

**INSC 588: Human-Computer Interaction**  
**Class Meetings: Mondays and Wednesdays, 6:30-7:45 PM EST**  
**Zoom: <https://tennessee.zoom.us/j/8365393894>**

**Course Syllabus and Schedule**  
**Spring 2023**

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**Dania Bilal, Professor**

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Knoxville, TN 37996-0341

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**CATALOG DESCRIPTION**

This course is an introduction to the field of human-computer interaction with a focus on the design and evaluation of interfaces to information systems. Students will be introduced to the topics of interaction design, describing user competencies, defining user requirements, user interface design, and evaluating interaction success. In addition, they will gain hands-on experience with user interviewing, user interface design specifications, and test construction.

**ADDITIONAL COURSE DESCRIPTION**

HCI is rooted in human psychology. A good understanding of user interaction and experience with products or systems requires knowledge of relevant theories and scientific underpinnings. This course covers key theories of human perception and cognition, people's mental models, their applications to understanding users' interaction behaviors, and implications for user-centered design.

**LEARNING OUTCOMES**

Students' course learning outcomes and the SIS program learning outcomes are mapped below. Note that some course learning outcomes may apply slightly or totally to the SIS learning outcomes.

| <b>Course learning outcome</b>  | <b>SIS program learning outcome</b> |
|---|-------------------------------------|
| HCI and UX key concepts.  |                                     |
| UX Lifecycle or Methodology (The Wheel) for product/system development including agile development. |                                     |

|   |   |
|---|---|
| Key theories in human perception and cognition and their applications for understanding users' interaction behaviors and needs.                             | #7. Explain the changing nature of information, information needs, and information behavior.  |
| Learn how to map conceptual design (based on the designer's perspectives) to user mental models of products/systems.  |   |
| Gain knowledge of contextual inquiry (C&I) method for gathering and analyzing users' needs and design requirements for developing products/systems.         | #8. Assess and implement information technologies, systems, sources, and services that serve users effectively and efficiently.                         |
| Become familiar with universal design, inclusive design, and accessibility guidelines for creating and evaluating products/systems for diverse populations. | #8. Assess and implement information technologies, systems, sources, and services that serve users effectively and efficiently.                         |
| Become familiar with cultural dimensions framework for designing UX solutions for diverse populations and cultures.   | #3. Apply the general principles, values, and ethical standards of providing information services in a variety of settings and for diverse populations. |
| Apply appropriate UX research methods to evaluate the usability of products/systems.  | #9. Analyze research and apply it to information practice.  |

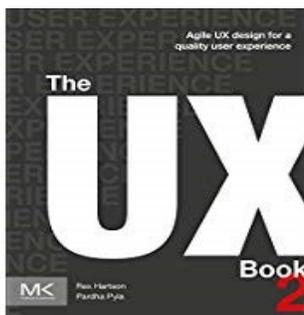
***Please read the note below:***

*Occasionally, students who enroll in this course may have basic or considerable knowledge of and experience in different aspects of HCI/UX. While everyone will gain knowledge from your practical experience in this area, be mindful that this is an introductory course that covers the fundamentals of HCI/UX, including but not limited to, methods, rules, principles, and their applications, which may not be in line with what is being practiced in your workplace. The application of HCI/UX differs by context, the mission of the organization, and its philosophy of HCI/UX, especially in relation to conducting usability testing, budget, and personnel, among other aspects. If you have concerns about this, let me know. All students are highly encouraged to participate and engage in class discussions.*

**REQUIRED TEXTBOOK**

Rex Hartson and Pardha Pyla. (2018). *The UX Book: Agile UX Design for a Quality User Experience* 2nd. Edition. Morgan Kaufman. eBook ISBN: 9780128010624; Paperback ISBN: 9780128053423.

The textbook is comprehensive but **DON'T PANIC**. I will cover key topics relevant to HCI and UX and employ a commonsense, meaningful approach to introduce the topics. Please note that not all book chapters will be covered in this course.



