



# USC

**University of Southern California**  
**ISE 470 – Human-Computer Interface Design**  
**Spring 2022**

**Time:** TTh 3:30-4:50 pm

**Location:** LVL 13

**Instructor:** Yalda Khashe

**Office:** <https://usc.zoom.us/my/yaldakhashe>

**Office Hours:** By appointment on Wednesdays 2-3 pm

**Contact Info:** [khashe@usc.edu](mailto:khashe@usc.edu)

**Teaching Assistant:** Ceylin Donat

**Office:** Zoom

**Office Hours:** TBD

**Contact Info:** [ceylindo@usc.edu](mailto:ceylindo@usc.edu)

**Catalog Course Description:**

This course covers topics of introductory nature on human-computer interaction (HCI). HCI focuses on how to design tech products that can be used easily, efficiently, and safely. The course also offers simple evaluation methodologies and tools to analyze a device's interface.

**Text:**

Handouts for lecture and case studies will be posted on Blackboard.

*Interaction Design: Beyond Human-Computer Interaction*, by J. Preece, H. Sharp, Y. Rogers, Wiley & Sons Publishers, 5<sup>th</sup> edition (2019), ISBN: 978-1-119-54725-9  
(4<sup>th</sup> edition is acceptable)

Supporting Text book:

*Human-computer Interaction*, by A. Dix, J. Finlay, G. Abowd, R. Beale, Pearson Education, 3<sup>rd</sup> Edition

*The Encyclopedia of Human Computer Interaction*, by Mads Soegaard and Rikke Friis Dam, 2<sup>nd</sup> Edition (2012), available at <https://www.interaction-design.org/literature/book/the-encyclopedia-of-human-computer-interaction-2nd-ed>

**Course Expectations and Policies:**

***Course Expectations and Netiquette:*** To ensure a cooperative learning environment, each student is expected to read the text before each class meeting time, and prepare to actively participate during class discussions, team-related activities, presentations, and writings.

Netiquette is network etiquette; a set of rules that encourages appropriate and courteous online behavior. The list of "Netiquette Rules for Class" is included on page 8 of this syllabus. Students are expected to engage in behaviors that enhance the learning environment. Our goal is to optimize the learning experience for all the students; therefore, disruptive behaviors are prohibited and will not be tolerated.

**COVID-19 Policy<sup>1</sup>:** We recognize that there are challenges associated with attending and participating in courses during the COVID-19 pandemic (or surges associated with the pandemic during face-to-face sessions). USC has provided information related to the COVID-19 and how USC is meeting the campus community's needs. Continuously updated COVID-19 requirements can be found on the USC COVID-19 resource center website <https://coronavirus.usc.edu/>. All students, faculty, staff, and guests must comply with the USC COVID-19 safety guidelines or be subject to disciplinary action.

**Importantly**, if you become ill, become COVID-19 symptomatic, and/or test positive for COVID-19 during the semester, you will be required to attend classes remotely until you have a negative COVID-19 test result and are asymptomatic. Please rest and contact the USC Health Center for assistance. Stay home if you have come in close contact with someone who has been infected with Covid-19, and contact your healthcare provider for guidance. The course will be provided to you remotely via Zoom while your course peers are taking the class in the USC classroom until you are able to return to our face-to-face class.

In compliance with the LA County Department of Public Health order, **everyone** must wear a mask indoors, regardless of vaccination status. **Accordingly, you must wear masks at all times during class and no eating or drinking are allowed in class due to the COVID-19 protocols.** Refusal to comply with university masking policy is a disciplinary matter and will be referred to Student Judicial Affairs and Community Standards (SJACS): <https://sjacs.usc.edu/>. If you have any questions or require assistance please contact USC COVID-19 hotline: (213) 740-6291, [covid19@usc.edu](mailto:covid19@usc.edu).

**Participation and Attendance Policy:** It is expected that students will attend class regularly and participate in the class discussion throughout the semester. participation involves actively listening and volunteering answers to questions and moving the discussion along toward a shared understanding. University policy regarding attendance in synchronous sessions requires that the students plan to attend every synchronous session for the classes in which they are enrolled, irrespective of when it occurs in their time zone. If the class falls outside the reasonable learning hours in your time zone, defined as 7:00 am to 10:00 pm, contact us so we can discuss your attendance and participation requirements. We will also create a discussion forum for each session of the class on Blackboard to potentially move some of the class discussions online, especially to accommodate students in different time zones.

