CSCI 3002: Foundations of Human-Computer Interaction (Fall 2019)

Syllabus Revised 2019-08-26

Meeting Time: Tuesday/Thursday, 11am–12:15pm
Location: Fleming 155

Instructor: Shaun Kane (Associate Professor @ Department of Computer Science)
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Office hours: Thursday 1–2pm, DLC 170 (or by appointment)

Teaching Assistants

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Overview of the Course

The purpose of this course is to learn about, explore, and practice methods for conducting user-centered research, design, and user evaluation. You will learn about user-centered design practices by actually doing them, reflecting on how things went, and (in most cases) practicing them several more times. You will learn about a variety of techniques for working with users and will apply them in the context of real-world design projects.

Learning Objectives

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

- Generate, discuss, and evaluate ideas for designing new interactive systems;
- Conduct user research in order to understand users' needs, abilities, challenges, and other attributes, in context;
- Develop and refine ideas through brainstorming, sketching, storyboarding, and creating low-fidelity, mid-, and high-fidelity prototypes;
- Evaluate prototypes through user testing and heuristic evaluation methods, and analyze the resulting data;
- Compare and contrast design, prototyping, user testing, and analysis methods in order to determine the right method for the problem you are trying to solve;
- Develop universally accessible technologies that address individuals with a wide range of needs and abilities.

Required Materials

The following materials are required:

1. I-Clicker Remote
2. Official CU email address (all class correspondence must go through this address)
3. During the semester you may need to sign up to (free) accounts on the web services Google Drive, Github, Figma, and Adobe Creative Cloud.

You will also be expected to acquire and bring the following materials to class for in-class activities:

4. A laptop computing device (any operating system that can run a web browser)
5. Pencils & pens for sketching

6. Loose leaf blank paper (or a notebook with removable pages)
7. Sticky notes
8. Colored pencils or pens for multi-color sketches

There is no required textbook for the class. Required readings will be posted on the web site.
Class Communication. We will use Canvas as the center of communication for this course. To contact the teaching staff, you may send messages on Canvas, email, or visit during office hours. Note that any email correspondence related to the class should be sent from a colorado.edu email address.

Grading expectations. In contrast to some CS classes, many elements of this class are graded based both on the successful completion of the work as well as the amount of care and effort put into the work. Assignments that you turn in should show evidence of careful thought, iteration on your initial ideas (*i.e.,* not turning in first drafts), and should be thoughtfully written and presented. For example, if a student turns in an assignment that "checks all the boxes" of the assignment description, but is poorly thought out or presented in a sloppy way, that student should not expect a perfect grade on that assignment. Whenever possible I will provide rubrics describing my expectations for each assignment.

Grading scheme. Most assignments will include a grading rubric. Many assignments will follow a (check minus, check, check plus) grading scheme. This scheme considers both the quality of the outcome and the amount of iteration and polish demonstrated in the work, providing extra points for assignments that show extra attention to detail in addressing the design problem.

Check Minus (7/10 points): Assignment is complete, but is missing some component specified in the assignment, or work seems rushed or like a first draft.

Check (9/10 points): The majority of “good” assignments will receive this grade. The assignment is complete and shows thoughtful application of the skills learned in class. This project shows some thought and iteration - this is not your first idea or attempt. Sketches are cleaned up and easy to read.

Check Plus (10/10 points): These demonstrate high quality work. These are submissions that go beyond the bare minimum assignment (e.g., including additional users in your study, including more ideas, or extensively iterating on and polishing your designs), and demonstrate a commitment to creating good solutions to design challenges, rather than just OK solutions.

Final grades. At the end of the course, letter grades will be assigned via the following formula:

Range	Letter Grade
94 to 100	A
90 to 93.9	A-
87 to 89.9	B+
83 to 86.9	B
80 to 82.9	B-
77 to 79.9	C+

Range	Letter Grade
73 to 76.9	C
70 to 72.9	C-
67 to 69.9	D+
63 to 66.9	D
60 to 62.9	D-
0 to 59.9	F

Expectation of work. This is a 4-credit course, and students are expected to work approximately 6 - 12 hours per week outside of class. Note that not every week will involve the same workload. Whenever possible, I will provide assignments early so that students can manage their time effectively. If you feel that you are working significantly more than the expected amount of time each week, please come talk to me during office hours.