**OTHER REQUIRED READINGS (specific chapters)**

Johnson, J. (2014). *Designing with the Mind in Mind: Simple Guide to Understanding User Interface Design Guidelines*. 2<sup>nd</sup> ed. Amsterdam: Elsevier. For detail, visit: Please visit <https://www.elsevier.com/books/designing-with-the-mind-in-mind/johnson/978-0-12-407914-4>

Norman, Don. (2013). *The Design of Everyday Things: Revised and Expanded*. New York: Basic Books. <https://www.amazon.com/Design-Everyday-Things-Revised-Expanded/dp/0465050654>

Krug, Steve. (2014). *Don't Make Me Think, Revisited: A Common Sense Approach to Web and Mobile Usability*. New Riders.

### **Additional Readings**

Additional readings are linked to the course schedule. New readings may be assigned throughout the semester.

### **Selected Websites**

<http://www.nngroup.com> Nielsen Norman Group (NNg)

<https://www.uxmatters.com/>

<https://www.interaction-design.org>

<https://www.usabilityfirst.com/>

<http://www.usability.gov>

<https://www.w3.org/> accessibility guidelines for people with disabilities

<https://uxpa.org/> UX Professional Association

<https://www.hfes.org/> Human Factors and Ergonomics Society

### **COVID-19 STATEMENT**

The UT classroom policies pertaining to absences due to COVID-19, making up missed work, and resources about COVID-19 are at <https://teaching.utk.edu/wp-content/uploads/sites/78/2020/11/COVID-19-Syllabus.pdf>. Let me know if you have any questions about the policies.

### **COURSE DESIGN**

Class time will be divided between lectures, discussions, and hands-on activities. **You may be asked to watch videos on certain topics outside of the classroom and discuss them in class.**

*Topic sequencing and processes.* Some topics will not be covered in the same sequence as shown in the Textbook. In addition, there may be a disagreement in the processes with those described in the Textbook.

The composition of class meetings will differ somewhat throughout the semester depending on scheduled topics and the number of discussions involved.

Reading the assigned materials before each class session is highly recommended for the successful completion of assignments and constructive participation in class discussions.

#### ***Time to devote to projects and assignments outside of the classroom***

HCI puts people at the center, meaning that designing user-centered products or systems will require recruiting users to participate in data collection through observations and interviews, among other methods. You will be involved in collecting data and analyzing it, which is time-consuming and may be frustrating. You are expected to complete the assignments/projects by collaborating with classmates in small groups. Working independently on the assignments/projects to collect data from users in real-world settings. This task can be demanding and time-consuming. Therefore, you should devote a chunk of time (from 2 to 6 hours a week) to work on these projects outside of the classroom.

If you cannot devote time outside of the classroom to the projects and assignments to conduct user research or collaborate on group projects, contact me to learn about your options.

### **COMMUNICATION**

I will communicate with you through your UTK email address. If you prefer to use another address, consult the [OIT Helpdesk](#) to obtain directions for forwarding your UTK mail to your preferred address if you don't wish to check both accounts.

## COMPUTING REQUIREMENTS

The [Office of Information Technology \(OIT\)](#) provides training classes in using various technologies for students at no charge (advance registration is required). The following are the major requirements.

- Adequate level of computing skills, including but not limited to, use of Microsoft Office suite or equivalent, web searching including search engines, online databases, and online catalogs;
- Subscription to the SIS student listserv
- Knowledge of using Zoom and Canvas.
- UTK email account.
- Access to a PowerPoint Reader, PowerPoint, Prezi, or equivalent to download lecture notes.
- Computer, microphone, and a headphone for attending classes in Zoom. Preferred is a hard-wired computer, especially if your wireless network has a weak signal. The use of a headphone may be needed to receive a high audio quality.
- Attending classes using a mobile device may compromise the quality of the audio and video. The instructor is not responsible for this problem.
- *Testing before class:* Please test your computer audio by running the Zoom Audio before attending each class meeting. This will sync the computer audio in Zoom and ensure quality audio on both sides during class.

