Department of Information Science

IFSC 11003: Web Technologies

Section 01: MW 1:40 PM -- 2:55 PM in EI220

Fall 2025

Web Technologies (01)

This course is an introduction to Internet client-side technologies and standards-based web development. The course will be divided into sections covering the core components of any web site/page. Core components include Structure, Content, Design (presentation), and Behavior. Three lecture hours per week.

Instructor Info

Name: Thomas Wallace
Preferred Pronouns: He/Him
Email: tswallace@ualr.edu
Phone: 501-916-5230
Office Location: EIT 547
Office Hours: Your success in this course is important to me. I will be available to meet virtually at the following times: Monday/Wednesday - 9:ooam-Noon | Tuesday/Thursday - 11:00am -Noon | Friday - 9:00am -Noon To schedule an appointment please email at tswallace@ualr.edu and I will send you a virtual meeting invitation.
Instructor Presence: All course content will be delivered during the scheduled classroom sessions by the Instructor, except in cases of a relevant guest speaker. Additional support is available via CSTEM Student Academic Services. To view available tutoring sessions visit https://ualr.edu/cstem/students/student-labs/.

Course Description

Credit Hour(s): 3

Description: This course is an introduction to Internet client-side technologies and standards-based web development. The course will be divided into sections covering the core components of any web site/page. Core components include Structure, Content, Design (presentation), and Behavior. Three lecture hours per week.

Prerequisites: None

Course Relationship to ABET Curriculum

IFSC 1310 Web Technologies teaches students techniques, skills, and tools necessary for computing practice.

Student Learning Outcomes

By the end of the course, students will be able to:

- Discuss key terminology and industry best practices related to website design and development, site security, file management and site optimization. This includes coverage of core technologies of the web stack, digital image creation and optimization, tooling and workflows of a modern web developer.
- Author valid content, and control the style and behavior of their websites using languages such as HTML, CSS, JavaScript and DOM (Document Object Model).
- Design and implement a web site based on criteria established by a client.
- Create and deploy to a production environment an accessible, standards-based web site using appropriate techniques.

Course Relationship to ABET Student Outcomes

IFSC 1310 Web Technologies will help students to develop their abilities to:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline

Course Learning Objectives

Upon successful completion of this course, students will be able to:

- Discuss key terminology and industry best practices related to website design and development, site security, file management and site optimization. This includes coverage of core technologies of the web stack, digital image creation and optimization, tooling and workflows of a modern web developer.

- Author valid content, and control the style and behavior of their websites using languages such as HTML, CSS, JavaScript and DOM (Document Object Model).

- Design and implement a web site based on criteria established by a client.

- Create and deploy to a production environment an accessible, standards-based web site using appropriate techniques.

Course Materials

Title: All required materials will be available via my website located at https://thomaswallace.net

Grading Scale

Your semester grade for this course will be determined based on the following scale:

A = 90-100
B = 80-89
C = 70-79
D = 60-69
F = less than 60

A = excellent work; B = above average work; C = average work; D = below average; F = failing

Grading Criteria

Grading Criteria

Course Component	Percentage of Total Points
Participation & Self-Initiated Learning	10%
Homework Assignments	30%
Skill-Based Assessments (3 - HTML5, CSS, Applied JS)	30%
Final Web Site Project	30%

Participation via GitHub Commits

Your GitHub commit history will be used to help assess participation throughout the semester. You'll complete around 10 coding assignments over 15 weeks, and regular commits will show your ongoing effort and engagement.

Participation credit is based on:

- Consistent progress over time
- Clear, meaningful commit messages
- Engaging with feedback and refining work

This system is designed to mirror real-world development expectations and help you build professional habits.

Last-minute bulk commits may not reflect active participation. If you run into issues that affect your ability to commit regularly, please reach out early so we can work something out.

Learning Activities

The course will be conducted as a seminar. Participation counts and may include small group presentations and exercises. A high level of student participation is required. Make sure that all assigned preparation and readings are done in advance and that you are ready to engage in full examination and discussion of topics. The instructor will not hesitate to call on students for questions and comments. It is, therefore, critical that reading assignments be completed before class in which they are addressed and reviewed.

