INFO 6150 Web Design and User Experience Engineering

Course Information
Course Title: Web Design and User Experience Engineering
Course Number: INFO 6150
Term and Year: Fall 2024
Credit Hour: 4
CRN: 12982
Course Format: On-ground

Instructor Information
Full Name: Brett Ritter
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Teaching Assistant Information

TBD - See Canvas once the class begins

Course Prerequisites
Graduate level INFO 5100 Minimum Grade of B- or Graduate level CSYE 6200 Minimum Grade of B-

Course Description
Exposes students to both conceptual and technical aspects of Web development with a focus on User Experience. User experience design is the discipline of creating a useful and usable website or application that is easily navigated and meets the needs of both the site owner and its users. Covers Web standards and best practices. Studies the fundamental concepts, techniques, practices, work flows, and tools associated with the practice of user-experience design in Web interfaces. Includes modern, semantic HTML5, CSS3 features available in all major modern browsers, copyright and licensing options, and basic JavaScript for interactive features, and fundamental accessibility(a11y) concepts to meet legal and moral obligations. The course emphasizes universal fundamentals of UX/UI development to allow students to understand and use modern and future development technologies.

Required Tools and Course Textbooks

There is no textbook for the class. Students will be provided with online resources to consult for the material.

Students will have to install and configure required software as directed in the course, available for all major platforms (Windows PC, Mac OS X, Unix/Linux distributions). In particular, the course requires

- The Chrome browser (You may use other browsers, but grading will be conducted using Chrome)
- A github.com account and git software for your platform
- NodeJS and npm
- An editor/IDE of student's choice (VSCode recommended)

Basic instruction for using the software is provided in class, but students are expected to resolve any difficulties installing and using the software on their systems and with their accounts.

Course Schedule/Topics Covered

The course consists of 3 sections. Most classes involve a lecture, a weekly assignment, and a weekly quiz regarding topics covered in the lecture. Each section concludes with a website project.

Section 1: Web UX and Course Fundamentals

~5 classes

- Working with git and github
- The browser and debugging CSS
- The roles of HTML/CSS/JS
- Navigation between pages and sites
- Semantic HTML
- HTML Forms
- CSS Fundamentals: inline, block, positioning
- Responsive and Adaptive
- Mobile First Design
- Basic CSS approaches: semantic, BEM, utility-first
- Layout with CSS: flexbox and grid
- Multi-column Grids
- Common Basic Web UI Patterns (Cards, Panels, Hero Images, Call-to-Action, Dropdown Menus)

Section 2: Browser Javascript and interactive sites

~4 classes

- Browser JS Intro
- Debugging JS
- Browser Events
- Form Validation
- Interactive UI Components (Accordions, Tabs, Gallery/Carousel, Hamburger Menus)
- Color Palettes

- Accessibility (a11y), WCAG, and ARIA

Section 3: React and modern libraries/frameworks

~4 classes

- JSX and Components
- Vite
- React State
- Single Page Applications (SPA)
- The state/render cycle
- a11y in React
- Interactive UX in React
- Deploying websites
- Workplace practices and expectations

Grading Scale

Instructor reserves the right to adjust scores based on the final demonstration of applied knowledge

Outside of the dropped scores for assignments and quizzes and any adjustment of scores for demonstrated knowledge, there is no grading curve.

Contributions of different material to the final grade are weighted as follows:

15% Total of Weekly Assignments (lowest score ignored)
10% Total Weekly Quizzes (lowest score ignored)
25% Project 1 Website using HTML and CSS
25% Project 2: Website to spec using plain Client Side JS
25% Final Project 3: Website using React

The letter grade for course is decided by the percentage of their total score compared to the possible score:

	87-89.9% B+	77-79.9% C+	
95-100% A	84-86.9% B	74-76.9% C	
90-94.9% A-	80-83.9%B-	70-73.9% C-	69.9% or below F

Attendance/Late Work Policy.

Attendance Policy

Students are expected to attend the weekly class sessions (in-person in the classroom) and ask questions whenever the lectures are unclear to them. Barring emergencies, any absences must be requested and approved in advance. Students registered in MGEN courses (INFO, CSYE, and DAMG) are allowed a maximum of 2 absences per course, with 3 or more absences resulting in an automatic 'F' for that course. Students are expected to inform their instructors of any absences in advance of the class; if a student is sick long-term or experiences a medical issue that prevents class attendance, it is strongly encouraged that they speak with their Academic Advisor (coe-mgen-gradadvising@northeastern.edu) to learn more about the Medical Leave of Absence. Should a student anticipate being unable to attend 3 or more classes, they should discuss their situation with their Academic Advisor to explore other types of leave in accordance with the University's academic and global entry expectations. International students should review the Office of Global Services webpage to understand their visa compliance requirements.

