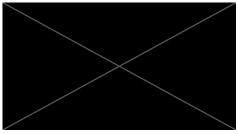


College of Education, Criminal Justice, Human Services, and Information Technology School of Information Technology 250 Teachers/Dyer Complex University of Cincinnati PO Box 210002 Cincinnati, OH 45221-0002 Phone: (513) 556-7967

# IT2040C Fundamentals of Web Development Syllabus

Section 002: Online

Instructor



## Contents

1
1
2
2
2
5
8

## **Course Description**

This is a foundation course in Web Technology that covers the underpinnings of the technology and a variety of modern standards. The course covers modern web standards, well-formed and valid documents, semantic XHTML/HTML, user-centered design of static web sites, styling and layout of Web documents with CSS, common tools for Web Site development. Emphasis is on coding syntactically correct Web documents which are also visually appealing, and accessible to users using assistive technologies. This course covers material up to the use of scripting which is introduced in the next course in the sequence. You will learn HTML5, CSS3, responsive and user-centric design, XML, and SVG. Hands-on active learning required.

# **Credit Hours and Course Format**

3 credit hours; online

## **Course Learning Outcomes**

Upon completion of this course, the student will be able to:

- 1. Publish locally created web pages to a web server for hosting.
- 2. Create a semantically, correct standards-compliant web pages.
- 3. Use a variety of current Web technologies: HTML5, CSS3, XML, SVG.
- 4. Apply responsive web design for addressing different devices
- 5. Evaluate websites for accessibility and visual appeal.

## **Course Materials**

There is no official textbook. Course materials draw from a number of publicly available sources and materials created by the University of Cincinnati.

#### **Required Technology**

- A text editor such as Sublime, NotePad ++ (For Windows), or Brackets (for Mac)
- A screen casting tool such as Kaltura on CECH MediaSpace
- Microsoft Office or similar tools

## **Course Policies and Grading**

#### Attendance/Participation Expectations

Class attendance is expected. This is especially important in an online class but looks totally different than in traditional classrooms. Attendance implies that when a new module opens, you promptly read through the materials and begin the work right away. Students cannot be successful in this class without engaging with the material regularly. Do not procrastinate since the modules are built upon each other and you can find yourself in an overwhelming spot if you do. Be sure to ask for any assistance needed from the instructor and/or other students in class!

#### **Group Work**

Students have the option to work in pairs or groups for the Web Technologies Deep Dive Assignment. You must notify me before you begin working on the assignment if you are working with a partner, so I can set it up in Canvas.

#### **Plagiarism and Al**

Ethical use of AI in an academic setting can be tricky and varies from class to class and instructor to instructor.

For this course, as a general rule, treat generative AI like a friend who knows the subject better than you. Example: Is it typically okay to ask a friend to explain the differences between HTML or CSS? Yes. Is it okay to ask a friend what a validation error means? Yes. Is it okay to ask a friend to fix your validation errors for you? NO. Is it typically okay to ask a friend to give you the code for your lab, provide a template for your final project, or answer your quiz questions for you? NO.

More specifically, for your final project you may not have Al write any HTML or CSS. You may not use a template (free or paid) for your site. You may not have anyone else write code for you. You may use tutorials and resources to help you in various components, but this needs to be cited and altered from whatever tutorial or resources you sourced it from. Think of this like paraphrasing in a research paper, the info is from a source, but the words are written by you and the original source is cited. If you have any doubt about what is appropriate for this course, please ask me. Do not assume.

Content and images used in your final project may be AI generated if cited as such. We are assessing your HTML and CSS skills in the project, not your ability to create images or write site content. Under no circumstances whatsoever should HTML or CSS be written by AI.

All assignments where you are writing HTML and CSS You will provide screen shots to show your HTML and CSS passes w3c validation. Validation screen shots will be spot checked during grading. If we find you have validation errors in your code, but have provided screenshots showing your code is valid, this is academic misconduct and will be reported.

The GPST case study redesign is the only exception. You may use anything that would be ethical in a professional setting. Please ask if you are unsure.

#### **Communication and Feedback Policy**

Please use email or Teams for course communication. If you have a general course content question, please ask those in the course Q&A forum so everyone can benefit from the answers. For personal questions like grades, absences, etc, email me directly.