University Policies

Students with Disabilities

- https://ualr.edu/policy/facstaff/course-syllabus/

Non-Discrimination Policy

- https://ualr.edu/policy/home/admin/non-discrimination/

Title IX and Harassment

- https://ualr.edu/titleix/titleix/title-ix-the-basics/

Inclement Weather Policy

- https://ualr.edu/policy/home/admin/weather/

Academic Integrity

- https://ualr.edu/deanofstudents/academic-integrity/

Disclosure of Instances of Sexual Misconduct

- https://ualr.edu/policy/home/facstaff/title-ix/

Withdrawal

- https://ualr.edu/policy/home/student/withdrawal-from-ualr/

Add/Drop

- https://ualr.edu/records/2511-2/

Incomplete

- https://ualr.edu/records/grades/

Grade Policies

- https://ualr.edu/policy/home/facstaff/grades-and-grading-systems/

Course Policies

Attendance

Attendance is critical in mastering the course material. If you must miss class, please send an email to tswallace@ualr.edu before class begins explaining the reason for your absence. Participation implies making comments, observations, and contributions and asking questions in the virtual and/or physical classroom. Excessive unexcused absences will negatively affect your participation grade. Due to COVID-19 content will be delivered in a hybrid format. All sessions will be offered online, with the understanding that there will be opportunities for face to face interaction as health safety permits. Students who wish to complete the entire course in an online environment due to health and safety concerns will be given the option to complete the course in its entirety online with instructor approval. We will be using Blackboard Collaborate for online class meetings and individual meeting requests will be handled via Google Meet. Students are expected to attend lectures online at the regularly scheduled times and participate throughout the duration of the session. If attendance on a particular day is not possible. Students should email the Instructor prior to class to make alternate plans for completion of that day's content.

Policy for Late/Missed Work

Students are expected to turn in all assignments on time. Failure to do so will result in reduced or no credit for the assignment. Only in the case of extenuating circumstances

will an extension be granted. Credit for Late Assignments

- 1st Offense - Maximum 75% Credit if submitted with 24 hours of the due date.
- 2nd Offense - Maximum 50% Credit if submitted with 24 hours of the due date.
- 3rd Offense - No Credit

Academic Integrity

Plagiarism on any assignment will at a minimum result in 0 points for the assignment. We reserve the right to pursue further disciplinary action if appropriate (e.g. any student caught cheating on an assignment/assessment will receive an "F" for the course, and we may pursue action with the Committee on Academic Integrity). Plagiarism includes copying someone else's work and claiming it as your own, or collaborating excessively with another person or persons and claiming the work as solely your own. It is strongly recommended that students maintain a record of the preparation of their major assignments.

Policy on the Use of Large Language Models (LLMs) in Class

The use of Large Language Models (LLMs), such as ChatGPT, Bard, or other AI-based tools, can be a valuable resource for learning and enhancing programming skills. However, their use in this course is governed by the following guidelines to ensure academic integrity, foster critical thinking, and maintain fairness.

Permitted Uses

Students are encouraged to use LLMs for:

- Conceptual Understanding like clarifying programming concepts
- Debugging Assistance: Seeking suggestions for resolving coding errors or improving code efficiency.
- Learning Resources: Generating examples, pseudocode, or explanations related to programming techniques.
- Brainstorming Ideas: Generating projects ideas or placeholder content
- Project Support: Researching tools, APIs, or workflows to enhance project outcomes.

Prohibited Uses

The following uses of LLMs are considered violations of academic integrity:

- Submission of AI-Generated Code or Text as Original Work: Any code, project deliverables, or written assignments must reflect the student's own understanding and effort.
- Directly submitting AI-generated output without proper attribution is prohibited.
- Collaboration Substitution: Using LLMs to replace meaningful collaboration with peers on group assignments or projects.
- Uncritical Reliance: Copying and pasting AI-generated solutions without verifying their accuracy, functionality, or relevance to the assignment requirements.
- Exam Assistance: Using LLMs during exams, quizzes, or other assessments unless explicitly allowed.

Attribution and Transparency

When LLMs are used to aid learning or assignments, students must:

- Clearly indicate where and how the tool was used in their work. For example: Comment in code: <!--This code was adapted from ChatGPT-generated pseudocode -->.
- In written assignments: "This explanation was inspired by ChatGPT's response on [date]."
- Ensure all LLM-generated content is appropriately revised to reflect personal understanding.

Evaluation and Accountability

Students are responsible for:

- Demonstrating a clear understanding of any code or solutions they submit.
- Justifying design choices or implementations when questioned.
- Ensuring LLM usage aligns with the course's academic integrity policy.

Encouraged Practices

- Treat LLMs as supplementary tools, not replacements for personal effort or human collaboration.
- Verify and critically analyze AI-generated suggestions before incorporating them into assignments or projects.
- Seek guidance from the instructor or peers when in doubt about the appropriate use of LLMs.

