

CSC318H1S 20261 (All Sections): The Design of Interactive Computational Media

Course Description

User-centered design results in robust solutions that successfully address real human problems. In this course, students will learn about methods and principles of user-centered design to explore a problem space and the people within that space, identify users' needs, system constraints and requirements, and ultimately design solutions that incorporate all those components. Designs will be iterated from initial concepts to really valuable solutions by gathering feedback and usability testing prototypes with users throughout the course. The course project will culminate with the development of a robust design that addresses the identified problem. Final project presentations will take place at the end of the course; this course has no final exam.

The delivery of this course will be different from standard lecture-based courses. Students will sit through a handful of lectures and complete in-class activities to get hands-on experience with the content. This subset of lectures will prepare them for an intermediate group project milestone. Students will then work within their groups during the scheduled tutorial sessions and outside of the course hours to complete a project report. Once the project milestone has been passed, the students will sit through another set of lectures, and the process will repeat.

Learning Objectives

This course is designed to provide students with the foundations necessary for understanding and applying user-centered design to address real-world problems. The learning objectives are:

1. to practice research methods for understanding user needs and practices.
2. to interpret raw data and create design artifacts (e.g., personas, scenarios).
3. to brainstorm, sketch and design prototypes that solve real user problems.
4. to evaluate prototypes (one's and others') for usability, learnability, and usefulness.
5. to work in multidisciplinary design teams.

Course Details

Resources: [Course Resources](#)

Course policies: [Course Policies](#)

Grading scheme: [Grading Scheme](#)

List of due dates: [Assignments & Due Dates](#)

Studios: [Studio Divisions](#)

Office Hours

Monday 1:30–2:30 PM (BA 7268)

Prerequisites

CSC300H1 provides useful background for work in CSC318H1, so if you plan to take CSC300H1 then you should do it before CSC318H1. No required background, but any of the following is an asset: graphic design and image manipulation; technical writing; research and literature review experience; mobile or web development; psychology or human cognition.

Course Policies

Contact Policy: You are always welcome to come talk to the instructor **after** class, and/or during office hours. For written communication, this course uses dedicated channels for different purposes. If you would like to contact us about:

- Questions about the lecture materials, in-class activities, and group assignments should be posted in their respective Quercus discussions.
- Questions about personal matters like accommodations, absences, or re-mark requests should be sent as an email to csc318-2026-01@cs.toronto.edu.

When emailing the instructors and/or the TAs, begin your subject line with “[CSC318]” and follow it with a meaningful phrase. All correspondence must happen with official University of Toronto email addresses. Please allow up to 72 hours for a reply. Emails that do not follow these instructions may not receive a reply.

Resources & Reference Materials: Lecture slides, announcements, and assignments will all be posted to Quercus. It is your responsibility to check Quercus and your emails regularly for course communications and updates.

We will be using a collection of different resources as reference materials in this course. The reference materials will be posted on Quercus. All of the materials are required readings. You are required to complete all of the readings listed prior to class.

Deadlines & Late Policy: All assignments are due at the specified deadlines for **all** students, regardless of when they enroll in the course. On-time submissions are graded as normal. Late submissions will incur a penalty:

- Submissions < 24 hours late incur a 10% penalty.
- Submissions < 48 hours late incur a 30% penalty.
- Submissions more than 48 hours late earn 0%.

As a result, **all** students are expected to follow the course along as if they are enrolled in the course. This includes completing and submitting assignments at the deadlines, so that they will not lose points for not having completed works due prior to their enrolment into the course. To do this, students without Quercus access must email csc318-2026-01@cs.toronto.edu their full name (which they used to enrolled at UofT with), UofT email address, Quercus Login ID, and SIS ID, with “[CSC318] Student Needing Quercus Access” as the email subject.

Please note that **no** exceptions will be granted for any sort of submission error. You are expected to submit at least one full day before the actual due date. Make sure you start early and have a good understanding of the assignment requirements to avoid any foreseeable or unforeseeable issues.

Students who are experiencing challenges that prevent them from being able to complete course work on time, can request special considerations by following the steps outlined in the Accommodations section below. Note that special consideration is NOT always granted; such situations will be considered on a case-by-case basis.

Accessibility, Diversity & Inclusion: This course is guided by the University of Toronto's goal to create a community that is inclusive of all persons and treats all members of the community in an equitable manner. In

creating such a community, the University aims to foster a climate of understanding and mutual respect for the dignity and worth of all persons. Please find details here: <https://www.utoronto.ca/accessibility> .

