CSCI 5839: User-Centered Design and Development I

Syllabus Version 1.0 (August 26, 2014)

Meeting Time: Tuesday/Thursday, 2:00-3:15pm
Locaton: ECEE 1B32 (http://www.colorado.edu/campusmap/map.html?bldg=ECEE)

Class web site: http://shaunkane.info/classes/csci5839 (http://shaunkane.info/classes/csci5839)

Instructor
Shaun Kane
Email: shaun.kane@colorado.edu (mailto:shaun.kane@colorado.edu)
Web site: http://shaunkane.info (http://shaunkane.info)

Office hours
Office hours will be on Thursdays, from 1 to 1:45pm, in my office (DLC 173A
(http://www.colorado.edu/campusmap/map.html?bldg=DLC)). If you are planning on attending office hours, I kindly
ask that you notify me in advance by email so that I know how many students to expect (however, if you decide to
attend at the last minute, please come anyway!)

Teaching Assistants/Graders
Gena Welk (gena.welk@colorado.edu (mailto:gena.welk@colorado.edu))
David Quigley (david.quigley@colorado.edu (mailto:david.quigley@colorado.edu))

Required materials
- Official CU email address (all class correspondence must go through this address)

- Piazza.com (http://piazza.com) account (Piazza page for this course
  (https://piazza.com/class/hywaq7x7uvl26v))

- Students should own, and bring to class every day, **plain white paper** and writing/drawing implements of
  your choice. You should bring pens and pencils **in at least 3 colors.**

- There is no required textbook for the class. Required readings will be posted on the web site.

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 (http://piazza.com) 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 https://piazza.com/class/hywaq7x7uvl26v (https://piazza.com/class/hywaq7x7uvl26v)

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.

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 by midnight the night 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.

Missing class. All students are expected to attend and actively participate in class. Both in-class participation and in-class activities are graded components of this class, and thus you will need to make up any missed activities if you cannot attend class. If you need to miss class, I strongly recommend that you let me know ahead of time so that we can arrange for you to make up the missed work.

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. All external resources included in your assignments (images, screen shots, video clips, etc.) **MUST** be acknowledged in a "works cited" section in your assignment. When collecting resources to use in your assignments, make sure to note where you find them so you don't need to track down items at the last minute. I may deduct up to 25% from your assignment grade for using sources without proper citations.

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

1. **Group project (40%).** 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. For details, see Group Project (project.html).

2. **Individual assignments (35%).** Students will complete several individual assignments to gain additional practice in generating and evaluating design ideas. For details, see Individual Assignments (assignments.html).

3. **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 by midnight the day before the readings are due so that they may be incorporated into class the next day.

4. **In-class activities (10%).** On most days, we will conduct some in-class activity. Students are expected to attend and *actively* participate in these activities. If you must miss a class meeting, you will be expected to make up any missed in-class activities.

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 are also encouraged to submit an (optional) participation report (files/ucd-participation.docx) at the end of the semester documenting your contributions to class learning.

Right to revise

The instructor reserves the right to revise the syllabus throughout the semester. If we 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 (http://amyhurst.com) and Ravi Kuber (http://userpages.umbc.edu/~rkuber/)

- CSCI 4839 from Leysia Palen (https://www.cs.colorado.edu/)

- CMSC 434 from Jon Froehlich (http://www.cs.umd.edu/~jonf/)

Disability Accommodations

If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Willard 322, or visit http://www.colorado.edu/disabilityservices/ (http://www.colorado.edu/disabilityservices/)

Religious Observances

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal 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 two weeks in advance of the event. See full details at http://www.colorado.edu/policies/fac_relig.html (http://www.colorado.edu/policies/fac_relig.html)

Classroom Behavior

Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to such behavioral standards may be subject to discipline. Faculty have the professional responsibility to treat all students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which they and their students express opinions. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender variance, 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. See policies at http://www.colorado.edu/policies/classbehavior.html (http://www.colorado.edu/policies/classbehavior.html) and at http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code (http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code).

Discrimination and Harassment

The University of Colorado at Boulder policy on Discrimination and Harassment
(http://www.colorado.edu/policies/discrimination.html (http://www.colorado.edu/policies/discrimination.html)), the
University of Colorado policy on Sexual Harassment and the University of Colorado policy on Amorous
Relationships applies to all students, staff and faculty. Any student, staff or faculty member who believes s/he has
been the subject of discrimination or harassment based upon race, color, national origin, sex, age, disability,
religion, sexual orientation, or veteran status should contact the Office of Discrimination and Harassment (ODH) at
303-492-2127 or the Office of Judicial Affairs at 303-492-5550. Information about the ODH and the campus
resources available to assist individuals regarding discrimination or harassment can be obtained at
http://www.colorado.edu/odh (http://www.colorado.edu/odh).

Honor Code

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic
integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic
dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be
reported to the Honor Code Council (honor@colorado.edu (honor@colorado.edu); 303-725-2273). Students who
are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the
faculty member and non-academic sanctions (including but not limited to university probation, suspension, or
expulsion). Other information on the Honor Code can be found at http://www.colorado.edu/policies/honor.html
(http://www.colorado.edu/policies/honor.html) and at http://www.colorado.edu/academics/honorcode/
(http://www.colorado.edu/academics/honorcode/).

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