**Disclaimer:** Attending classes using a mobile device while driving is not recommended. The instructor is not liable for any issues or problems that may arise in this case.

## CLASS ATTENDANCE POLICY (see also COVID-19 UT policies)

Class attendance is required by UT and SIS. Missing classes or failing to participate in the class will lower your grade; frequent constructive participation will raise the grade. If you will be absent from class:

- Let me know in advance or as soon as you can;
- Submit any work due from the missed class period,
- Listen to missed class session recordings, and
- Obtain notes, handouts, etc. from Canvas and/or classmates.

*Acceptable reasons for absence from the class include:*

- Illness, serious family emergencies, special curricular or job requirements (e.g., conferences), severe weather conditions, religious holidays, participation in official university activities such as music performances, athletic competition, or debate; or imposed legal obligations (i.e., jury duty, a subpoena).

Missing more than one class meeting for reasons other than those listed above will have a negative impact on your course participation grade; a **reduced credit of 2 points** will be deducted from the total grade for each absence.

## COURSE POLICY

The course is delivered live via Zoom synchronously. Canvas is used for posting supporting course materials, engaging in discussions, and taking quizzes or exams.

**I prefer that you speak rather than text to maintain a more active, lively, and engaging class environment.**

Be mindful to:

- test your Zoom audio before each class;
- **mute your audio during class** and turn it on when you speak;
- stay close to the microphone when you speak so that we are all able to hear you clearly;
- ensure you are in a room away from noise and distractions;
- use headphones if your audio is unclear; and
- keep your pets in a separate room during class.

## E-MAIL NOTIFICATION

I will use email as the main means of communication with you. You are responsible for checking your email and class announcements on Canvas regularly. When you email me, please include **INSC588 in the subject line** of the email to identify your message quickly.

## COLLABORATIVE TEAMWORK

For teamwork, you are encouraged to use Google Docs or equivalent applications.

## EXPECTATIONS

- HCI is about designing and testing interfaces by involving users throughout the UX cycle, making product/system design enjoyable and satisfactory to the user, and design interfaces that are intuitive, have affordances, and meet user goals. Therefore, you will be spending time collecting data from clients/users in real-world settings outside of the classroom. Due to COVID-19 circumstances, you could collect the data (conduct observations and interviews) using Zoom or equivalent applications.
- Log into Zoom a few minutes before each class session. Note that if you are logged into Zoom but not present, you will be considered absent.
- Complete discussion activities in the Canvas Discussion forum in a timely manner.
- Submit assignments, projects, and other activities on time.
- Complete assigned readings before each class session.

## SUBMISSION OF PROJECTS/ASSIGNMENTS

Class activities must be submitted in Canvas by 11:59 p.m. EST on the due date as indicated in the Course Schedule. Before submitting an activity, name and save the file or document as follows:

### **Bilal-Carver-Underwook-588-Proj-1.1**

- Use only **Microsoft Word** or equivalent to format all assignments/projects.
- Paginate each assignment.
- Include a cover page with your name or names of team members, as applicable, project number, course number, instructor's name, semester, and date.

## TROUBLINGSHOOTING

If you experience Zoom or Canvas connectivity problems, please contact OIT at 865. 974. 9900 or complete a help form online. Note that the OIT office is **not** open 24/7; therefore, plan to connect to ZOOM at least 30 minutes before class time.

## CLASS ENGAGEMENT AND INTERACTION RULES

You are highly encouraged to participate in class by sharing constructive ideas, experiences, and discussions.

## INCLEMENT WEATHER

*“The chancellor (or appointed representative) may officially close or suspend selected activities of the university because of extreme weather conditions. When a decision to close is made, information is distributed to the campus community, shared with local media, and posted on the front page at <http://utk.edu>. SIS will cancel classes when UT is closed. Please check the **SIS student listserv** ([UTKSIS-L@LISTSERV.UTK.EDU](mailto:UTKSIS-L@LISTSERV.UTK.EDU)), UT website, and/or UT Facebook page for messages about closing.*

## DISABILITIES THAT CONSTRAIN LEARNING

Any student who feels he or she may need accommodation based on the impact of a disability should contact the Office of Disability Services (ODS) at **865.974.6087** in 100 Dunford Hall to document their eligibility for services. ODS will work with students and faculty to coordinate reasonable accommodations for students with documented disabilities.