We encourage all the students to participate live in their team presentation, however, if that is not possible due to time-zone differences or other issues, the students need to disclose that with the instructor in advance and they can participate by recording a video/voice and include it in their presentation. It is the teams' responsibility to manage virtual presentations and make sure that there is no technical difficulty with their presentation (laptop, slides, video, etc.).

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<sup>1</sup> **As the conditions of the current Covid-19 pandemic changes, we may have to alter details of this syllabus. Please keep updated with announcements on Blackboard and the USC website.**

**Camera Policy:** To maintain class dynamics to the extent possible in the online/virtual environment, that students are expected to have their **cameras on** during synchronous online sessions. You can use virtual backgrounds for a more private setup and earphones or headsets to improve audio quality. Please contact me directly if you have any concerns or limitations regarding the camera-on policy and we will discuss expectations and accommodations needed.

**Recording Online Classes:** USC policy requires that all classes conducted online to be recorded for asynchronous viewing with transcriptions made available. Recordings ensure that all classes are ADA compliant, and can be freely accessed at all times by students irrespective of the region or time zone they are studying from. Students are responsible for the appropriate use and handling of these recordings under existing SCampus policies regarding class notes (<https://policy.usc.edu/scampus-part-c/>). You are not permitted to create your own class recordings without the instructor's permission. Violations of these policies will be met with the appropriate disciplinary sanction.

**Due Dates/Make-Up Work:** Exams must be taken as scheduled. Assignments are due as scheduled. Make-ups will be allowed only if the student has contacted the professor before the due date, detailing a serious problem. Make-up exams should be scheduled before the next instruction session and cannot be taken before the scheduled exam.

**Online Communication Policy:** Students are encouraged to contact the instructor by USC email and schedule a meeting during office hours. In the subject line, indicate the course number and a very brief summary of the email. Simple questions will be answered by email, but for more complex discussions students may be instructed to schedule a zoom meeting. We will do our best to respond to your emails within 24 hours. We will be less responsive on the weekends or during holidays.

**Academic Integrity:** USC seeks to maintain an optimal learning environment. General Principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. *SCampus*, The Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: <http://usc.edu/dept/publications/SCAMPUS/gov/> Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review should there be any suspicion of academic dishonesty. The Review process can be found at <http://usc.edu/student-affaris/SJACS/> Information on intellectual property at USC is available at <http://usc.edu/academe/acsen/issues/ipr/index.html>.

**Statement for Students with Disabilities:** Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to your course instructor (or TA) as early in the semester as possible. DSP is located in STU 301 and is open from 8:30 am to 5:00 pm, Monday through Friday. Website and contact information for DSP

[http://sait.usc.edu/academicsupport/centerprograms/dsp/home\\_index.html](http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html) (213)740-0776(Phone), (213)740-6948(TDD only), (213)740-8216(FAX), [ability@usc.edu](mailto:ability@usc.edu)

**USC Technology Support Links:**

Zoom information for students (<https://itservices.usc.edu/zoom/>)

Blackboard Help for students (<https://studentblackboardhelp.usc.edu/>)

Software available to USC Campus (<https://software.usc.edu/>)

**Grading:**

I. Letter Grades Table:

96-100	A	75-79	C+
91-95	A-	70-74	C
87-90	B+	65-69	C-
84-86	B	60-65	D+
80-83	B-	56-60*	D

\* Grades less than 56: F

The final grade will be based on the above table combined with the cluster analysis of all the students' grades. Which will be explained in detail in the first class session.

According to USC policy: "No student is allowed to retake a final examination or do extra work in a course after the semester has ended for purposes of improving his/her grade." [https://arr.usc.edu/forms/ARR\\_Grade\\_%20Handbook.pdf](https://arr.usc.edu/forms/ARR_Grade_%20Handbook.pdf)

II. The final course grade will be determined based on the following weights:

Exam 1 .....	20 %
Exam 2 .....	20 %
Homework .....	15 %
Term Project .....	20 %
Special Topic Presentation .....	15 %
Participation/in-class exercises .....	10 %
Peer Evaluation .....	*

\*Peer Evaluation will be reflected in the final Term Project grade and the participation grade

**Exams:** Exams consist of true/false, multiple-choice, short answers and essay questions. If you cannot take an exam on the scheduled date and time, you must provide documents from a responsible party (doctor, court, police, etc.) and you must arrange to take the exam before the following class meeting. The final exam date/time is set USC and cannot be rescheduled.

