CSCI 5839: User-Centered Design and Development I - Fall 2016

Syllabus Version 1.0 (August 23, 2016)

Meeting Time: Tuesday/Thursday, 2:00–3:15pm
Locaton: ITLL 1B50

Class Web Site

- Web site: https://learn.colorado.edu/d2l/home/6606
- Course calendar: http://shaun.cat/classcalendar
- Piazza discussion board: http://piazza.com/colorado/fall2016/csci5839

Instructor

Shaun Kane, Assistant Professor, Department of Computer Science
Email: shaun.kane@colorado.edu
Web site: http://shaunkane.com

Office hours

Office hours will be on Tuesdays, from 3:15 to 4pm, in my office (DLC 173). Additional office hours are available by appointment.

Teaching Assistants/Graders

- Darren Guinness (darren.guinness@colorado.edu)
- Halley Profita (halley.profita@colorado.edu)

Required materials

- Official CU email address (all class correspondence must go through this address)
- There is no required textbook for the class. Required readings will be posted on the web site.
- Sketching supplies (see below)

Supplies

You are expected to purchase supplies to be used for activities inside and outside of class, primarily sketching. You should have the following materials and should bring them to every class meeting (can purchase at Amazon or elsewhere):

- Pencils & pens for sketching
- Loose leaf **blank** paper (or a notebook with removable pages)
- Sticky notes
- Colored pencils or pens

Overview of the course

The purpose of this course is to learn about, explore, and practice traditional 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 a real-world design project.

Learning objectives

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

1. Generate, discuss, and evaluate ideas for designing new interactive systems;
2. Conduct user research in order to understand users' needs, abilities, challenges, and other attributes, in context;
3. Develop and refine ideas through brainstorming, sketching, storyboarding, and creating low-fidelity, mid-, and high-fidelity prototypes;
4. Evaluate prototypes through user testing and heuristic evaluation methods, and analyze the resulting data;
5. 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.

Class Communication

We will use Piazza for class discussion and for sharing content with the group. You will need to sign up for a Piazza account to participate in this course. The CSCI 5839 discussion board URL is http://piazza.com/colorado/fall2016/csci5839.

In general, I ask that you post questions about the course to the Piazza discussion board rather than through email. This makes it easier for the TAs and me to respond, and reduces the number of redundant responses we need to write. Posts on Piazza may be made anonymously, or may be anonymous to other students but not to the teaching staff. For questions of a personal nature, please contact the instructor or TAs by email.

Assignments and Grading

This course consists of a combination of individual and group assignments. These assignments are designed primarily to give you experience in conducting user-centered design activities, giving and receiving peer feedback, and generating and evaluating new ideas for designing interactive systems.

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 quality of 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. Many of the assignments will follow a (check minus, check, check plus) grading scheme. This grading scheme values the quality of the outcome and the amount of iteration and polish demonstrated in the work, while providing extra points for assignments that show particular attention to detail in addressing the design problem. The grading scheme is as follows:

- *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):* Most good assignments will receive this grade. The assignment is complete, and shows thoughtful application of the skills learned in class. This project 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 assignments are not only complete, but demonstrate high quality work. These are submissions that go beyond the assignment (e.g., including additional users in your study, including more ideas, or extensively iterating on and polishing your designs).

Reading assignments and in-class activities will be graded pass/fail (i.e. 100% or 0%) grading.

Reading before class. This course draws on a set of diverse (and, in my opinion, interesting) readings. Since we are drawing from interesting and well-written source material, my goal is to minimize the amount of class time I spend reiterating the assigned reading. It is a much better use of our class time to discuss questions and comments *about* the reading, to connect the reading to real-world examples, and to practice the methods described in the assigned reading.

In order to make the best use of our limited class time, I expect that everyone will come to class having read the assigned reading, and having posted at least one interesting question or comment to the Piazza thread bone hour before class. You should not reiterate questions or comments that have already been made; you may want to post early to make sure no one else has already added the question/comment you were thinking of. I will make sure that readings are posted several weeks in advance, so that you have time to read them even if your schedule becomes busy.

Expectation of work. This is a 3-credit course, which means that students are expected to work approximately 6 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.

Due dates. Unless specified otherwise, assignments are due before the start of class (1:59pm) on the date that they are due.

Late assignments. All assignments are due by the date and time specified in the assignment. Late assignments will be accepted at the instructor's discretion: my typical policy is to deduct 20% off the total grade for each day that the assignment is late. However, some assignments are time sensitive and in those cases late assignments will not be accepted. I generally do not provide extensions except in extenuating circumstances, and only if the request for an extension is made ahead of the assignment deadline.

Citing sources. Much of the work we do in this class involves drawing from other resources (tutorials, pre-made wireframes or mockups, images, etc.). It is 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 lose points on the assignment, or I may return the assignment without a grade.