## COPING WITH STRESS AND PERSONAL HARDSHIP

The university's Student Counseling Center offers a range of services to students that meet the requirements at no charge. Visit the Center's website to learn about the services offered (<https://counselingcenter.utk.edu/clinical-services/counseling-services/>). You may also contact the Center by phone at **865.974.2196** or send an email to

(counselingcenter@utk.edu).

## **CIVILITY**

Civility is genuine respect and regard for others: politeness, consideration, tact, good manners, graciousness, cordiality, affability, amiability, and courteousness. Civility enhances academic freedom and integrity and is a prerequisite to the free exchange of ideas and knowledge in the learning community. Our community consists of students, faculty, staff, alumni, and campus visitors. Community members affect each other's well-being and have a shared interest in creating and sustaining an environment where all community members and their points of view are valued and respected. Affirming the value of each member of the university community, the campus asks that all its members adhere to the principles of civility and community adopted by the campus: <http://civility.utk.edu/>

## **DIVERSITY STATEMENT – SHORT VERSION**

“CCI recognizes and values diversity. Exposing students to diverse people, ideas, and cultures increases opportunities for intellectual inquiry encourages critical thinking, and enhances communication and information competence. When all viewpoints are heard, thoughtfully considered, and respectfully responded to, everyone benefits. Diversity and fairness unite us with the wider professional and global community.”

<http://www.cci.utk.edu/diversity>

## **ACADEMIC INTEGRITY**

Students should be familiar and maintain their *Academic Integrity* described in Hilltopics Student Handbook (<https://hilltopics.utk.edu/student-code-of-conduct/>) as: “*Study, preparation and presentation should involve at all times the student’s own work unless it has been clearly specified that work is to be a team effort. Academic honesty requires that the student present his or her own work in all academic projects, including tests, papers, homework, and class presentation. When incorporating the work of other scholars and writers into a project, the student must accurately cite the source of that work.*”

Students should abide by the ***Honor Statement*** described below:

*“An essential feature of The University of Tennessee is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the University, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity.”*

<https://hilltopics.utk.edu/student-code-of-conduct/>

## **PLAGIARISM**

Plagiarism in any of its several forms is intolerable, and attention to matters of documentation in all written work is expected and required. Inadvertence, alleged lack of understanding, or avowed ignorance of the various types of plagiarism are not acceptable excuses. At some point, I will run your work in **iThenticate** software and/or check specific online sources to identify plagiarism.

***Specific examples of plagiarism are:***

1. Copying without proper documentation (quotation marks and a citation) written or spoken words, phrases, or sentences from any source. For example, if you copy and paste a definition from a source without citing the source, it will be considered plagiarism;
2. Summarizing without proper documentation (usually a citation) ideas from another source (unless such information is recognized as common knowledge);
3. Borrowing facts, statistics, graphs, pictorial representations, or phrases without acknowledging the source (unless such information is recognized as common knowledge);
4. Collaborating on a graded assignment without the instructor’s approval;
5. Submitting work, either in whole or in part, created by a professional service and used without attribution (e.g., paper, speech, bibliography, or photograph).

**Copying text often is not acceptable even if the proper documentation is provided.** If you are unsure of the nature of plagiarism should consult the instructor or a guide for writing research reports. Additional resources are available at <https://libguides.utk.edu/scholarlypublishing/plagiarism>

**6. Use of ChatGPT for generating/writing research papers, essays, or any other materials is considered plagiarism. [Added by the instructor]**

Students who may be unsure of the nature of plagiarism should consult the instructor or use this LibGuide on Authorship, Research Misconduct, and Plagiarism available online at UT Hodges Library, <https://libguides.utk.edu/scholarlypublishing/plagiarism>

Infractions of academic integrity are penalized according to the severity of the infraction but **may include a course grade of "F"**.