Late assignments. All assignments are due by the date and time specified in the assignment. Because of the extensive work required to accommodate late assignments, no late assignments will be accepted without prior permission of the instructor.

Citing sources. Much of the work we do in this class involves drawing from other resources (tutorials, pre-made wireframes or mockups, images, open source projects, etc.). It is extremely important that you cite all external sources you use in your assignments and provide links back to them. If your assignments are missing citations to work, you may receive a failing grade for the assignment.

Late adds. Students who join the class will be given one week after their first date of attendance to complete any assignments that were due before they joined.

Grading breakdown. Your grade in the course will be based on the following components:

- **Project Assignments (40%).** You will complete several mini-projects during the semester. These assignments will build upon and integrate the ideas covered in class and give you opportunities to practice your skills on real-world projects. These assignments will generally include both a solo component and a group component.
- **Weekly lab activities (20%, drop lowest).** You will complete in-class assignments during the recitation section. These are graded assignments. Each week you will turn in a report on your in-class assignment via Canvas. These activities will often require working with a partner. If you must miss a class meeting, you will be expected to make up any missed in-class activities.
- **In-Class Quizzes (25%).** There will be 3 in-class quizzes that will evaluate your overall knowledge of the course material. Dates for these, and topics covered, will be announced ahead of time.
- **Reading Assignments (10%, drop lowest).** Each week you will read a paper or a book chapter from the literature and answer questions about it.
- **Class participation (5%).** Some activities will take place during lecture meetings, including clicker activities and small-group activities.

Using technology in class. We will take advantage of available technology whenever possible to enrich our learning. However, technology use can also be a detriment to the classroom experience, not just for you but for other students around you. If I see that you are using technology to the detriment of the class meeting, I will ask you to stop. If the problem continues, I will ask you to leave class.

Missing class. This is a "flipped class" — much of the learning in this class will come through in-class group activities. These activities form a major portion of your grade. You will document your in-class work through write ups on Canvas. If you miss a class and the in-class activity, you are expected to make up that work.

Right to revise. I reserve the right to revise the syllabus throughout the semester. In general, if I am considering making a change to an assignment or due date, I will discuss it with the class first.

Disability accommodations. We will do everything we can to ensure that each student can participate on a level playing field. This includes supporting accommodations for students who need them. This course complies with the university's policy on disability accommodations (see details below). If you require any accommodations, please talk directly to me and let me know as soon as possible so that we can adequately address your needs.

Preliminary Schedule (subject to change)

Week #	Date	Topic	Project Deliverable
1	8/28	Introduction to user-centered design	
2	9/3	Brainstorming	
3	9/10	Users and tasks	Project Plan
4	9/17	Formative research methods	
5	9/24	Sketching	Formative Research
6	9/31	Visual Design	
7	10/8	Color	Paper Prototypes
8	10/15	Heuristic Evaluation	
9	10/22	Usability testing	Study Plan + Heuristic Evaluation
10	10/29	Pointing and gestures	
11	11/5	Data analysis	Usability Testing
12	11/12	Human performance	
13	11/19	Audio	Final Prototype + Storyboard
FB	11/25	Fall Break	
14	12/3	Current topics in HCI	
15	12/10	Final presentations	Video

University Policy Statements

Accommodation for Disabilities. If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the Disability Services website. Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition or injury, see Temporary Medical Conditions under the Students tab on the Disability Services website.

Classroom Behavior. Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on classroom behavior and the Student Code of Conduct.

Honor Code. All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code (honor@colorado.edu); 303-492-5550). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found at the Honor Code Office website.

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation. The University of Colorado Boulder (CU Boulder) is committed to fostering a positive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct intimate partner abuse (including dating or domestic violence), stalking, protected-class discrimination or harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or cureport@colorado.edu. Information about the OIEC, university policies, anonymous reporting, and the campus resources can be found on the OIEC website.

Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

Religious Holidays. Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, I appreciate knowing if you are going to miss class, but it is not required. You will not be penalized for missing any particular class, although you are expected to make up any work you have missed.

See the campus policy regarding religious observances for full details.