The TA and I will do our best to grade assignments the week after they are due. More detailed assignments may require more time to grade. Assignment resubmissions will have a lower priority than original submissions and may take an additional 1-2 weeks to grade. If you're looking for specific feedback or have specific questions about your work that you

would like addressed in the feedback, please indicate as such in your submission comments.

#### Late or Missing Assignment Policy

In general, late work is not accepted for full credit, unless you have an excused absence that we discussed beforehand. I am very flexible in making arrangements for extensions on most work (excluding labs) when arrangements are made ahead of time.

Any accommodations for late work must be made 3 days prior to the due date (in other words, for work due on Sunday, this needs to be arranged by Thursday.

Examples of excused absences, which do not require advanced notice (documentation, maybe requested):

- Illness, surgery, hospitalization, serious injury (excusal note from DR required for
- missed quizzes, please do not include medical info).
- Death/funeral of close family member or friend (documentation may be required).
- Work required travel (documentation required).

Some assignments may be accepted late for partial credit. Please see details in the assignments section

#### Assignments:

There are six types of assignments in this course

- Quizzes: 3 total, Modules 1-4, Modules 5-8, and Modules 9-12
  - Quizzes are open note. You may use any materials linked in the course.
  - Quizzes are not timed, but questions are presented one at a time.
  - You may NOT work together on quizzes.
  - You may take a quiz early, but I will not accept them late.
- Labs & Case Study: Typically, there is one per module.
  - $\circ$   $\;$  Labs must be submitted with a link to view the lab on homepages.
  - Screen shots showing HTML and CSS validation of ALL pages created or updated in the lab and a zipped file including your site files and assets must also be submitted. If you make mistake and forget an item you may resubmit until the due date. Faking/fabricating validation screen shots is academic misconduct.
  - Labs that do not earn 10/10 may be re-submitted once for reevaluation. Resubmitted labs may earn up to a 9/10 (90%). If you are eligible for resubmission the lab will be "re-assigned" to you in Canvas. To be eligible to resubmit:
    - Your lab must have been submitted BEFORE the due date.
    - Your lab must have been submitted with all the required items (screenshots, files, link).

- Your resubmission must include a written explanation or a screencast detailing what the errors in your original submission were, and what you did to correct them.
- Labs will not be accepted late, as the solution code will have been released.
- Mini Research and Other HW Assignments: These are completed every few weeks.
  - These assignments will be accepted up to 1 week late with a 5% grade reduction per day.
- Web Technologies Deep Dive Presentation: You can start working on this at any time. It's due towards the end of the semester.
- Final Culminative Assignments
  - **Final Project**: You will complete a final project milestone every few weeks, and the final website will be due during finals week.
    - Milestones 1-5 will be accepted up to 1 week late with a 5% grade reduction per day.
    - No late submission for the final website. Start your work early.
  - **Case Study Redesign**: You will act as consultants in this 2-part assignment and redesign the case study that we use for the labs.

#### **Grading Scale**

93.00% and above = A 90.00%-92.99% = A-87.00%-89.99% = B+ 83.00%-86.99% = B 80.00%-82.99% = B-77.00%-79.99% = C+ 73.00%-76.99% = C 70.00%-72.99% = C-67.00%-69.99% = D+ 63.00%-66.99% = D less than 60.00% = F

## **Course Schedule**

#### Module 1 Intro to Web Dev & Getting Started with HTML and CSS

**Overview**: In this module, we will be covering the basic foundational knowledge that web developers need to know. Much of this information is covered in more depth in other courses, so we'll focus on what you need to know within the context of this course. We'll take our first look at HTML and create a very basic webpage.

#### Module 2 HTML Basics

**Overview**: In this module, we will be covering the basics of HTML. Later, we'll add in styling using CSS, but for now, focus on getting comfortable with basic HTML syntax. We'll continue to work with elements introduced last week, and continue exploring how to configure the body of our web pages using headings, paragraphs, divs, list, blockquotes, and more. We'll also learn how to test out HTML for valid syntax using the W3C HTML validation tool. This week, we'll begin working on a semester-long case study that will help us practice with elements and attributes introduced in each module.

#### Module 3 Visual and Other Design Considerations

**Overview**: In this module we will explore what separates good design from bad design. We'll look into site organization and navigation, the principles of visual design, audience analysis, and web design best practices.

