

Tentative Syllabus

CSCE 572 - 001: Human-Computer Interaction

(Fall 2023)

Class Meeting: Tuesday & Thursday 1:15PM-2:30PM, Swearingen Engr Ctr 2A31
Course Instructor: Dr. Yan Tong
Email: tongy@cse.sc.edu
Storey Innovation Center 2273
777-0801 (office)
Office Hours: by appointment
Class Homepage: <http://www.cse.sc.edu/~tongy/csce572/csce572.html>

Academic Bulletin Description:

Interdisciplinary approach to interaction design, user-centered design, human abilities, survey development, experimental study methodology, heuristic evaluations, usability testing, universal design, and accessibility.

Full Course Description:

Human-Computer Interaction is a course that focuses on the importance of human-computer interaction in the design and development of things people use. Topics covered in this course will include the capabilities and limitations of users, HCI methods, the design process, and design evaluation.

Keywords: Interaction design and evaluation, interaction modes, system usability, human-robot interaction, cooperative systems, universal design, and accessibility.

Pre-requisites:

Undergraduate or graduate standing in CSE or permission of the instructor.

Goals and Learning Outcomes:

The overall goal of this course is to provide students with knowledge and skills necessary to critically evaluate system design from a human-centered approach. The measurable learning outcomes used to determine the degree to which this goal is being met follow:

- Students will describe the design process
- Students will apply evaluation tools, techniques, and ideas to interface design
- Students will critically analyze human-computer interaction systems

Course Textbooks and Readings:

- *Interaction Design: Beyond Human-Computer Interaction, (4th Edition)*, Yvonne Rogers, Helen Sharp, and Jennifer Preece, John Wiley & Sons, Inc. New York, NY, 2011.
- Optional textbook: *Understanding Your Users: A Practical Guide to User Requirements Methods, Tools, and Techniques*, Catherine Courage, Kathy Baxter, and Kelly Caine, Elsevier, 2005. (2nd edition is fine)

All course materials comply with copyright/fair use policies.

Course Overview:

This course is designed to provide students with a variety of contexts for understanding, evaluating, and implementing human-computer interaction methods and processes. A typical class session will consist of:

- Lectures
- Group discussion of human-computer interaction material
- Group work

A tentative course schedule can be found at the end of the syllabus. All course deadlines are listed in Eastern Time Zone.

Course Communication:

I will be communicating with you regarding grades and assignments. If you need to get in touch with me, the best method is via email (tongy@cse.sc.edu). Generally, I will reply to emails within 24 hours and will provide feedback on assignments within 72 hours. You may also post questions pertaining to the course on the Blackboard Discussion Board. These questions usually will be answered within 24 hours. If you are having trouble with this course or its material, you should contact me via email to discuss the issues.

Announcements will be posted to this course whenever necessary. If there is any other information I think is important, I will send it to your email address you have in Blackboard. It is your responsibility to ensure that your email account works properly in order to receive email.

Below is how you check your email address in Blackboard:

- Access blackboard.sc.edu
- Click your name on the main Blackboard navigation panel on the left
- Review your email address. By default, Blackboard uses your university-issued email address

Your email address in Blackboard coincides with your preferred university email. If you are unsure of your preferred email, check your account (<https://myaccount.sc.edu>).

Technology Requirements:

The lecture notes, links to articles, assignments, quizzes, and rubrics are located on the Blackboard site for the course. To complete assignments, you will need:

- Bring a laptop to class
- A current Internet browser that is compatible with Blackboard (Google Chrome is the recommended browser for Blackboard);
- Microsoft Word as your word processing program; and
- Reliable data storage for your work, such as a USB drive or Office365 OneDrive cloud storage.

If your computer does not have Microsoft Word, Office 365 ProPlus package is available to you free of charge and allows you to install Word, Excel, PowerPoint, Outlook, OneNote, Publisher, and Access on up to 5 PCs or Macs and Office apps on other mobile devices including tablets. Office 365 also includes unlimited cloud storage on OneDrive. To download Office 365 ProPlus, log into your student (University) email through a web browser, choose Settings (top right corner), and select software. If you have further questions or need help with the software, please contact the [Service Desk](https://www.sc.edu/about/offices_and_divisions/university_technology_services/support/servicedesk.php) (https://www.sc.edu/about/offices_and_divisions/university_technology_services/support/servicedesk.php).

