



CS 377 Advanced Web Development and Security

Summer 2024

Course Credits: 4

Contact Hours: 56 hours

Instructor: TBA

Email: TBA

COURSE OBJECTIVES

This intensive course delves into advanced web development, emphasizing HTML5. Topics include web infrastructure, security, search engines, HTML5, web interfaces, privacy, Semantic Web, and web services. Through hands-on projects, students gain practical experience aligned with the curriculum, building a robust foundation in computer science-based web development.

Upon Completion of this Course, students will be able to:

1. Develop a deep grasp of web development intricacies, from server-client dynamics to networking protocols.
2. Acquire skills in encryption, authentication, and authorization for robust web application protection.
3. Learn effective web content structuring using HTML5 and XML, optimizing for search engine visibility.
4. Master designing web interfaces for swift data exchange between applications and databases.
5. Explore the Semantic Web and modern web services, ensuring readiness for evolving technologies.

PREREQUISITES

CS 203 Information Security, CS 226 Fundamental Databases.

GRADING

Grades will be determined by accumulating points, with 100 points being the



maximum, as follows:

ITEM	POINTS
Quizzes	15 Points
Assignments	20 Points
Midterm Exam	15 Points
Project	20 Points
Final Exam	30 Points
Total	100 Points

Late submissions will be graded at the end of the course. Grades will be assigned according to the following rule:

$A \geq 90 > B \geq 80 > C \geq 70 > D \geq 60 > F$.

We reserve the right to make adjustments to the overall grading policy.

COURSE MATERIALS

Required Texts:

Terry Felke Morris, *Web Development and Design Foundations with HTML5*, Pearson, 2020.

Recommended (Optional) Texts or Other Materials:

None

COURSE TOPICS

MODULE	TASKS
Module 1	Topics: Topic 1: Universal Design for the Web Topic 2: Reliability and Information on the Web Topic 3: Internet Protocols Topic 4: Markup Languages Assessments: Quiz#1 Assignment#1



Module 2	Topics: Topic 5: HTML5—the Newest Version of HTML Topic 6: Configure List Markers with CSS Topic 7: Responsive Page Layout Topic 8: Privacy and Forms Assessments: Quiz#2 Assignment#2
Module 3	Topics: Topic 9: Server-Side Processing Topic 10: Web Development Topic 11: Web Multimedia and Interactivity Topic 12: JavaScript Resources Assessments: Midterm Exam Project
Module 4	Topics: Topic 13: Web Storage Topic 14: Progressive Web Application Topic 15: Encryption Topic 16: Secure Sockets Layer (SSL) Assessments: Quiz#3 Project due
Module 5	Topics: Topic 17: Components of a Search Engine Topic 18: A Brief Look at JavaScript and jQuery Topic 19: Writing a Variable to a Web Page Topic 20: Web-Safe Color Palette Assessments: Final Exam

ATTENDANCE

1) Class attendance is required. Missing classes without permission will lead to decrease in overall grade.

Missing less than two classes: no penalty.

Missing more than two classes: 7% will be taken off from the overall grade.

If the instructor reports a student's frequent missing of class to the Soochow University Academic Administration Office, the student might get a written warning



and might be prohibited from attending final exam.

2) Participants in this course are expected to arrive in class promptly and adequately prepared. The primary objective of this course is to critically engage with the readings and the subject matter. Therefore, course participants are expected to have completed the reading prior to class and prepare thoughtful reflections/commentaries to share with fellow colleagues.

LEARNING REQUIREMENTS

- 1) Late assignments are not acceptable and are subjected to grade deductions.
- 2) Assignments submitted in the wrong format will be counted as not submitted.
- 3) Failure to submit or fulfill any required course component results in failure of the class.
- 4) Make-up for midterm and final exams only with valid excuses, as defined by the University.
- 5) In order to earn a Certificate of Completion, participants must thoughtfully complete all assignments by stated deadlines and earn an average quiz score of 50% or greater.

TECHNOLOGY POLICY

The use of electronic devices in class is distracting, both for the user and for the rest of the class. Only non-programmable calculators can be used in the tests and exam. Any attempts to use cell phones and other electronic communication devices will be seemed as cheating. Laptops are discouraged, unless you use them for activities DIRECTLY related to the course (eg., note taking, reading course documents).

ACADEMIC INTEGRITY POLICY

Soochow University highly values the academic integrity and aims to promote the academic fairness, honesty and responsibility. Any academic dishonesty behaviors and any attempts to cheats and plagiarism will be reported to the university administration office. A written warning and the relevant penalties will be imposed. The record might be shown on the official university transcript.



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DISABILITY ACCOMMODATION

Soochow University is committed to maintaining a barrier-free environment so that students with disabilities can fully access programs, courses, services, and activities at Soochow University. Students with disabilities who require accommodations for access to and/or participation in this course are welcome.

Note:

Please contact the University Administrative Office immediately if you have a learning disability, a medical issue, or any other type of problem that prevents professors from seeing you have learned the course material.