Students with diverse learning styles and needs are welcome in this course. If you have a disability or a health consideration that may require accommodations, please register with Accessibility Services at the beginning of the academic year. Accessibility Services will assess your situation, develop an accommodation plan with you, and support you in requesting adequate accommodation for your course work by issuing a Letter of Accommodation. Only after you have registered will Accessibility Services verify your situation with your instructors, and the instructors will then be advised about your accommodation needs and the appropriate accommodations. An accessibility letter can then be provided to the teaching team 1-2 business days before a deadline for accommodations & special considerations to be arranged. The process of accommodation is private: Accessibility Services will not share details of your needs or condition with any instructor, and your instructors will not reveal that you are registered with Accessibility Services. Note that it is your responsibility to forward the accessibility letter to the instructor, and request accommodations in a timely manner as indicated in the letter issued by Accessibility Services.

Accommodations: Students who have missed class time and/or are experiencing challenges that prevent them from being able to complete course work on time, can request special consideration. Making a request does not guarantee that you will always be granted special consideration. Additionally, before making your request, make sure you also familiarize yourself with the Deliverable Extension Policy below.

If you are experiencing difficulties that affect your learning due to a disability, or if you believe that you may have a disability; you should register with the University of Toronto's Accessibility Services. Accessibility Services staff are available by appointment to assess needs, provide referrals, and arrange appropriate accommodations. After registering with Accessibility Services, please forward the accessibility letter to the instructor, and request accommodations in a timely manner as indicated in the letter issued by Accessibility Services.

Students who have missed class time may declare an absence using the Absence Declaration Tool in ACORN. The ACORN Absence Declaration Tool is intended to be used in the following circumstances: a health condition or injury (e.g., illness, serious physical harm, mental health issue, scheduled surgery); a personal or family emergency (e.g., unanticipated and unavoidable familial incident beyond the student's control); bereavement (e.g., the death of a student's immediate family member or close friend). Immediately after declaring absence on ACORN, please submit your absence form to the instructor and request special consideration specific to the missed academic obligation (e.g., deadline, quiz, studio). Requests submitted after the last day of the absence period will be rejected.

Students who are ill or suffer from an injury (and cannot provide an absence declaration because they have already declared an absence this term) should obtain a Verification of Illness Form (download it [here](#)) and submit the completed form to the instructor to request special consideration specific to a missed academic obligation (e.g., deadline, quiz, studio). The VOI form indicates the impact and severity of the illness, while protecting your privacy about the details of the nature of the illness. You can submit a different form (such as a letter from a doctor), as long as it is an original document, and it contains the same information as the VOI form. Please note, the form can only be completed and signed if you were seen by your practitioner during the time of your illness or injury, not after the fact. Thus, it is important to see your practitioner as soon as possible.

In the case of personal extenuating circumstances that are not related to an absence or disability and which incur challenges in participating to course work (e.g. financial struggle, housing crisis, etc...), we encourage you

to contact your College Registrar to seek counselling and advice. Where appropriate, your College Registrar will issue a letter with recommendations of accommodations for instructors to implement, which you can forward when contacting the instructor to request for accommodation.

Deliverable Extension Policy: With the benefit of advance notice regarding deliverable due dates, you are expected to make the necessary adjustments to your study schedules to make yourself available to successfully complete your coursework. You are expected to schedule your time with consideration given to the possibility that you may become ill or other extraordinary circumstances may arise. Deliverable extensions are provided only when students are unable to meet the original deadline because of serious extenuating circumstances. If an extension is granted, it will generally be proportionate to the delay caused by the problem that prevented you from completing the assignment on time (e.g. a one-week illness or severe injury having significant impact on academic performance may result in a granted extension, whereas a one-day absence due to illness will not be considered as a valid motive for deliverable extension).

Extensions for group deliverables will be very rare, and will only apply to individual students, for up to 48h, because other students are not permitted to receive extensions. In the instance that a group member has been granted an extension for completing group coursework, the group will still be required to make a submission by the original group assignment due date. This submission should demonstrate sufficient progress on the assignment by the group as a whole, and will be the primary document that the graders consider for marking. The group will then be invited to submit an improved version integrating minor changes and additions as a result of accommodating the member(s) who were granted an extension. This second document will be considered by the graders before finalizing the grade for the group assignment.

Marking Concerns & Re-marking: Any requests to have your work remarked must contain a written justification for consideration to the course instructors using the remark request form below. In this course, we distinguish between grading *errors*, and grading *judgements*. For grading errors, a regrade should indeed be requested as soon as possible. But for grading judgements, a regrade is **not** advisable and might well lead to a **lower** grade.