**Assignment Submission:** Homework descriptions will be posted on blackboard and assignments are due at the beginning of the class and should be submitted online through Blackboard. Electronic submission must be in MS Office formats.

**In-class Work, Class Discussions, and Final Participation Grade:** We encourage students' participation in class discussion. The participation grade will be assigned at the end of the semester, and 50% of the final participation grade is based on the in-class exercises and case studies. The rest of the grade is based on objective (contribution

to class discussions, interaction with TA/Instructor inside and outside the classroom) and subjective (contributing meaningful questions/answers, illustrating comprehension of course material) assessment by the instructor. The participation rubric is included at the end of this syllabus.

Students will complete work assigned during class time, such as small group assignments, open-notes quizzes, and polls that count towards their in-class work grade. Case studies will be presented at the end of each topic (given the time availability) as an in-class group exercise. Each team will read a case and present it briefly. The questions associated with each case will be discussed in the class by all the students. There is no late submission for in-class exercises. Most activities are designed as group exercises; however, no credit will be given to team members who miss the exercises. Credit will be given for thoughtful completion. The lowest two scores on in-class work will be dropped.

**NOTE:**

Course materials and grades will be posted on the Blackboard page. Please make sure that you have access to the blackboard and your **USC account** is up and running.

Due to administrative processes, **this syllabus is subject to change**. It is the **student's responsibility** to verify with the instructor regarding any updates.

## Tentative Course Outline<sup>2</sup>:

Week of		Topics	Assignment Due	Book Chapter
01	Jan 10	Introduction and Logistics of the Course Human Information Processing		<i>Dix 1</i>
02	Jan 17	<b>January 17-Martin Luther King's Birthday-University Holiday</b> Computer		<i>Dix 2 &amp; 3</i>
03	Jan 24	Interaction and Interaction Design Understanding and Conceptualizing Interaction <b>January 26 - Project Proposal Presentation (3 minutes)</b>	<b>Homework 1</b>	<i>Pr1 &amp; 2 Pr11</i>
04	Jan 31	User Needs and Requirements <b>February 2 - Team 1: Personas and Ethnography</b>		<i>Dix 15 Pr4</i>
05	Feb 7	Cognition Task Analysis	<b>Homework 2</b>	<i>Pr7</i>
06	Feb 14	Emotional and Social Interaction <b>February 16 - Team 2: Social Computing</b> In-class Design Session		<i>Pr9 &amp; 10</i>
07	Feb 21	<b>January 21- President's Day-University Holiday</b> Data Gathering, Analysis, Interpretation and Presentation	<b>Homework 3</b>	
08	Feb 28	<b>March 2 - Midterm Exam</b> <b>March 4 - Midterm Project Presentation</b>		<i>Pr5 &amp; 6</i>
09	March 7	Design guideline, Prototyping and Construction <b>March 9 - Team 3: Design for all</b>	<b>Homework 4</b>	<i>Pr 12</i>
10	March 14	<b>Spring Recess - University Holiday</b>		
11	March 21	<b>March 21 - Team 4: Wearable Computing</b> <b>March 23 - Team 5: Context Aware Computing</b> In-class Design Session	<b>Homework 5</b>	<i>Pr14 &amp; 16</i>
12	March 28	Interface design evaluation Usability hueristics		<i>Ms 38</i>
13	April 4	Human-Robot Interaction <b>March 23 - Team 6: Affective Computing</b>	<b>Homework 6</b>	
14	April 11	Balancing Automation		
15	April 18	Case Study: The Application of HCI Design in Digital Health In-class Design Session		
16	April 25	<b>April 25 &amp; 27 - Final Presentation</b>	<b>Due: Presentations (4/24-11:59pm)</b> <b>Due: Peer evaluations (4/27)</b> <b>Due: Course evaluation (4/27)</b> <b>Due: Project Report (4/29)</b>	
Friday, May 6		Final Exam (2-4 pm <sup>3</sup> ) - Mandated by USC Schedule		

<sup>2</sup> Schedule may be revised to accommodate the content and pace of the class learning process. Due dates and case studies are subject to change.

