

**Course:** "User Interface Development," Winter 2019

**Class Meeting Times:**

9:00am – 10:30am	M/W	G906 COOL	Sai R. Gouravajhala
4:30pm – 6:00pm	Tu/Th	2505 GGBL	Walter S. Lasecki

**Discussion Sections:**

6:00pm – 7:00pm	Tu	1010 DOW	Staff TBD
6:00pm – 7:00pm	Th	1010 DOW	Staff TBD
10:30am – 11:30am	F	1010 DOW	Staff TBD
12:30pm – 1:30pm	F	1024 FXB	Staff TBD
1:30pm – 2:30pm	F	1024 FXB	Staff TBD

**Lecture Videos:** <available through Canvas>

**Summary:** For students to gain practical experience with the design, implementation, and testing of user interfaces. This course will present design methods, UI abstractions, and practical examples of tools and languages commonly used in UI development. *The course and project will be focused on web development for UI creation.* Significant experience with object-oriented programming is assumed, and experience with web technologies is beneficial. The course will cover some of the core concepts and methods in web programming, but will do so at a rapid pace.

**Tentative Schedule**

*T = Theory and Concepts; A = Applications and Tools; S = Special Topics*

1. (1/9 - 1/10) T: Intro and Overview of HCI
2. (1/14 - 1/15) UI Design and Considerations
3. (1/16 - 1/17) T: UI Concepts (Windowing and widgets; Containers)
4. (1/21 - 1/22) **NO CLASS - MLK Day(s)**
5. (1/23 - 1/24) A: Web Architecture, Programming Languages and HTML
6. (1/28 - 1/29) T: Hierarchies, Inheritance, and Layout Management
7. (1/30 - 1/31) A: CSS and Bootstrap
8. (2/4 - 2/5) REVIEW FOR TEST 1
9. ( 2/7 ) **Test 1**
10. (2/11 - 2/12) T: Interactivity and Events
11. (2/13 - 2/14) A: Javascript Basics
12. (2/18 - 2/19) A: Advanced JS and Bootstrap
13. (2/20 - 2/21) T: Designing for Collaboration
14. (2/25 - 2/26) A: Web Architectures 2
15. (2/27 - 2/28) *Putting it All Together: Full-Stack Examples of Collaborative Systems*
16. (3/4 - 3/5) *SPRING BREAK*
17. (3/6 - 3/7) *SPRING BREAK*
18. (3/11 - 3/12) T: MVC Concepts
19. (3/13 - 3/14) A: MVC Frameworks
20. (3/18 - 3/19) REVIEW FOR TEST 2
21. (3/21) **Test 2**
22. (3/25 - 3/26) T: Windowing Systems

- 23. (3/27 - 3/28) T: 2D/3D Graphics Pipeline
- 24. (4/1 - 4/2) A: three.js
- 25. (4/3 - 4/4) T: Beyond Windowed GUIs
- 26. (4/8 - 4/9) A: UI Accessibility
- 27. (4/10 - 4/11) Special Topics: Research in Human-AI Interaction and Crowdsourcing
- 28. (4/15 - 4/16) REVIEW FOR TEST 3
- 29. ( 4/18 ) **Test 3**
- 30. ( 4/23 ) **NO CLASS**
- 31. **There is no final exam for this course.**

## Readings

**No textbook is required for this class**, though some readings will be assigned for each major section. These will help you get a better sense of the space, and understand more deeply some of the concepts from class.

## Discussion Sections

IA-led discussion sections will happen Tu/Th/F. These discussion sections will be composed of about 20-30 minutes of examples and review material for the previous week, and up to 30 minutes of “open questions.” Think of this as part of your office hour time. You can bring prepared questions and ask them in a smaller venue where more people can still benefit from them. For specific questions, you may ask after the normal session lets out **IF** it lets out early. Please respect the IA’s time constraints and avoid asking them to stay past the scheduled time without a pre-arranged appointment.

## Grading

Grades will be decided by the following major categories:

- Individual Assignments and Homeworks: 40%
- 3 Tests: 42% (15% / 15% / 12%)
- Quizzes: 14%
- Participation: 4%

## Outside-of-Class Support

- For discussion forums, only expect prompt (within a couple hours) replies between 10am and 6pm — IAs/GSIs have lives too, so please leave yourself time to get help if it’s needed.
- If you have a question not appropriate for the discussion forums, please email the *entire* teaching team: [eeecs493-winter19@umich.edu](mailto:eeecs493-winter19@umich.edu)
- **IMPORTANT:** In rare cases, you may have a personal matter you need to discuss. In this case, you may email me directly, but please use the email title prefix: “EECS493-Winter19: “ or your email will most likely get lost (I receive hundreds of emails / messages per day, and cannot promise an immediate response to emails sent directly to me instead of to the teaching team, but I’ll do my best.)

## Cheating

**Please do not.** I hate paperwork, and I hate seeing people's academic lives damaged or destroyed because they were worried about a few more points. There's plenty of ways to get help in this course, so let's find a legitimate way to get you the knowledge + grade you want.

An **IN**complete list of what counts as cheating in this class: Using someone else's code, using someone else's solution approach/method, using someone else's data, taking credit for work in a group assignment that you did not personally complete, incomplete or missing citations to work or content you used, etc.

## Honor Code [Official]

All students (including LS&A and Engineering) are required to observe the Engineering Honor Code in all assignments and exams. A copy of the honor code can be found at <http://ossa.engin.umich.edu/honor-council/>. Please make sure that you clearly understand what constitutes cheating. If you are not sure in any specific case, you should ask the teaching staff. The University takes honor code violations seriously, and penalties can be severe. You are not allowed to share your code with anyone other than your partner. You are not allowed to make use of project or homework solutions by others, including solutions from previous semesters. **Make sure that you do not upload your code on github public repositories, as this also constitutes violation of the honor code.**

Any suspected violations of the honor code will be reported.

## Disabilities and Conflicts

Students with disabilities that are documented with the Services for Students with Disabilities ([SSWD](#)) Office should contact the professor during the first three weeks of class to make appropriate arrangements.

