Instructor: Lois Frankel, PhD
4372 Mackenzie Building
Tel 613 520-2600 x 5675
Office Hours: During lecture hours or by appointment.

Course Time and Location: Tuesdays 13:05-15:55 pm  SA617

Course Description:
Provides foundational knowledge, exploring interdisciplinary approaches for incorporating accessible, inclusive, and human-centered design principles into the research, design, and development of products, information, and environments that can be used by all people, regardless of ability.

The course sessions may include a range of visitors and visits. Students will work in interdisciplinary teams to investigate, document, and present case studies addressing current and evolving perspectives on disability and accessibility that are relevant to taking a lead in bringing accessibility to the forefront in the areas of engineering, ICT, and design.

Learning Outcomes:
By the end of this course, students will be able to:

1. Differentiate among inclusive and accessible design principles for problem identification, ideation, and evaluation in the creation of products, services and/or environments to be used by the largest number of people, regardless of age, gender, or abilities.
2. Recognize and develop empathy for the diversity and uniqueness of end-user needs, including evolving motor, cognitive, and sensory capabilities.
3. Understand a range of basic qualitative and quantitative human-centered design research and analysis processes, such as in-situ ethnographic user studies and usability testing, for the design of inclusive and accessible design solutions or standards.
4. Consider accessibility from multiple perspectives, including technical, ethical, social, individual, and legislative.
5. Use course resources skillfully to support critical opinions about current and evolving perspectives on disability and accessibility that are relevant to taking a lead in bringing accessibility to the forefront in the areas of engineering, ICT, and design.
6. Effectively communicate ideas through visual, written, and oral presentations.
7. Cooperate with interdisciplinary team members in working through class exercises and assignments.
8. Adopt professional/responsible behaviour.

**Course Deliverables & Evaluation Information:**

1. **Assignment 1:** Individual Critical Reading Insights 20%
2. **Assignment 2:** Team Reading Facilitation 20%
3. **Assignment 3:** Phase 1: Individual Case Study 30%
4. **Assignment 3:** Phase 2: Group Case Study 25%
5. **Professionalism & Participation** (includes peer reviews, attendance, engagement & participation) 5%

Course Schedule follows:

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<tr>
<th>THEME</th>
<th>WEEKLY ACTIVITIES</th>
<th>MEDIA/READINGS</th>
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<tr>
<td>[1] S10 Disability Awareness</td>
<td>Course Introduction - Disability Awareness Exercises - READi program Assignment 1: Introduction &amp; planning Class visitor: Dr. A Chan Introduce TCPs2 tutorial</td>
<td>In-Class Videos</td>
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<td>(for articles in Ares-go to Library Reserves folder on CULearn, then to Ares &amp; download) Read/View before class &amp; be prepared for discussion</td>
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<tr>
<td>THEME</td>
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**Assignment 2:** Report on background research & present first draft of interview questions & set up interviews  
*hand in draft 1 of interview questions end of class*                                                                                               | Practicalities of Working with Users. Yielding & Cassim p. 149-163 (14p)  
Video: Turning the Page at H’art of Ottawa  
https://vimeo.com/114442912  
TCPS2 certificates MUST BE SUBMITTED on CULearn prior to class and PRIOR to conducting Interviews |
| [4] O1 Field Trip 1: AACT | **Assignment 2:** Interviews should be taking place sometime between this week & next                                                                                                                                 | Assignment 1: Insight Submission 1 due                                                                                                                                                                        |
| [5] O8 USER Point of View | **Team 1 Facilitates**  
**Assignment 2:** Interviews should be completed well before class & Raw data available in class for initial sorting  
Class Visitor: Cathy Edwards                                                                                                                                                        | Empathic engineering: helping deliver dignity through design. Hosking et al. p. 388-394 (8p)  
Inclusive Design & Making in Practice: bringing bodily experience into closer contact with making. Luck, p. 96-119 (22p)  
| [6] O15 Field Trip to Queens University | **Assignment 2:**  
Group Blogs & Interview Questions posted on class Blog site                                                                                                                                                 | Background readings for trip:  
Enhancing Activity & Participation. Davies p. 361-369 (8p)  
Designing Action-based Exergames for Children with Cerebral Palsey. Hernandez et al. page 1263-1270 (9p)                                                    |

