

# Syllabus

## INLS 718 User Interface Design (3 credits), Fall 2020

**Instructor:** Fei Yu ([feifei@unc.edu](mailto:feifei@unc.edu))

**Class Mode:** Remote-only instruction (Synchronously and asynchronously)

**Schedule:** Online class session on Thursdays 6:40 to 8:00 PM

**Office Hours:** By appointment

**Prerequisites:**

*INLS582, System Analysis; INLS382, Information Systems Analysis and Design; or permission of instructor*

**Course Description**

*INLS718* introduces fundamental design principles relevant to the design of the human interface to computer-mediated information systems. The major topics include universal design principles, user research methods, the characteristics of tasks supported by information systems, user interface design process, and methods for evaluating an interface design.

This course is designed to prepare students to participate in the design of information system interfaces. It focuses on analyzing and designing the functions that systems perform. *INLS718* also introduce students to the methods used in the evaluation of system interfaces. This course is a prerequisite for *INLS818, Seminar in Human-Computer Interaction*.

This is not a programming class although UI/UX designers usually work closely with software engineers or application developers; this is not a graphic design class either although graphic design tools or skills can facilitate the prototyping process.

**Course Objectives**

- Students develop familiarity with UI design concepts, terminologies, principles, theories, framework, and practice;
- Students can apply proper principles, theories and methods to their UI/UX research and gain hands-on experience in system design;
- Students know how to effectively evaluate UI/UX design and generate evaluation deliverables;
- Students walk through the whole system design process and develop an ability to interact with others to achieve goals;
- Students master one or two important prototyping tools and apply them to their class projects;
- Students know how to create/improve technology experience for all people, especially those underrepresented, disabled, or in adversity with a professional attitude towards their responsibilities;
- Students understand the personal and social nature of UI design including better understanding themselves, aesthetics, values and limitations of their own experience and develop a deeper understanding of people who live in social situations very different from them.

## Textbooks:

1. Lidwell, W., Holden, K., Butler, J., & Elam, K. (2010). **Universal principles of design: 125 Ways to enhance usability, influence perception, increase appeal, make better design decisions, and teach through design.** Beverly, Mass: Rockport Publishers.
2. Krug, S. (2014). **Don't make me think, revisited: A common sense approach to Web usability.** Indianapolis: New Riders
3. Sharp, H., Rogers, Y., & Preece, J. (2015). **Interaction design: Beyond human-computer interaction.** Chichester: John Wiley.

## Class Structure

Due to the COVID-19 pandemic, this class will be taught online only using a combination of synchronous and asynchronous modes.

- **Asynchronous mode:** students need to complete the following before they join the weekly online class: (1) to watch a short instruction video for the week; (2) to read assigned weekly readings including textbook chapters and research papers; (3) to complete the mini-design project if assigned and prepare for a class presentation; (4) each student shall create a personal website using *Web.UNC* and record weekly design reflection (one paragraph minimum). In addition, each student will be expected to participate in a remote field trip to the usability testing lab at the SAS institute Inc.
- **Synchronous mode:** students are expected to attend the weekly synchronous online session (about 1 hour) during which they will participate in class activities including a quiz (the whole class together and ungraded), UI design critique, design project presentation, reading discussion/student-led reading discussion, or a guest speaker's lecture if it is offered that week.

## Recommended Prototyping Software

Each student needs to use **at least three** different prototyping software for their class activities, assignments, and final project. The recommended tools include but are not limited to: Adobe XD, Axure, Sketch, Invision, and PowerPoint. It is the student's responsibility to manage access to the software through trials or purchase.

