelle. SitePoint © 2011.

Web Designer's Guide to iOS Apps, The: Create iPhone, iPod touch, and iPad apps with Web Standards (HTML5, CSS3, and JavaScript), 1/e, Layon, Kristofer. Pearson © 2010.

#### Other Learning Resources

##### Audiovisual

*Optional but not required:*

Title:HTML5 Mobile Web Development By:Jake Carter Publisher:O'Reilly Media Formats:Safari Books Online ,Video  
Video:September 2010 Run time:13 hours 23 minutes ref: <http://shop.oreilly.com/product/0636920014225.do>

##### Electronic

Articles, software, and other materials available through TC3's e-reserves

The W3C (World Wide Web Consortium) Web site, which establishes the standards and recommendations for Web languages, and guidelines for the future development of Web, Web languages, and Web browsers. (<http://www.w3c.org>)

The W3Schools.com Web site:

HTML5: [http://w3schools.com/html/html5\\_intro.asp](http://w3schools.com/html/html5_intro.asp)

CSS3: <http://w3schools.com/css3/default.asp>

JavaScript: <http://w3schools.com/js/default.asp>

The NotePad++ Editor Web Site:

<http://notepad-plus-plus.org/>

<http://notepad-plus-plus.org/download/v6.3.html>

The Google Chrome Browser Web Site:

<https://www.google.com/intl/en/chrome/>

[https://www.google.com/intl/en/chrome/browser/?&brand=CHMA&utm\\_campaign=en&utm\\_source=en-ha-na-us-bk&utm\\_medium=ha](https://www.google.com/intl/en/chrome/browser/?&brand=CHMA&utm_campaign=en&utm_source=en-ha-na-us-bk&utm_medium=ha)

Web sites that are already using HTML5, CSS3, and JavaScript will provide students with examples of both implementation and code, which will enhance their learning of Web and Mobile Design.

### **Other**

*Optional but not required:*

Reserve Desk iPad loan.