Minimal Technical Skills Needed:

Minimal technical skills are needed in this course. All work in this course must be completed and submitted online through Blackboard. Therefore, you must have consistent and reliable access to a computer and the Internet. The minimal technical skills you have include the ability to:

- Organize and save electronic files;
- Use UofSC email and attached files;
- Check email and Blackboard daily;
- Download and upload documents;
- Locate information with a browser; and
- Use Blackboard.

Grading System:

All grades will be posted on Blackboard. You are strongly encouraged to check your scores in Blackboard regularly. A final letter grade will be assigned based on:

A (90-100%), B+ (86-89%), B (80-85%), C+ (76-79%), C (70-75%), D+ (66-69%), D (60-65%), and F (0-59%)

Grading policy (Undergraduate students):

- Two exams (20% each)
- Individual assignments (3) (10% in total)
- Team project (45% in total):
 - Topic definition and understanding of the problem report (5%),
 - Design alternative presentation (5%),
 - Final project presentation (10%),
 - Final written report (15%), and
 - Participation grade (10%)
- Quizzes (5) (5% in total)

Grading policy (Graduate students):

- Two exams (15% each)
- Individual assignments (4) (10% in total)
- Paper reading and written report (10%)
- Team project (45% in total):
 - Topic definition and understanding of the problem report (5%),
 - Design alternative presentation (5%),
 - Final project presentation (10%),
 - Final written report (15%), and
 - Participation grade (10%)
- Quizzes (5) (5% in total)

Note: the graduate students and undergraduate students will have different versions for both exams, where the graduate students are asked to answer more questions.

Course Assignments:

All course deadlines are listed in Eastern Time Zone.

Team project: A big part of human-computer interaction is applying knowledge about human capabilities and limitations, and thus documenting and reducing design problems is a large part of the field. Consistent with this, a semester-long, team-based interface design project will be given in this course. The project will have your team develop an alternative interface for some computer-based application. The project will be broken down into consecutive design phases:

- Topic definition and understanding the problem,
- Design alternatives presentation,
- System prototype development,
- Usability techniques,
- Final presentation, and
- Final written paper.

You will be judged on your originality, innovativeness, and quality. Further details on the project will be communicated often throughout the course.

Certain class periods will be used for your project. You will conduct some kind of activity individually or with your team. Absence from the teamwork not only negatively impacts your team project ultimately, but also peer-assessments from your team members about your contributions to the project, which will affect your participation grade.

The team project will consist of several deliverables during the semester, with **the end products** being

- A final team presentation and

- A final team-written report.

Details and rubrics on these final products will be communicated throughout the course.

Individual assignments include

- An essay about yourself. **(Undergraduate and Graduate)**
- Completion of a required IRB training: You are required to successfully complete an IRB training for better understand ethical guidelines that HCI researchers must follow. **(Undergraduate and Graduate)**
- An individual written critique assignment: This assignment will require you to think critically of the evaluation techniques you learn in class and answer pre-determined questions. **(Undergraduate and Graduate)**
- A case study of evaluation: This assignment will require you to think critically how to choose evaluation methods to meet the specific objectives. **(Graduate students ONLY)**
- Graduate students are required to conduct a literature review on a selected HCI research topic and write a report. **(Graduate students ONLY)**

These individual assignments should be completed individually (do NOT work in groups)

Exams: There will be 2 exams during the semester. The exams will consist of True/False, Single/Multiple Choice, Short Answer questions, etc. The content of the exams will be notified in lecture. Most of the materials you will be tested on come from class lectures and may or may not be included in the textbook(s). Make-up exams are not allowed except excusable absences (http://bulletin.sc.edu/content.php?catoid=52&navoid=1280#Attendance_Policy) with appropriate documentation and advanced notice. Please refer to **Attendance Policy** below for details. Graduate students will complete additional requirements to get graduate credits. The exams will be secured in Blackboard with a password.

Quizzes: There will be 5 quizzes during the semester, which will help you to strengthen your understanding of key concepts learned in class. The quizzes consist of True/False, Single/Multiple Choice or Short Answer questions. The quizzes will be secured in Blackboard with a password.

Late Submission Policy:

A due date will accompany all assignments, quizzes, exams, and deliverables of the team project. All course deadlines are listed in Eastern Time Zone.