Infractions of academic integrity are penalized according to the severity of the infraction but **may include a course grade of "F" and/or suspension from SIS and UTK.**

### **ASSIGNMENTS AND GRADING**

Your work will be assigned a grade using the point system. *Only exceptional work will receive an "A" grade.* See the point system under Grading Scale.

Your final grade will be based on total points earned over the course of the semester, in addition to points earned for constructive class participation, engagement, and attendance.

### **GRADES TURNAROUND TIME**

I will return graded projects and activities within one week to two weeks, pending unforeseen circumstances.

You have **one week** from the time you receive a grade to ask for a review. You should do so in writing via email. I will reply to your request within one week.

### **DUE DATES AND PAST DUE SUBMISSIONS**

Assignments are to be submitted in Canvas by 11:59 p.m. EST on the due date shown in the Course Schedule. A reduced credit of **2 points** will be incurred for any past due activity, unless I am notified in advance and given an acceptable reason.

### **INCOMPLETES**

Based on adopted University of Tennessee-Knoxville and SIS policy, a grade of an "I" (Incomplete) is reserved for emergencies that prevent the student from completing the course on time. Incompletes are granted only under "the most unusual of circumstances" and solely at the discretion of the instructor. Plan your semester's course of study carefully to ensure sufficient time to complete the required work.

If you do not attend classes and do not contact me about your absence, you will receive an "F" in the course.

### **EVALUATION CRITERIA**

Generally, the evaluation of projects and other course activities will be based on these factors:

*Operational:* Meeting the requirements/guidelines and submission on time.

*Qualitative:* Quality of writing, organization, demonstration of critical thinking, and evidence of reading and understanding, and reflective thinking, consistency in formatting documents and citing sources according to a style manual, and proper documentation of text or other materials used.

*Quantitative:* Analysis and synthesis, completeness, and accuracy, among others.

### **GRADE SCALE**

Semester grades will be assigned according to the following scale:

|    |          |  |
|----|----------|--|
| A  | 93≤      | (4 quality points per semester hour) superior performance.                     |
| A- | 90-92.99 | (3.7 quality points per semester credit hour) distinguished grade performance. |
| B+ | 88-89.99 | (3.5 quality points per semester hour) better than satisfactory performance.   |
| B  | 83-87.99 | (3 quality points per semester hour) satisfactory performance.                 |
| B- | 80-82.99 | (2.7 quality points per semester credit hour) intermediate grade performance.  |

|    |          |   |
|----|----------|---|
| C+ | 78-79.99 | (2.5 quality points per semester hour) less than satisfactory performance.  |
| C  | 70-77.99 | (2 quality points per semester hour) performance well below the standard expected of graduate students.   |
| D  | 60-69.99 | (1 quality point per semester hour) clearly unsatisfactory performance and cannot be used to satisfy degree requirements.   |
| F  | 59.99≥   | (no quality points) extremely unsatisfactory performance and cannot be used to satisfy degree requirements.   |
| I  |          | (no quality points) a temporary grade indicating that the student has performed satisfactorily in the course but, due to unforeseen circumstances, has been unable to finish all requirements. An “I” is not given to enable a student to do additional work to raise a deficient grade. The instructor, in consultation with the student, decides the terms for the removal of the “I”, including the time limit for removal. If the grade “ I” is not removed within one calendar year, the grade will be changed to an F. The course will not be counted in the cumulative grade point average until a final grade is assigned. No student may graduate with an “I” on the record. |