## Module 4 Intro to CSS - Graphics and Text Styling Basics

Overview: In this module we will explore Cascading Style Sheets (CSS) and use CSS to configure text, color, and page layout. CSS is used to separate the information on a web page from the presentation style. CSS was introduced in 1996 and the W3C continues to work on updated standards for CSS. The current version of CSS is CSS3, but CSS4 is already in draft form. CSS3 added in features such as rounded-corners, transparency, and embedded fonts.

We'll also begin to explore using CSS to configure your text to work with the images/graphics for your site, and how to create pages that are enhanced by graphical elements, but are not dependent on them.

#### Module 5 More CSS Basics and Intro to Box Model

**Overview**: In this module, we will begin to explore the CSS Box Model and work with the margin, border, and padding attributes. We'll also learn to center page content, apply shadows, configure rounded corners, and configure opacity and gradients using CSS.

#### Module 6 Using CSS to Design Page Layouts

**Overview**: In this module we'll explore basic page layout techniques, begin working with floating and positioning elements with CSS, and use pseudo-classes to add interactivity to hyperlinks.

#### Module 7 Responsive Design Using Media Queries

**Overview**: In this module we will be begin to explore designing for multiple browser sizes, such as mobile devices, using responsive techniques.

## Module 8 Responsive Design Using CSS Flexbox

**Overview**: In this module we will continue to explore responsive design and learn about CSS Flexbox.

#### Module 9 Responsive Design Using CSS Grid

**Overview**: In this module we will be covering HTML tables, which can be used to organize information. In the past web developers used tables to format webpages. This practice is antiquated and considered inaccessible. In this module we'll focus on the correct way to use tables and how to format accessible tables.

## Module 10 Table and Form Basics

**Overview**: In this module we will be covering HTML tables and forms. Tables can be used to organize information. In the past web developers used tables to format webpages. This practice is antiquated and considered inaccessible. We will focus on the correct way to use tables and how to format accessible tables. In this module we will also be introducing forms. While we will be crafting and styling forms, we will not be creating forms that actually collect data, as that would require server-side processing, which is outside the scope of this class.

# Module 11 Adding Audio and Video & CSS Transitions, Transforms, and Filters

**Overview**: In this module we will begin working with multimedia, introducing methods to add audio and video to your webpages. We'll also look at ways to add interactivity to your pages using CSS3 transform and transition properties.

## Module 12 Web Publishing Basics & CSS Frameworks

**Overview**: In this module we will begin to explore web development frameworks and review information needed to publish websites.

#### Module 13 Work Week

**Overview**: Spend this week working on your GPST Case Study Redesign, Final Project, or Extra Credit. No new material.

#### Exam Week: Final Projects and Assignments

Purpose: To design, develop, and publish a responsive web site using recommended design practices. Your Project will demonstrate mastery of the web development skills and concepts learned in this course.

# **UC** Policies

**Attendance**: Students at the University of Cincinnati are expected to attend classes in order to meet the learning objectives for the course. Students are expected to follow the class attendance policy as outlined by the instructor. Students participating in official University sponsored activities, where the student is representing the University, will meet with instructor related to absences due to university-sponsored activities. When such absences occur, students need to provide documentation of the event(s), and work with the professor to develop a written plan for completion of missed assignments or other course requirements with as much advance notice as possible.

**Communication**: All university business must be conducted using a university assigned email account. The use of a personal, or non-university assigned email account to conduct university business is strictly prohibited. <u>See full policy here</u>.

**Class Cancellation Policy**: In the rare case that a class must be cancelled, faculty will post an announcement on the LMS that will be emailed to students. Faculty will attempt to communicate class cancelations with as much advance notice as possible. Students should be sure that their LMS email is current and valid to ensure emails are received. If the University closes due to inclement weather or other emergency situations, there will be an announcement posted on Blackboard (LMS) and if possible on the local news channels (TV and radio). Communications related to University closures will also be sent to the student's cell phone number on record through the automatic University emergency text messaging system. Students should notify the University if they change their cell phone number to ensure they will receive these important emergency communications.

**Academic Integrity**: The University of Cincinnati is committed to academic integrity. A formal articulation of this commitment is articulated in the Student Code of Conduct. Any violation of these rules, including plagiarism or cheating will be handled on a case-by-case basis. At the least, you should anticipate a zero on an assignment, at the fullest extent, your violation will reported to the university and the incident will be documented on your permanent record.