Teaching Assistants (TAs) or Instructional Assistants (IAs) will be present at each class to collect student attendance.

Late Work Policy

Students are expected to complete the weekly assignments between classes and submit to their class Github repositories by the deadline (normally before the day of the next class). Students are expected to complete the weekly Canvas-based quizzes between classes and submit online before the deadline (normally before the day of the next class).

Students must communicate with the faculty prior to the deadline if they anticipate work will be submitted late. Work submitted late without prior communication with faculty will not be graded. Late work submitted WITH prior communication is either granted an extension (no grade penalty) OR will be graded with a penalty and only graded after on-time assignments are graded, time-permitting. Any submission that was not granted an extension has no guarantee that it will be graded.

End-of-Course Evaluation Surveys
Your feedback regarding your educational experience in this class is particularly important to the College of Professional Studies. Your comments will make a difference in the future planning and presentation of our curriculum.

At the end of this course, please take the time to complete the evaluation survey at **https://neu.evaluationkit.com**. Your survey responses are **completely anonymous and confidential**. For courses 6 weeks in length or shorter, surveys will be open one week prior to the end of the courses; for courses greater than 6 weeks in length, surveys will be open for two weeks. An email will be sent to your Husky Mail account notifying you when surveys are available.

Academic Integrity

A commitment to the principles of academic integrity is essential to the mission of Northeastern University. The promotion of independent and original scholarship ensures that students derive the most from their educational experience and their pursuit of knowledge. Academic dishonesty violates the most fundamental values of an intellectual community and undermines the achievements of the entire University.

As members of the academic community, students must become familiar with their rights and responsibilities. In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, examinations of whatever kind, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Students are responsible for learning the conventions of documentation and acknowledgment of sources in their fields. Northeastern University expects students to complete all examinations, tests, papers, creative projects, and assignments of any kind according to the highest ethical standards, as set forth either explicitly or implicitly in this Code or by the direction of instructors.

Go to http://www.northeastern.edu/osccr/academic-integrity-policy/ to access the full academic integrity policy.

MGEN Student Feedback

Students who would like to provide the MGEN unit with anonymous feedback on this particular course, Teaching Assistants, Instructional Assistants, professors, or to provide general feedback regarding their program, may do so using this survey: https://neu.co1.qualtrics.com/jfe/form/SV_cTIAbH7ZRaaw0Ki

University Health and Counseling Services

As a student enrolled in this course, you are fully responsible for assignments, work, and course materials as outlined in this syllabus and in the classroom. Over the course of the semester if you experience any health issues, please contact UHCS.

For more information, visit https://www.northeastern.edu/uhcs.

Student Accommodations

Northeastern University and the Disability Resource Center (DRC) are committed to providing disability services that enable students who qualify under Section 504 of the Rehabilitation Act and the Americans with Disabilities Act Amendments Act (ADAAA) to participate fully in the activities of the university. To receive accommodations through the DRC, students must provide appropriate documentation that demonstrates a current substantially limiting disability.

For more information, visit https://drc.sites.northeastern.edu.

Library Services

The Northeastern University Library is at the hub of campus intellectual life. Resources include over 900,000 print volumes, 206,500 e-books, and 70,225 electronic journals.

For more information and for education specific resources, visit https://library.northeastern.edu.

24/7 Canvas Technical Help

For immediate technical support for Canvas, call 617-373-4357 or email help@northeastern.edu

Canvas Faculty Resources: https://canvas.northeastern.edu/faculty-resources/

Canvas Student Resources: https://canvas.northeastern.edu/student-resources/

For assistance with my Northeastern e-mail, and basic technical support:
Visit ITS at https://its.northeastern.edu
Email: help@northeastern.edu
ITS Customer Service Desk: 617-373-4357

Diversity and Inclusion

Northeastern University is committed to equal opportunity, affirmative action, diversity, and social justice while building a climate of inclusion on and beyond campus. In the classroom, members of the University community work to cultivate an inclusive environment that denounces discrimination through innovation, collaboration, and an awareness of global perspectives on social justice.

Please visit http://www.northeastern.edu/oidi/ for complete information on Diversity and Inclusion

Title IX

Title IX of the Education Amendments of 1972 protects individuals from sex or gender-based discrimination, including discrimination based on gender-identity, in educational programs and activities that receive federal financial assistance.

Northeastern's Title IX Policy prohibits Prohibited Offenses, which are defined as sexual harassment, sexual assault, relationship or domestic violence, and stalking. The Title IX Policy applies to the entire community, including male, female, transgender students, faculty, and staff.

In case of an emergency, please call 911.

*Please visit **https://www.northeastern.edu/ouec** for a complete list of reporting options and resources both on- and off-campus.*