## CLASS ACTIVITIES AND GRADING

| <b>ORIGINAL VERSION</b><br>(see revised versions of required and optional activities)                | <b>Total Points</b> |
|--|---------------------|
| <b>ASSIGNMENT 1: Evaluating a selected product, system, or service (Independent Work – Required)</b> | <b>10</b>           |
| <b>PROJECT 1- PARTS 1.1 AND 1.2 (GROUP Work - required)</b>  |                     |
| <b>Part 1.1: Topic idea &amp; selection</b>  |                     |
| a. Product concept statement (5 points)  |                     |
| b. Descriptive summary (5 points)  | <b>10</b>           |
| <b>Part 1.2: Contextual inquiry</b>  |                     |
| a. Planning; recruiting users, and collecting usage data (15)  |                     |
| b. Analysis of usage data and design requirements (15 points)  | <b>30</b>           |
| <b>Quiz</b>  | <b>15</b>           |
| <b>Choose one of project 3 below to work on independently or in a group</b>                          |                     |
| <b>PROJECT 3: Prototyping design</b>   | <b>25</b>           |
| <b>PROJECT 3: Usability evaluation</b>   | <b>25</b>           |
| <b>Constructive class participation and engagement; class attendance</b>                             | <b>5</b>            |
| <b>Presentation of PROJECT 3</b>   | <b>5</b>            |

## COURSE EVALUATION

You will receive an email from TNVoice toward the end of the term to evaluate the course. Please participate in this valuable process. I may also ask you to evaluate the wellness of the course informally at different points in the semester.

Formative evaluation. I would appreciate your honest comments and suggestions about the well-being of the course throughout the semester so I can make the adjustments needed in a timely manner, as appropriate.

## CITING SOURCES

I prefer the APA style, but you may use your preferred standard style manual for citing sources.

## TEAMWORK

Collaboration or teamwork can reduce or increase time in completing the work depending on team members’ commitment, background knowledge, and experience in HCI/UX. Therefore, each team should develop a work plan, meeting schedule, and an effective communication process.

### *Factors for Successful Team Collaboration*

- Open, quick, and honest communication,
- Authenticity,
- Compromise,
- Tolerance,
- Trust,
- Good rapport,
- Effective time management,
- Equal distribution of efforts and contribution,
- Reliability, and
- Being a good team player.

The team qualities were extracted from <https://www.risebeyond.org/6-skills-needed-for-effective-collaboration/>

**INSC 588**  
**Course Schedule**  
*(Subject to change\*)*  
**Spring 2023**

**Dr. Dania Bilal**

| Session  | Date    | Topic  | Readings  | DUE<br>(besides discussion of readings, etc.)          |
|--|---------|--|---|--|
| 1  | Jan 25  | Introductions and syllabus   | None  | None   |
| 2  | Jan 27  | Syllabus; key HCI/UX concepts  | UX (chap. 1)  | Discussion of experiences with products/systems        |
| <b>MODULE 1. Concepts; UX Lifecycle/WHEEL PHASE 1. UNDERSTANDING USER WORK AND NEEDS</b> |         |  |   |  |
| 3  | Feb 1   | <ul style="list-style-type: none"> <li>Key concepts (cont'd.)</li> <li>Introduction of The Wheel (UX Methodology or Lifecycle)</li> </ul>        | UX (chaps. 1-2)   |  |
| 4  | Feb 6   | <ul style="list-style-type: none"> <li>Prelude to the Wheel process</li> <li>How a project starts?</li> <li>Project concept statement</li> </ul> | UX (chap. 5)  |  |
| 5  | Feb 8   | <ul style="list-style-type: none"> <li>The Wheel: Eliciting user needs and requirements</li> <li>Contextual Inquiry (C&amp;I)</li> </ul>         | UX (chap. 7)  | <b>Groups identification formed</b>                    |
| 6  | Feb 13  | <ul style="list-style-type: none"> <li>C&amp;I</li> <li>Analysis of usage data</li> <li>WAAD</li> </ul>  | UX (chap. 7)<br>UX (chap. 8)  |  |
| 7  | Feb 15  | Analysis of usage data from C&I (WAAD)   | UX (chap. 8)<br><a href="http://jamboard.google.com">http://jamboard.google.com</a> |  |
| 8  | Feb 20  | Analysis of usage data from C&I (WAAD)   | UX (chap. 8)  |  |
| 9  | Feb 22  | <ul style="list-style-type: none"> <li>Usage data modeling</li> <li>Extracting design requirements</li> </ul>                                    | UX (chaps. 9-10)  | <b>P1.1. a-b Product concept statement and summary</b> |
| 10   | Feb 27  | Requirements and modeling  | UX (chaps. 9-10)  |  |
| 11   | March 1 | Requirements and modeling  | UX (chaps. 9-10)  |  |
| 12   | March 6 | <ul style="list-style-type: none"> <li>Artificial Intelligence</li> <li>Human-AI interaction</li> </ul>  | TBA   |  |
| <b>MODULE 2. KEY THEORIES AND PRINCIPLES TO GUIDE DESIGN</b>                             |         |  |   |  |