Consequences of Misuse

Misuse of LLMs, including violations of the above policies, will be treated as an academic integrity offense and may result in penalties ranging from reduced grades on assignments to failure in the course, depending on the severity of the violation. By adhering to this policy, students can leverage LLMs to enhance their learning experience while upholding the principles of academic integrity and personal accountability. If you have questions about the acceptable use of LLMs, please discuss them with the instructor.

Helpful University Resources

Blackboard Student Support

- https://ualr.edu/blackboard/contact/

Bookstore

- https://ualr.bncollege.com/

Care Team

- https://ualr.edu/studentsuccess/care-team/

Career Center

- https://ualr.edu/careers/

Child Care Connections

- https://ualr.edu/studentsuccess/child-care-connections/

Disabilities Resource Center

- https://ualr.edu/disability/

Communication Skill Center (CSC)

- https://ualr.edu/appliedcomm/communication-skill-center-csc/

Counseling

- https://ualr.edu/counseling/

Handshake

- https://ualr.joinhandshake.com/login

Health Services

- https://ualr.edu/health/

Information Technology Services (ITS)

- https://ualr.edu/itservices/welcome/

Mathematics Assistance Center

- https://ualr.edu/mathematics/mathematics-assistance-center/

Military Student Success Center

- https://ualr.edu/military/

Office of Student Retention Initiatives (SRI)

- https://ualr.edu/studentsuccess/academic-resources/coaching-and-student-support/

Student Support Services (SSS)

- https://ualr.edu/studentsupport/

Trojan Tutoring (i.e. introductory-level courses only) via University Learning Commons

- https://ualr.edu/studentsuccess/academic-resources/

UA Little Rock Trojan Food Pantry

- https://ualr.edu/foodpantry/

University Writing Center (UWC)

- https://ualr.edu/writingcenter/

Ottenheimer Library

- https://ualr.edu/library/

Tentative Course Schedule

Week 1

- Review Syllabus and course expectations
- Our Window to the Web: Web Browsers & Understanding Web Related Terminology

Week 2

- Structure, Content, Design, & Behavior and a discussion on Naming Conventions, Meta Naming, Directory Structure
- Structure: Introduction to HTML5 – Properly Marking up an HTML5 Document (Headings, Paragraphs, Lists, Links, Images.

Week 3

- Structure: Introduction to HTML5 - Properly Marking up an HTML5 Document (Tables , Forms, Attributes)
- Structure: Block (Structural) vs. Inline (Text-level Semantics) Elements, Additional HTML Attributes
- Structure: Terminology and Concepts Quiz

Week 4

- Site Management: Building Development Environment, File management, Publishing to web server / GIThub / AWS / Cloud9
- Assessment: Develop a prototype html document project

Week 5

- Design: Introduction to CSS – Creating and attaching a stylesheet – Type, ID, Class Selectors
- Design: CSS Syntax, Styling the elements of your site, Resetting vs. Normalization CSS

Week 6

- Design: Using CSS for Layouts – CSS Box Model / Flexbox
- Design: Using CSS for Layouts – In-class Lab (Positioning Lab Assignment)

Week 7

- Design: Color Theory and Designing with Grids
- Assessment: Style prototype HTML document and publish to server

Week 8

- Design: Introduction to Graphic Design concepts – Working with Shapes, Symbols and Text | Rasterized vs. Vector Imagery
- Design: Introduction to Graphic Design – Filters, Guides, and Paths, Cropping
- Vector Icon Design Assignment

Week 9

- Design: Introduction to Graphic Design - Web Site Banner Case Study – Explore the design process using a combination of the techniques we have used thus far |
- Image Optimization
- Structure / Design: Integrating Images into your site template
- Structure: Validating your site Template | Finalizing Page Structure | Duplicating Pages
- Assign Individual Web Project

Week 10

- Project Q&A
- Web Forms

Week 11

- Project Consulting: The client Interview / Site Planning / Prototyping
- Behavior: Introduction to JavaScript – Your First Script, Document Object Model (DOM)
- Assign Final Project

Week 12

- Behavior: Introduction to JavaScript – The Power of JavaScript Libraries
- Behavior: Progressive Enhancement Case Study

Week 13

- Behavior: Introduction to JavaScript – JQuery in-class lab
- Special Topic: Web Accessibility

Week 14

- Final Project Troubleshooting / Optimization
- Next Steps and Evaluation

Week 15

- Final Web project Due at time of Final