Grading breakdown

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

1. **Assignments (60%).** Both group and individual assignments. Students will complete a group project involving the design, development, and evaluation of a prototype of a new interactive system. Project milestones will be spread throughout the semester. Students will complete several individual assignments to gain additional practice in generating and evaluating design ideas.

2. **Sketchbook (10%).** You will keep an individual sketchbook outlining design ideas, to get practice generating and evaluating ideas. These sketching assignments will be spaced throughout the semester.

3. **In-class activities (15%).** On most days, we will conduct some in-class activity. Students are expected to attend and *actively* participate in these activities. These activities will be documented in your personal blog on Piazza. If you must miss a class meeting, you will be expected to make up any missed in-class activities.

4. **Reading responses (10%).** Readings will be assigned each week. Each student is expected to read the assigned readings before each class and post at least one comment or question to the associated discussion thread on Piazza. These responses should raise a question that the reader had about the work, comment or critique on some aspect of the work, compare and contrast the current reading with prior readings, connect the reading to an item in the news, and so on. **Responses must be posted at least one hour before class so that they may be incorporated into class discussion.**

5. **Contributions to class learning (5%).** All students are expected to attend and participate in class each day. However, different students may contribute to the class's overall learning in different ways, such as by sharing news and design inspirations on the discussion board, or by providing additional feedback on other students' projects outside of class. This

portion of the grade is based on the evaluation of the instructor and TAs; however, you may submit a one-page participation summary at the end of the semester documenting your contributions to class learning.

Activities that are considered as part of this grade component include:

- Presenting ideas and demonstrating your work in class;
- Giving feedback to projects on the Piazza discussion board;
- Posting "inspirations" (interesting links, tools, and stories) to the discussion board;
- Helping out in other ways (if someone helps you, send a note to the instructors so we can credit the person who helped!)

An approximate rubric for this component of your grade is:

- (5 points) Participates in class or on Piazza almost every week; volunteers to share work or lead breakout discussion; shares inspirations or other materials; helps out other students and contributes to the classroom environment.
- (4 points) Participates in class or on Piazza most weeks; volunteers to share work or lead breakout discussion; posts a few inspirations and comments.
- (3 points) Attends class regularly; volunteers to share work or lead breakout discussions several times.
- (1 point) Attends class regularly; does not typically participate or post comments on Piazza.

Class Policies

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 the class meeting.

Citing sources

Much of the work we do in this class involves drawing from other resources (tutorials, pre-made wireframes or mockups, etc.). It is 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 lose points on the assignment, or I may return the assignment without a grade.

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 a blog thread on Piazza. If you miss a class and the in-class activity, you are expected to make up that work within one week.

If you are going to miss class, please let me know ahead of time so that we can discuss what's planned for the class and how you will make up the 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. If I decide to make any changes to the syllabus or grading, each student will have the opportunity to **opt in** to the changes, or to **opt out** and follow the earlier version of the syllabus.

Sources for this course

This course (CSCI 5839 Fall 2014) draws from a variety of sources, including other classes. All external materials used in this course are used with permission and are cited when used. Some content used in this course has been adapted, with permission, from the following courses

- IS 403 and HCC 729 from Amy Hurst and Ravi Kuber
- CSCI 4839 from Leysia Palen
- CMSC 434 from Jon Froehlich
- CEN 4722 from Lisa Anthony

University Statements

Disability Accommodations

If you qualify for accommodations because of a disability, please submit to your professor a letter from Disability Services in a timely manner (for exam accommodations provide your letter at least one week prior to the exam) so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities. Contact Disability Services at 303–492–8671 or by e-mail at mailto:dsinfo@colorado.edu. If you have a temporary medical condition or injury, see the Temporary Injuries guidelines under the Quick Links at the Disability Services website and discuss your needs with your professor.

Religious Observances

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, **please send me e-mail or visit me in office hours to notify me of such a situation at least one week in advance of the event so that we can make alternative arrangements**. See the campus policy regarding religious observances for full details.

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 differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, disability, and nationalities. 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.

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

The University of Colorado Boulder (CU Boulder) is committed to maintaining a positive learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct, discrimination, harassment or related retaliation against or by any employee or student. CU's Sexual Misconduct Policy prohibits sexual assault, sexual exploitation, sexual harassment, intimate partner abuse (dating or domestic violence), stalking or related retaliation. CU Boulder's Discrimination and Harassment Policy prohibits discrimination, harassment or related retaliation based on race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Individuals who believe they have been subject to misconduct under either policy should contact the Office of Institutional Equity and Compliance (OIEC) at 303–492–2127. Information about the OIEC, the above referenced policies, and the campus resources available to assist individuals regarding sexual misconduct, discrimination, harassment or related retaliation can be found at the OIEC website.

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the academic integrity policy of the institution. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access, clicker fraud, resubmission, and aiding academic dishonesty. All incidents of academic misconduct will be

reported to the Honor Code Council (honor@colorado.edu; 303–735–2273). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code Council as well as academic sanctions from the faculty member. Additional information regarding the academic integrity policy can be found at honorcode.colorado.edu.