|   |          |   |  |                      |
|---|----------|---|--|----------------------|
| 13  | March 8  | <ul style="list-style-type: none"> <li>• Pirolli's Information Foraging Theory &amp; Information Scent</li> <li>• Human-centered design Norman's System Image Model</li> <li>• Mental models and conceptual design</li> <li>• Norman's Action Cycle/Stages-of Action Model</li> </ul> | <a href="https://www.nngroup.com/articles/information-foraging/">https://www.nngroup.com/articles/information-foraging/</a><br><br>DN (chap. 1)<br>UX (chap. 15)<br><br>DN (chaps. 2-3)<br>UX (chap. 15)   |                      |
| <b>03/13 to 03/17<br/>Spring Break</b>                                      |          |   |  |                      |
| 14  | March 20 | <ul style="list-style-type: none"> <li>• Type of Affordances</li> <li>• Affordances and cultural conventions</li> <li>• Norman's Human Information Processing Model: Cognition and emotion</li> </ul>   | UX (chap. 30)<br>DN (chap. 2)  |                      |
| 15  | March 22 | <ul style="list-style-type: none"> <li>• Perception</li> <li>• Gestalt Principles</li> <li>• Human attention, memory, recognition, and recall</li> </ul>  | JJ (chaps. 1-2; 8-10)  | <b>Project 1.2 a</b> |
| 16  | March 27 | Review of previous topics   | Previous readings  |                      |
| <b>MODULE 3. CONCEPTUAL DESIGN. THE WHEEL PHASE 2. DESIGN SOLUTIONS</b>     |          |   |  |                      |
| 17  | March 29 | Design solutions: design thinking, ideation, sketching  | UX (chap. 14)<br>DN (chap. 6)  |                      |
| 18  | April 3  | Design solutions: design thinking, ideation, sketching  | UX (chap. 14)<br>DN (chap. 6)  | <b>Assignment 1</b>  |
| 19  | April 5  | <ul style="list-style-type: none"> <li>• Personas, profiles, scenarios</li> <li>• Task analysis</li> <li>• Designing the interaction</li> <li>• Designing for emotional impact</li> </ul>   | UX (chap. 9)<br>(UX chaps. 17-18)<br><a href="https://www.interaction-design.org/literature/article/personas-why-and-how-you-should-use-them">https://www.interaction-design.org/literature/article/personas-why-and-how-you-should-use-them</a> |                      |
| <b>MODULE 4. DESIGN PROTOTYPES. THE WHEEL PHASE 3. PROTOTYPE CANDIDATES</b> |          |   |  |                      |
| -   | April 10 | <b>Placeholder for invited speaker</b>  |  |                      |