## Course Requirement

| Requirement                                    | % of Total Grade |
|--|------------------|
| Attendance (weekly online meeting)             | 10%              |
| Class participation                            |                  |
| • Weekly quiz                                  | 5%               |
| • Class discussion                             | 5%               |
| • Three mini-design projects                   | 15%              |
| • Before class activities                      | 5%               |
| Assignments                                    | 30%              |
| Class project final deliverable & presentation | 20%              |

## Grading

| Undergraduate Student |             | Graduate Student |             |
|-----------------------|-------------|------------------|-------------|
| Grade                 | Range       | Grade            | Range       |
| A                     | 90-100      | H                | 95-100      |
| B                     | 80-89       | P                | 80-94       |
| C                     | 70-79       | L                | 70-79       |
| D                     | 60-69       | F                | 69 or below |
| F                     | 59 or below |                  |             |

## Schedule

You should regularly check the Sakai site for the course schedule and assigned readings for each week. Please note course schedule may change. The Sakai version will always reflect the up-to-date syllabus.

| Class | Date     | Topic                                      | Reading   | Assignment   |
|-------|----------|--|---|--|
| 1     | Aug. 13  | Introduction and overview                  | <b>Sharp</b> (Ch1.3 What is Interaction Design? 1.4 The User Experience; 1.6.3 Design Principles; 2.5 Interaction Types)<br><b>Lidwell</b> (p.14, 22, 54, 56, 60, 82, 104, 250)   |  |
| 2     | Aug. 20  | Design process and models                  | <b>Sharp</b> (Ch1.5 The Process of Interaction Design; 9 The Process of Interaction Design; 12.2 AgileUX)<br><b>Lidwell</b> (p.66, 68, 72, 74, 102, 142, 150, 160, 168, 210)  | H1 Release   |
| 3     | Aug. 27  | User study intro                           | <b>Sharp</b> (Ch3.2 What is Cognition? 3.3.3 Information Processing)<br><b>Lidwell</b> (p.26, 32, 34, 62, 104, 128, 136, 138, 200, 242)<br><b>Krug</b> (Ch1)  | 1 <sup>st</sup> mini-design announcement               |
| 4     | Sept. 3  | User research methods                      | <b>Sharp</b> (Ch7 Data Gathering, 10.4 Data Gathering for Requirements)<br><b>Lidwell</b> (p. 42, 46, 70, 88, 94, 132, 226, 228, 240)<br><b>Krug</b> (Ch2)  | H1 due   |
| 5     | Sept. 10 | Data analysis & Persona<br>* Guest speaker | <b>Sharp</b> (Ch8 Data analysis, Interpretation, & Presentation, 10.3 What are requirements, 10.5 Data analysis, Interpretation, & Presentation)<br><b>Lidwell</b> (p. 36, 38, 44, 90, 104, 106, 112, 166, 182, 186, 198) | H2 Release<br>2 <sup>nd</sup> mini-design announcement |

|    |          |   |  |  |
|----|----------|---|--|--|
| 6  | Sept. 17 | Conceptual model                          | <b>Sharp</b> (Ch3.3 Cognitive Framework; 11.3 Conceptual Design)<br><b>Lidwell</b> (p. 22, 84, 108, 116, 126, 152, 154)  | 1 <sup>st</sup> mini-design due                    |
| 7  | Sept. 24 | User tasks                                | <b>Sharp</b> (Ch10.6 Task Description; 10.7 Task Analysis; Ch8.6.3 Activity Theory)<br><b>Lidwell</b> (p. 50, 52, 120, 166, 172, 174, 246)   | H2 due   |
| 8  | Oct. 1   | Information architecture                  | <b>Lidwell</b> (p. 18, 40, 86, 100, 108, 122, 140, 146, 188, 190, 216, 260)<br><b>Krug</b> (Ch4, 6); <a href="#">Web Style Guides: Ch. 4</a>   | H3 Release   |
| 9  | Oct. 8   | Aesthetics                                | <b>Lidwell</b> (p. 20, 44, 48, 96, 114, 116, 124, 176, 194, 202, 226)<br><b>Krug</b> (Ch5, 7)<br><a href="https://www.nngroup.com/books/emotional-design/">https://www.nngroup.com/books/emotional-design/</a> | 2 <sup>nd</sup> mini-design due                    |
| 10 | Oct. 15  | Prototyping and tools                     | <b>Sharp</b> (Ch11.2 Prototyping)<br><b>Lidwell</b> (p. 92, 110, 162, 170, 180, 194, 244)<br><b>Krug</b> (Ch3)   | H3 due<br>3 <sup>rd</sup> mini-design announcement |
| 11 | Oct. 22  | Usability & evaluation methods            | <b>Sharp</b> (Ch13 Introducing evaluation)<br><b>Lidwell</b> (p. 60, 98, 204, 214, 220, 222, 236, 262)<br><b>Krug</b> (Ch 8-9)   | H4 Release   |
| 12 | Oct. 29  | Usability evaluation @ SAS Institute Inc. | <b>Sharp</b> (Ch14 Evaluation Studies)<br><b>Krug</b> (Ch10-11)  | H5 Release   |
| 13 | Nov. 5   | UI evaluation deliverables                | <b>Sharp</b> (Ch15 Evaluation: Inspections, Analytics, and Models);<br><b>Lidwell</b> (p. 16, 76, 130, 152, 156, 184, 206, 208, 238, 248)<br><b>Krug</b> (Ch13)  | H4 due<br>3 <sup>rd</sup> mini-design due          |
| 14 | Nov. 12  | Class project presentation                | <b>Krug</b> (Ch12)   | H5 due   |
| 15 | Nov. 19  | No meeting                                |  | Class Project report due                           |