O 22 Fall Break
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| **[7]** | **O29** | **Assistive Technologies** | **Team 2 Facilitates**  
Cass visitors- Dr. Audrey Girouard &  
Dr. Mojtaba Ahmed & others  
**Assignment 2-**  
Brief in-class discussion of group blogs | **Approaches to Estimating User-Exclusion.** Clarkson et al. p 304-310 (6p)  
**Making the Case for Inclusive Design.** Waller et al. p. 297-303 (6.5p)  
**Deliverables:**  
Individual Team Blog Comment sheets submitted on CULearn before class  
Assignment 1: Insight Submission 2 due |
| **[8]** | **N 5** | **Field trip to Ottawa Rehab Centre** | **The evidence Gap for Assistive devices.** Lemaire 39-45 (5p) |
| **[9]** | **N12** | **Accessible Environments** | **Team 3 Facilitates**  
Class Visitors:  
Kim Kilpatrick & TBD  
**Assignment 2-** Individual progress reports | **Designing Accessible Workspaces for Visually Impaired people.** Gomez et al. p. 269-279 (9p)  
**Sensory Environments.** In book The Senses: Design beyond Vision p 123-137 (15p)  
**Deaf Space.** In book The Senses: Design beyond Vision p 138-147 (10p)  
**Video:** Accessibility Problems at New Toronto Area Public Transit Stations  
[https://www.youtube.com/watch?v=za1UptZq82o&feature=youtu.be](https://www.youtube.com/watch?v=za1UptZq82o&feature=youtu.be) |
| **[10]** | **N19** | **Standards & Legislation** | **Accessible Standards for Learning**  
Class Visitors: Dean Mellway,  
Larry McCloskey, & Boris Vukovic  
**Assignment 2-** Individual progress reports | **Bill C-81 The Accessible Canada Act**  
**The Canadian Accessibility Network**  
**AODA: The Accessibility for Ontarians with Disabilities Act**  
**Accessibility: A Practical Handbook on Accessible Web Design**  
**AccessAbility: A Practical Handbook on Accessible Graphic Design**  
**Accessibility: Usability for All.** Soegaard.  
Assignment 1: Insight Submission 3 due |
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<td>Assignment 2- Final Blogs posted</td>
<td>Envisioning the future for older adults: Autonomy, health, well being and social connectedness. Rogers &amp; Mitzner p133-139 (6)</td>
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<td>Envisioning Inclusive Futures. Sullivan &amp; Sahasrabudhe p.140-148 p140-148 (8.5)</td>
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<th>[12]</th>
<th>Final Review &amp; potluck</th>
<th>Final Blog presentations</th>
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### Required Readings:

Most of the course readings are available on the course CuLearn site in the top right-hand corner in the box “Library Reserves” under the title “view course in Ares” at no expense to students. Others are available to download from the Internet as noted on the course Reading List at the end of this outline. Please note that Readings for each date are required as noted in Assignment.

**For September 17**


**For September 24**


Video: *Turning the Page at H’Art of Ottawa* https://vimeo.com/114442912
For October 8

Luck, Rachel, Inclusive Design and making in practice: Bringing bodily experience into closer contact with making. Design Studies 54(2018) 96-119


For October 15 (optional prep for field trip)


For October 29


For November 5 (optional prep for field trip)

For November 12


Sensory Environments p 123-137
Deaf Space p 138-147
Video: Accessibility Problems at New Toronto Area Public Transit Stations
https://www.youtube.com/watch?v=za1UptZq82o&feature=youtu.be

For November 19

Bill C-81: An Act to Ensure a Barrier-Free Canada
Note: look for Bill C81 Plain Language Summary online

Carleton Canadian Accessibility Network:

Accessibility for Ontarians with Disabilities Act (AODA)
https://www.ontario.ca/page/accessibility-laws

https://www.rgd.ca/resources/accessibility/access

AccessAbility: A Practical Handbook on Accessible Graphic Design

https://www.interaction-design.org/literature/article/accessibility-usability-for-all

For November 26


Rogers, W., Mitzner, T. (2017). Envisioning the Future for Older Adults: Autonomy, health, well-being, and social connectedness with technology support. Futures 87 (2017) 133-139


Other Suggestions
Abilities Magazine
http://abilities.ca/

AODA Videos online:

https://www.chrc-ccdpgc.ca/eng/content/international-best-practices-universal-design-global-review


Inclusive Design Toolkit can be downloaded from: https://www-edc-eng.cam.ac.uk/downloads/idtoolkit.pdf


OCADU Inclusive Design Research Centre

Web Accessibility Laws & Policies  https://www.w3.org/WAI

Individual/Group Work
Courses may include individual and group work. It is important in collaborative work that students clearly demonstrate their individual contribution.

Review/Presentation Attendance
Attendance at scheduled SID Reviews/Presentations is mandatory. These are equivalent to exams when indicated in the course outline. Failure to attend the Review/Presentation without reasonable cause, will result in a grade of F. Students arriving late for the Review/Presentation or not remaining for the complete session without approval from the instructor, will be addressed on a case-by-case basis at the discretion of the instructor.

If you are not able to attend a Review/Presentation, foresee arriving late or need to leave before it is complete, please email your instructor in advance explaining the reason for the situation. It is important that you provide a reasonable rationale for your absence, late arrival or early
departure. In the event of an illness or death in the family, you will be required to sign a form verifying your claim and this form is available through the SID administration office.

**Late Submission of Lecture & Studio Deliverables**
Students who do not hand in deliverables on time will have their earned grade reduced by 10% per day up to a maximum of 3 days.

**Participation and Professionalism**
Active participation and professional conduct (e.g. class discussion, consultations with instructors, work ethic, etc.) are important in lecture and studio courses and may be formally evaluated by a grade.

**Student Access to Quiz, Test and Exam Papers**
Examinations will be returned to students with comments

**Requests for Academic Accommodation**
You may require special arrangements to meet your academic obligations during the term. For an accommodation request for any of the following topics below, refer to the link provided for more information: [https://students.carleton.ca/course-outline/](https://students.carleton.ca/course-outline/)

- Parental Leave
- Religious/Spiritual Obligation
- Academic Accommodations for Students with Disabilities
- Survivors of Sexual Violence
- Accommodations for Student Activities

**Academic Integrity**
Carleton’s Policy on Academic Integrity is available at: [https://carleton.ca/registrar/academic-integrity/](https://carleton.ca/registrar/academic-integrity/) and covers the following topics:

- **Plagiarism** (e.g. submitting work in whole or in part by someone else, failing to acknowledge sources through the use of proper citations when using another’s work).

- **Test and Exam Rules** (e.g. attempting to read another student’s exam paper, speaking to another student even if the subject matter is irrelevant to the text, using material not authorized by the examiner).
**Other Violations** (e.g. improper access to confidential information, disruption in classroom activities, misrepresentation of facts for any academic purpose).

The policy governs the academic behavior of students. In industrial design, ideas and concepts come from a multitude of sources and may be modified and utilized in the design and development process. The student should reference such sources appropriately and it is strongly advised that you read Carleton’s Policy on Academic Integrity prior to conducting any work at the University.

**Student Responsibility**

The student is responsible for knowing the content of this course outline; the schedule of classes, assignments, and/or Reviews; and the material that was covered when absent. The studio is a professional environment and students should be working during the scheduled hours.

Unless otherwise arranged, the class will meet during scheduled class hours. Please note that attendance is important since issues and questions may be raised in class, and announcements made, along with information disseminated through cuLearn. As external professionals are often involved in our work, scheduling changes for guest lectures, presentations, and Reviews may occur at short notice, requiring students to stay informed.

**Changes to the Course Outline**

The course outline may be subject to change in the event of extenuating circumstances.