|   |          |   |  |                                    |
|---|----------|---|--|------------------------------------|
| 20  | April 12 | <ul style="list-style-type: none"> <li>Design prototyping</li> <li>Tools for prototyping</li> </ul>   | UX (chap. 20; review chap. 17)<br>Top 22 prototyping tools ( <a href="https://blog.prototypr.io/top-20-prototyping-tools-for-ui-and-ux-designers-2017-46d59be0b3a9">https://blog.prototypr.io/top-20-prototyping-tools-for-ui-and-ux-designers-2017-46d59be0b3a9</a> )   | <b>Take home quiz</b>              |
| 21  | April 17 | Agile vs. traditional product development methods   | UX (chap. 4)   |                                    |
| <b>MODULE 5. EVALUATION. THE WHEEL PHASE 4. EVALUATE UX</b> |          |   |  |                                    |
| -   |          |   |  |                                    |
| 22  | April 19 | System evaluation/usability methods   | UX (chap. 21)  |                                    |
| 23  | April 24 | System evaluation/usability methods   | UX (chaps. 23-24)  | <b>Project 1.2 b</b>               |
| 24  | April 26 | <ul style="list-style-type: none"> <li>System evaluation/usability methods</li> <li>Usability tools</li> </ul>  | UX (chaps. 23-24)  |                                    |
| 25  | May 1    | <ul style="list-style-type: none"> <li>Usability tools</li> <li>Usability measures &amp; metrics</li> </ul>   | UX (chap. 22)<br>UX (chap. 25)   |                                    |
| 26  | May 3    | <b>KEY THEORIES &amp; PRINCIPLES</b> <ul style="list-style-type: none"> <li>Universal interaction design principles</li> <li>Accessibility guidelines (W3C) Internationalization, culture, diversity in UX</li> <li>Hofstede Cultural Dimensions</li> </ul> | <b>KEY THEORIES &amp; PRINCIPLES</b><br><a href="https://www.interaction-design.org/literature/article/the-seven-principles-of-universal-design">https://www.interaction-design.org/literature/article/the-seven-principles-of-universal-design</a><br>Krug (chap.12)<br><br><a href="https://www.w3.org/WAI/fundamentals/accessibility-principles/">https://www.w3.org/WAI/fundamentals/accessibility-principles/</a><br><br><a href="https://uxdesign.cc/how-culture-impacts-ux-design-6443a80319f3">https://uxdesign.cc/how-culture-impacts-ux-design-6443a80319f3</a><br><a href="https://hi.hofstede-insights.com/national-culture">https://hi.hofstede-insights.com/national-culture</a> |                                    |
| 27  | May 8    | Project presentations   |  | <b>Project 3 slides and report</b> |

### Readings in Course Schedule

UX - Reading from the main textbook (Hartson & Pyla, 2018) are marked as

Other readings are marked as follows:

**DB** – Dania Bilal. (2007). Grounding children’s information behavior and system design in child

development theories. In Diane Nahl and Dania Bilal (Eds.), *Information and Emotion: The Emergent Affective Paradigm in Information Behavior Research and Theory*. New York: Information Today, Inc. (pp. 39-50).

**JJ** - Johnson, J. (2013). *Designing with the Mind in Mind: Simple Guide to Understanding User Interface Design Guidelines*. 2<sup>nd</sup> Edition. Elsevier. Download a free copy from:  
<https://ia904704.us.archive.org/17/items/DesigningWithTheMindInMind/DesigningWithTheMindInMindSimple-Johnson-Kaufmann2010.pdf>

**DN** - Norman, D. (2013). *The Design of Everyday Things. Revised and Expanded Edition*. Basic Books. Download for free from: [file:///C:/Users/dania/Downloads/The-Design-of-Everyday-Things-Revised-and-Expanded-Edition%20\(1\).pdf](file:///C:/Users/dania/Downloads/The-Design-of-Everyday-Things-Revised-and-Expanded-Edition%20(1).pdf)

**Krug**– Krug, Steve. (2014). *Don't Make Me Think, Revisited: A Common Sense Approach to Web and Mobile Usability*. New Riders. Download for free from:  
[https://eng317hannah.wordpress.ncsu.edu/files/2020/01/Krug\\_Steve\\_Dont\\_make\\_me\\_think\\_revisited\\_a\\_cz-lib.org\\_.pdf](https://eng317hannah.wordpress.ncsu.edu/files/2020/01/Krug_Steve_Dont_make_me_think_revisited_a_cz-lib.org_.pdf)

**\*University policy:** *The instructor reserves the right to revise, alter or amend this syllabus, course schedule, due dates, and assignments as necessary. Students will be notified in class and/or on Canvas course site of any change. If you have any concerns about this practice, do not hesitate to talk with me.*

I hope you will enjoy this course. 😊