<sup>3</sup> **Confirm the time and date of the exam on the USC website.**

### **Special Topic Presentation**

According to the Accreditation Board of Engineering and Technology (ABET), one of the most important qualities of a good engineer is the ability to read, research, reduce and present a topic to a specific audience. Also, according to the Journal of Engineering Education, allowing the students to read/learn outside the class and present their own findings is a better mode of learning than listening to lectures only. The quality of contents and the presentations may indeed vary from one team to another, however, we know that the depth of learning for the presenting team is significantly higher and the effects are longer lasting.

The teams will work on the topic presented in their assigned section of the textbooks and their presentation should include both the book content and also the discussion of the topic based on team research or personal experiences. The students are encouraged to explore and bring data and concepts from outside the book to complement the chapter content. The teams' performance will be evaluated on the content of the presentation, presentation style and professionalism, and the ability to engage the students in the presentation and the following Q&A. The team should prepare at least three Questions/Answers at the end of the presentation. These questions should reflect the summary of the presentation and your own analysis and criticism. The rubric for the chapter presentation is as follow:

<b>Criteria</b>	<b>%</b>	<b>Excellent</b>
Content of the presentation	70	<ul style="list-style-type: none"><li>• Covering the main topics discussed in the book chapter</li><li>• Relating the topics to course material discussed in lectures</li><li>• Supplemental external research included in the presentation</li><li>• Providing relevant and informative examples</li></ul>
Presentation style and professionalism	15	<ul style="list-style-type: none"><li>• Professional slides (Fonts, format, etc.)</li><li>• Presentation style</li><li>• Team members' participation in the presentation</li><li>• Multimedia and other creative approaches to presentation</li></ul>
The ability to engage the students	15	<ul style="list-style-type: none"><li>• Q&amp;A</li><li>• Using case studies and other creative approaches to engage the students</li></ul>

Each team has about 30 minutes for their presentations and 5 minutes for Q/A and follow up. We will do a follow-up briefing, and a summary of the topic discussed as a class after each presentation.

### **Design Project Project**

**Topic:** The purpose of this project is to learn how to design and evaluate a human-computer interface.

**Midterm and Final Presentation:** Teams will present the project status in class, with one project briefing (mid-semester) and a final presentation (see Course Schedule for dates). The midterm presentation is pass/no-pass. We will give you feedback on your presentation style and the ability to engage students which you can use for your final presentation. Also, there is a folder posted on Blackboard with information on how to design and deliver good presentations. The rubric for the final team presentation is similar to the book chapter presentation only the content should focus on your project updates and results.

**Final Term Paper:** The term paper should include all the steps that your team has taken to define and analyze the problem and design and evaluate the interface. The paper organization guideline is posted on Blackboard under the *Term Project* section.

**Peer Evaluation and Final Grade:** The final project grade is the average of the final presentation and the final term paper grades. All team members will receive equal grades, contingent on team members' confirmation of their participation, however, each member has a chance to evaluate the other members at the end of the semester. Peer Evaluation will be reflected in the final Term Project grade and the participation grade. Please note that if you fail to submit your peer evaluation on time, you will not receive any points towards your own evaluation.

Criterion		Name			
(Assign <b>0 to 5</b> for each criterion)		Team Member 1	Team Member 2	Team Member 3	Team Member 4
1	Ability to communicate effectively: listening and talking with respect				
2	Willingness to help others				
3	Creativity in performing the tasks assigned				
4	Ability to offer solutions and accept constructive criticism				
5	Spend time and work hard to finish the project				
6	Availability and flexibility				
<b>Total Points/6</b>					

## **Netiquette Rules for Class**

Netiquette is network etiquette; a set of rules that encourages appropriate and courteous online behavior.