## Absence

This is a once-a-week class and a lot of materials are packed into each session. If you miss a session, you will miss a lot. If you have more than 2 online absences (or any unexcused absences), your attendance and participation grade will decrease by 25% for every subsequent absence.

## Writing Skills and Citation Information

Strong written communication skills are critical in both academia and the workplace. Your responses to assignments must be well-organized, clear, concise, free from grammatical errors, original, and corrected cited. Students who have questions about their writing, or who want to improve their writing are encouraged to contact the Writing Center (<http://writingcenter.unc.edu/>) which has many excellent resources to help you with your writing.

I do not require a single specific style of citation, although you are welcome to use an established citation style like Chicago or APA. My **main priority** is that I can access the same resources that you used based on the citation you provided. This means providing the unique identifiers of your source, which include:

- Author (this can be an individual or an organization such as Kaiser Family Foundation).
- Year of publication.
- Title of publication.
- If you accessed the resource online:
  - Date of access (the date that you viewed the website).
  - A link to the resource.
- If you are referencing a journal article, in addition to the online citation, please also include the journal name, volume, pages, etc.

Put your full references at the end of your document, and some short unique identifier (either author, year or a number) after the part of your writing that is being cited. For example, if I were citing the Kaiser Overview of Health Reform, in the text I would write:

*Most U.S. citizens are now required to have some form of health insurance coverage (Kaiser Family Foundation, 2010)*

Or I could also write:

*Most U.S. citizens are now required to have some form of health insurance coverage (1).*

Then, at the end of my answer, I would put (with any other references that I had used):

1. Kaiser Family Foundation. (2010). *Overview of Health Reform*. Retrieved May 13, 2013 from <http://www.kff.org/healthreform/8061.cfm>

Don't worry too much about the details of the citation format beyond what I mentioned here. The priority is just to get you in the habit of citing your sources. Many fields and departments have a specific citation format that they prefer, and you can use this to practice, or plan to learn it later when it becomes necessary.

## **Due Dates and Late Work**

The homework assignments are normally due on Thursdays before 6:40 PM. A late penalty of 10% per day will be applied unless prior arrangements have been made with the instructor. Students are highly encouraged to submit their homework even if it is late.

## **Sakai**

We will use Sakai for Course Materials and Homework Assignments, and the Class Project Deliverable. It is the responsibility of each student to make sure they have access to Sakai and can submit assignments when they are due. If for some reason you are unable to submit an assignment to Sakai, you may email it to me along with a note about the problem you encountered.

## **Honor Code**

Faculty and students at the University of North Carolina at Chapel Hill adhere to their Code of Student Conduct. Accordingly, you all should recognize that most software applications available in the computer lab are copyrighted and cannot be copied. We can learn much from each other and we will do that. I expect each of you to help each other. We'll discuss what we expect in terms of cooperative, collaborative, shared work and the honor code.

The code of student conduct

It shall be the responsibility of every student at The University of North Carolina at Chapel Hill to obey and support the enforcement of the Honor Code, which prohibits lying, cheating, or stealing when these actions involve academic processes or University, student or academic personnel acting in an official capacity.

It shall be the further responsibility of every student to abide by the Campus Code; namely, to conduct oneself so as not to impair significantly the welfare or the educational opportunities of others in the University community.