Please plan accordingly and complete these assignments in advance of their deadlines to ensure that any unanticipated circumstances do not result in a missed assignment. User error does not qualify you for any kind of makeup or retake opportunity.

Completing and submitting the assignments, quizzes, exams, and project deliverables by the due date is your sole responsibility. If you are concerned about missing a deadline, you may want to submit your assignments and project deliverables the day before the deadline.

Late submissions of assignments, quiz responses, or project deliverables will be accepted if BOTH of the following requirements are met:

- You must contact me in advance of the required assignment, quiz, and project deliverable deadline to make arrangement for its completion.
- You must complete the assignment, quiz, and project deliverable within the week following its due date.

However, late submissions will be subject to the following penalty: 10% will be deducted from your grade for the first day late, and an additional 5% will be deducted on each subsequent day.

Except group presentations and final written report of the team project, you will be granted a ONE-TIME waiver of late submission penalty - you will not be penalized if you submit your assignment in three days after due date. For team deliverables, you cannot use the waiver if any member in the team has used the waiver before. Please notify me in advance when you use this waiver.

Attendance Policy:

Success in this course is dependent on your active participation throughout the course. Class attendance is required as claimed in University policy. When you miss class, you miss important information. If you are absent, you are responsible for learning material covered in class. If you have an [excused absence](#) (<https://academicbulletins.sc.edu/undergraduate/policies-regulations/undergraduate-academic-regulations>), you will be permitted to make up coursework or complete an equivalent assignment agreed upon with me.

To arrange excuses for absences that can be anticipated at the start of the term, you should:

- Submit a written request (email is acceptable) stating the dates of the anticipated absence no later than the end of the second week of the course.
- Explain the reason for absence. In some cases, documentation may be required. Please [consult the policy](https://academicbulletins.sc.edu/undergraduate/policies-regulations/undergraduate-academic-regulations) (<https://academicbulletins.sc.edu/undergraduate/policies-regulations/undergraduate-academic-regulations>) for additional information.
- Include any request for make-up work.

To arrange excuses for absences that cannot be anticipated at the start of the term, (e.g. legal proceedings or illness), you should, at the first opportunity, submit in a written request stating:

- The date of absence
- The reason for absence. In some cases, documentation may be required. Please [consult the policy](#) for additional information.
- Any request for make-up work as soon as reasonably possible after you become aware of the need to be absent.

Academic Integrity:

You are expected to practice the highest possible standards of academic integrity. Any deviation from this expectation will result in a minimum academic penalty of your failing the assignment, and will result in additional disciplinary measures. Violations of the University's Honor Code include, but are not limited to improper citation of sources, using another student's work, and any other form of academic misrepresentation. Violations of the University's Honor Code will be reported to the Office of Student Conduct and Academic Integrity. Below are some websites for you to visit to learn more about University policies:

[Carolinian Creed \(http://www.sc.edu/creed\)](http://www.sc.edu/creed)

[Academic Responsibility \(http://www.sc.edu/policies/staf625.pdf\)](http://www.sc.edu/policies/staf625.pdf)

[Office of Student Conduct and Academic Integrity](#)

[\(https://www.sc.edu/about/offices_and_divisions/student_conduct_and_academic_integrity/index.php\)](https://www.sc.edu/about/offices_and_divisions/student_conduct_and_academic_integrity/index.php)

[Information Security Policy and Standards](#)

[\(https://sc.edu/about/offices_and_divisions/division_of_information_technology/security/policy/universitypolicy/\)](https://sc.edu/about/offices_and_divisions/division_of_information_technology/security/policy/universitypolicy/)

Disability Services:

[Student Disability Resource Center](#) (SDRC)

[\(https://www.sc.edu/about/offices_and_divisions/student_disability_resource_center/\)](https://www.sc.edu/about/offices_and_divisions/student_disability_resource_center/) empowers students to manage challenges and limitations imposed by disabilities. Students with disabilities are encouraged to contact me to discuss the logistics of any accommodations needed to fulfill course requirements (within the first week of the semester). In order to receive reasonable accommodations from me, you must be registered with the Student Disability Resource Center (1705 College Street, Close-Hipp, Suite 102, Columbia, SC 29208, 803-777-6142). Any student with a documented disability should contact the SDRC to make arrangements for appropriate accommodations.