- Above all, show respect to your peers and the instructor.
- Respect the opinions of others, regardless of how much you disagree.
- If you are writing an email or discussion post in anger, the content of your text will probably come off as disrespectful. Give yourself time to calm down and show respect.
- Reflect kindness and concern for your colleagues, you never know when someone else is having the worst day of their life.
- Allow others to save face. When possible, allow others the option of coming to the same conclusion, rather than pushing an opinion or answer on them. Instead of saying, "That's not right, it should be purple," consider saying this instead, "Would purple be a better color in this situation?"
- Address your instructor with their full title (e.g. Professor or Dr.) unless they explicitly tell you otherwise.
- Let others know how you would like to be addressed and address others as they would like to be addressed.
- Limit your use of the exclamation point.
- Avoid using all caps. IT IS COMMONLY INTERPRETED AS YELLING.
- Humor is difficult to interpret in text-based communication. Consider avoiding it in professional and academic communication.
- Check your spelling and grammar before hitting send or submit. This is an academic community and part of being professional is checking and double-checking your work.
- Use professional language and avoid using social media language and characters (i.e. don't use slang, text shortcuts, such as "u" instead of "you," emojis, emoticons).
- Use appropriate fonts.
- Use appropriate font-size: 12 font for papers (you can use 10 for tables); 11 or 12 in emails or discussion board posts.
- In emails, be brief. After greetings, but the most important point in the first sentence. Do not make the reader get halfway (or all the way) through the email before you present the reason for the email.
- In the discussion board, expand on your thoughts. Explain why you agree with them or why you think it's a great post.
- Give details to your discussion post. What was your source and what pages were you looking at?

A more comprehensive list of communication norms is posted on the course page on Blackboard.

## Participation Ruberic

Excellent Performance	Fair / Average Performance	Unacceptable Performance
<ul style="list-style-type: none"> <li>• Initiates information relative to topics discussed</li> <li>• Accurately exhibits knowledge of assignment content</li> <li>• Clarifies points that others may not understand</li> <li>• Shares personal experiences or opinions related to the topic</li> <li>• Offers relevant/succinct input to class</li> <li>• Actively participates in labs and class exercises</li> <li>• Demonstrates ability to apply, analyze, evaluate &amp; synthesize course material.</li> <li>• Demonstrates willingness to attempt to answer unpopular questions</li> <li>• Builds on other students' contributions</li> </ul>	<ul style="list-style-type: none"> <li>• Participates in group discussions when asked</li> <li>• Demonstrates knowledge of course material</li> <li>• Offers clear, concise, "good" information on class assignments</li> <li>• Offers input, but tends to reiterate the intuitive</li> <li>• Attends class regularly</li> </ul>	<ul style="list-style-type: none"> <li>• Fails to participate even when specifically asked</li> <li>• Gives no input to discussions</li> <li>• Does not demonstrate knowledge of the readings</li> <li>• Shows up to class: does nothing</li> <li>• Distracts group/class</li> <li>• Irrelevant discussion</li> </ul>

### Statement on Academic Conduct and Support Systems:

**Academic Conduct:** Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” [policy.usc.edu/scampus-part-b](http://policy.usc.edu/scampus-part-b). Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, [policy.usc.edu/scientific-misconduct](http://policy.usc.edu/scientific-misconduct).

### **Support Systems:**

*Counseling and Mental Health - (213) 740-9355 – 24/7 on call*

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. [studenthealth.usc.edu/counseling](http://studenthealth.usc.edu/counseling)

*National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call*

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. [suicidepreventionlifeline.org](http://suicidepreventionlifeline.org)

*Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL), press “0” after hours – 24/7 on call*

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. [studenthealth.usc.edu/sexual-assault](http://studenthealth.usc.edu/sexual-assault)

*Office of Equity and Diversity (OED) - (213) 740-5086 | Title IX – (213) 821-8298*

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. [equity.usc.edu](http://equity.usc.edu), [titleix.usc.edu](http://titleix.usc.edu)

*Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298*  
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity |Title IX for appropriate investigation, supportive measures, and response. [usc-advocate.symplicity.com/care\\_report](https://usc-advocate.symplicity.com/care_report)

*The Office of Disability Services and Programs - (213) 740-0776*  
Support and accommodations for students with disabilities. Services include assistance in providing readers/note takers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs. [dsp.usc.edu](https://dsp.usc.edu)

*USC Campus Support and Intervention - (213) 821-4710*  
Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student. [campussupport.usc.edu](https://campussupport.usc.edu)

*Diversity at USC - (213) 740-2101*  
Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students. [diversity.usc.edu](https://diversity.usc.edu)

*USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call*  
Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. [dps.usc.edu](https://dps.usc.edu), [emergency.usc.edu](https://emergency.usc.edu)

*USC Department of Public Safety - UPC: (213)740-6000, HSC: (323)442-120 – 24/7 on call*  
Non-emergency assistance or information. [dps.usc.edu](https://dps.usc.edu)