Accessibility and Special Needs: The University of Cincinnati is committed to providing all students with equal access to learning opportunities. Accessibility Resources is the official campus office that works to arrange for reasonable accommodations for students with an identified physical, psychological or cognitive disability (learning, ADD/ADHD, psychological, visual, hearing, physical, cognitive, medical condition, etc.) Students are encouraged to contact the Accessibility Resources Office to arrange for a confidential meeting to discuss services and accommodations. Contact should be initiated as soon as possible to allow adequate time for accommodations to be arranged.

**Counseling Services**: As a UC college student, there may be times when personal stressors interfere with your academic performance and/or negatively impact your daily life. If you or someone you know is experiencing challenges such as strained relationships, increased anxiety, feeling down, difficulty concentrating, lack of motivation, etc., you are not alone; there are people here that can help.

- **To schedule**: please contact Counseling and Psychological Services (CAPS) at **513**-**556-0648** to schedule a virtual or in-person appointment with our CAPS CECH embedded counselor, Madeleine Muller, located in the CECH Student Services Center in Suite 360 of the Teachers-Dyer Complex.
- Have questions before committing to an appointment? Check out Let's Talk, a 15-20minute conversation to ask questions about counseling and get to know our <u>CECH</u> <u>counselor</u>.
- After-hours crisis line: 513-556-0648
- **Self-Help:** to access Therapy Assistance Online (TAO), a **free** <u>self-help resource</u> for students.

**Diversity, Equity, and Inclusion**: The University of Cincinnati embraces diversity, equity, and inclusion as core values that empower individuals to transform their lives and achieve their highest potential. The University of Cincinnati recognizes a very broad and inclusive concept of diversity that includes commonly recognized considerations such as race, ethnicity, gender, age, disability status, socioeconomic status, gender identity and expression, sexual identity, sexual orientation, religion, and regional or national origin. Going forward, we emphasize that UC's concept of diversity will retain the capacity to grow with our understanding. Inclusion authentically brings traditionally excluded individuals and/or groups into processes, activities, and decision/policy making. We are committed to creating and fostering a positive learning and working environment based on open communication, mutual respect, and inclusion.

**Religious Accommodation**: Ohio law and the University's Student Religious Accommodations for Courses Policy 1.3.7 permits a student, upon request, to be absent for reasons of faith or religious or spiritual belief system or participate in organized activities conducted under the auspices of a religious denomination, church, or other religious or spiritual organization and/or to receive alternative accommodations with regard to examinations and other course requirements due to an absence permitted for the abovedescribed reasons. Not later than fourteen days after the first day of instruction in the course, a student should provide the instructor with written notice of the specific dates for which the student requests alternative accommodations. For additional information about this policy, please contact the Executive Director of the Office of Equal Opportunity and Access at (513) 556-5503 or <u>oeohelp@UCMAIL.UC.EDU</u>

#### Valuing Student Identity:

The College of Education, Criminal Justice, Human Services, & Information Technology recognizes that gender identity is fluid and respects those that may not identify with the gender binary. Please feel free to share your lived pronouns with the instructors and staff members you may work with, in order to avoid misgendering in the learning space. To learn more about pronoun use, please check out mypronouns.org.

We also understand that names may have some personal, cultural, or familial importance to everyone. If your name is being pronounced incorrectly in class, please make sure to find time to correct me through email or after class.

**Title IX**: Title IX is a federal civil rights law that prohibits discrimination on the basis of a person's actual or perceived sex, gender, gender identity, gender expression, or sexual orientation. Title IX also address instances of sexual violence, dating or domestic violence, and stalking. If a student discloses a Title IX issue to a faculty member, the faculty member is required to forward that information to the Title IX Office. The Title IX office will follow up with the student and discuss how the University can take steps to address the impact on the student and the community. They will also inform the student of their rights and direct them to available resources. The priority is to make sure students are safe and successful here at the University of Cincinnati. Students are not required to talk to anyone in the Title IX Office. Students may also directly report any instance of sex or gender-based discrimination, harassment or violence to the Title IX office at 513-556-3349. Students who wish to know more about their rights and resources on campus, they can consult the <u>Title IX website</u> or contact the Title IX office directly at 513-556-3349.

NOTE: The instructor reserves the right to update this syllabus as class needs arise. Be assured that they will communicate to you any changes to the schedule, syllabus or policies quickly and efficiently.