Health and Safety:

Students are expected to comply with all university health and safety guidelines including those about COVID-19. For current COVID-19 guidelines, visit https://sc.edu/safety/coronavirus/safety_guidelines.

Tentative Course Schedule

		Date	Topic	Assignment & Due Date, Important Dates
1	Th	8/24	Lecture on introduction to course and syllabus	<ul style="list-style-type: none"> An essay about yourself (due 11:59pm EST, Friday, Sep. 1, 2023) A proposal for HCI literature review (Graduate ONLY) (due 11:59pm EST, Friday, Sep. 15, 2023)
2	T	8/29	Lecture on introduction to HCI	Aug. 30, Last Day to Drop/Change w/o "W" grade
3	Th	8/31	Lecture on design principles	
4	T	9/05	Lecture on team project and project examples	Quiz #1 (in class)
5	Th	9/07	Lecture on project examples and human abilities – auditory	“Topic definition and understanding of the problem” report (due 11:59pm EST, Sunday, Sep. 24, 2023)
6	T	9/12	Lecture on human abilities – vision	
7	Th	9/14	Lecture on human abilities – cognition	<ul style="list-style-type: none"> Quiz #2 (in class) A written report of HCI literature review (due 11:59pm EST, Sunday, Nov. 19, 2023) (Graduate ONLY)
8	T	9/19	Lecture on human abilities – cognition and IRB instructions	IRB training (due 11:59pm EST, Sunday, Oct. 8, 2023)
9	Th	9/21	Lecture on prototyping Team work – work on project ideas	
10	T	9/26	Review for Exam #1	Quiz #3 (in class)
11	Th	9/28	Exam 1	
12	T	10/03	Lecture on prototyping Team work– work on design alternatives presentation	
13	Th	10/05	Design alternatives presentation – part 1	PowerPoint slides for design alternative presentation (due 11:59pm EST, Tuesday, Oct. 10, 2023)
14	T	10/10	Design alternatives presentation – part 2	
15	Th	10/12	Lecture on evaluation methods - Survey	
16	T	10/17	Lecture on evaluation methods – Task Analysis	
	Th-F	10/19-10/20	Fall Break (no classes)	
17	T	10/24	Lecture on evaluation methods – Personas, Cognitive Walkthrough, Card Sorting	Quiz #4 (in class)
18	Th	10/26	Lecture on evaluation methods – Heuristic Evaluation, Field Study, User Testing	<ul style="list-style-type: none"> Written critiques (due 11:59pm EST, Sunday, Nov. 12, 2023) A plan of usability test (due 11:59pm EST, Tuesday, Nov. 14, 2023)

		Date	Topic	Assignment & Due Date, Important Dates
19	T	10/31	Lecture on evaluation methods – Experiments	<ul style="list-style-type: none"> A case study of evaluation (due 11:59pm EST, Tuesday, Nov. 14, 2023) (Graduate ONLY)
20	Th	11/02	Review for Exam 2	Quiz #5 (in class) Nov. 8, Last Day to Drop w/o "WF" grade
21	T	11/07	Exam 2	
22	Th	11/09	Team work day – work on prototypes and usability test plan	
23	T	11/14	Team work day – work on prototypes and usability test plan	
24	Th	11/16	Team work day – usability test	A report on usability test results (due 11:59pm EST, Tuesday, Dec. 5, 2023)
25	T	11/21	Team work day – usability test	
	W-F	11/22-26	Thanksgiving break (no classes)	
26	T	11/28	Team work day – usability test data analysis & refine design	
27	Th	11/30	Team work day – usability test data analysis & improve prototype	
28	T	12/05	Lecture on final presentation/report rubrics Team work day – improve prototype	
29	Th	12/07	Team work day – improve prototype & prepare final presentation	
	Sa	12/09	Reading Day (no classes)	
	T	12/12	<ul style="list-style-type: none"> Team final presentation, 12:30pm – 3:00 pm Team final report, (due 11:59pm EST, Tuesday, Dec. 12, 2023) Team final presentation slides, (due 11:59pm EST, Tuesday, Dec. 12, 2023) Peer evaluation forms, (due 11:59pm EST, Tuesday, Dec. 12, 2023) 	
	M	12/18	Commencement Exercises in Columbia	