- *Grading errors* arise when the grader makes an actual mistake, usually due to being in a rush. Examples of grading errors include: adding up the grades incorrectly, copying a grade incorrectly, thinking that the student(s) did not explain something, when they had actually explained it elsewhere in their solution, etc. Such grading *errors* should be brought to the instructor's attention as soon as possible, to be corrected appropriately.
- *Grading judgements* involve the grader deciding, as best as they can, how many points a component of the work is worth based on its quality. Unless the component's requirement is absolutely perfect, and also perfectly explained, then some judgement is required to determine how many marks should be awarded. Examples of grading judgements include: if a component is included but is not well explained, does it deserve just one point to be taken off? Or two? Or three? Or more? If a component is on the right track but contains some minor errors, should it receive half marks? More? Less? Etc. These are *grading judgements*, for which regrades should usually **not** be requested. The reason is that there is no perfect guideline for how many marks a partially correct or poorly explained solution should receive. Furthermore, the grader can only grade based on what is written on the page, not what was going on in your head. The graders do their best to be fair and consistent in their grading. There will always be some questions where you feel you deserved a few more marks, and others where you were lucky to get as many marks as you did. This is all part of the usual grading practice, and is unavoidable. It is **not** a basis for a regrade.

Re-marking requests must be made within one week of receiving the graded work. Requests past this timeframe will be automatically rejected. The request must include a written explanation as to why the students believe the work was incorrectly marked. Re-evaluation appeals are at the discretion of the instructors. Note that adjustments in marks will be rare and could equally result in a lowering or raising of the mark. If a re-evaluation is completed by the instructors, the student must accept the resulting mark as the new mark, whether it goes up or down or remains the same. When appealing a re-evaluation decision, the student accepts this condition.

Writing Quality: All assignments should be written with proper English spelling and grammar. For the group project reports specifically, documents should be written with university-level prose and structure. Documents in violation of these expectations are subject to a penalty of up to -10%. If you are concerned about meeting these expectations should refer to the university's Writing Centres and the course's policy on generative AI (see below).

Academic Offenses: Honesty and fairness are fundamental to the University of Toronto's mission. Violations of the Code of Student Academic Integrity, including cases of suspected plagiarism and cheating, are treated very seriously. This will result in direct reporting to the department and upwards. Disciplinary action will be pursued to resolution. This is an unpleasant process for all involved, so please do not put yourself in this situation. Here are a few guidelines to help you avoid committing academic misconduct.

You are responsible for knowing the content of the University of Toronto's Code of Behaviour on Academic Matters.

All the work you submit must be done by you (individually or within your group), and your work must not be submitted by anyone else and/or copied from other sources. As a general rule, we encourage you to discuss course material with each other and ask others for advice. However, it is not permitted to share complete solutions for anything that is to be handed in. You are allowed to look at online resources, tutorials, and Q&A websites while working on your assignments. However, the submitted work must be constructed by yourself (and your teammates when applicable). Submitting AI generated content is strictly forbidden and any violation will be persecuted with the fullest extent of the regulation (see the course's policy on generative AI below for more detail).

You should also review this document regarding plagiarism in the context of CS: <http://www.cs.toronto.edu/~fpitt/documents/plagiarism.html>. "How Not to Plagiarize" and other advice on documentation format and methods of integrating sources are available on the "Writing at UofT website".

If you have any questions about what is or is not permitted in this course, please do not hesitate to post your question in Discussions and/or contact the instructors.

Use of Generative AI (e.g., ChatGPT): User-centered design requires individuals to critically examine a problem beyond what can be summarized in a single text prompt. However, generative AI can help individuals expand their thinking and examine a problem from multiple perspectives. Therefore, the use of generative AI is permitted as a supplementary tool for (1) exploring new ideas or (2) copyediting of written materials. Generative AI is not permitted for creating design artifacts (e.g., questionnaires, storyboards) or for completing quizzes.

Understand that its intended use is to help you learn the course material, and not do the work for you. E.g., you may look at the generated content, but then write your own version of the solution. Directly copying the generated content from ChatGPT will not help you with mastery of the course content.

It is your responsibility to critically evaluate the content generated and to regularly assess your own learning independent of generative AI tools. Please be warned that these tools have not been vetted by the University of Toronto and might not meet University guidelines or requirements for privacy, intellectual property, security, accessibility, and records retention. Generative AI may produce content that is incorrect, misleading, or inconsistent with the expectations of this course. They may even provide citations to sources that don't exist—and submitting work with false citations is an academic offense.

Copyright: Reproducing and/or sharing of course materials is prohibited. Course materials include lecture slides, video recordings, course notes, assignments, data, and documents provided by the instructors. Course materials created by the instructors of this course are their intellectual properties. They may not be shared, posted, rehosted, sold, or otherwise distributed and/or modified without expressed permission from the authors. All such reproduction or dissemination is an infringement of copyright and is prohibited. All rights are reserved by the instructors. See the University of Toronto Academic Integrity's policy regarding recording lectures.

Grading Scheme

	Individual Work
	Quizzes (10%)
42%	Studio critiques (15%)
	G0: Short Bio (2%)
	G1-G3: Individual Forms (5%)
	Paper Prototype Evaluation Session: Individual Contribution (10%)
	Group Work
	Studio group presentations (10%)
58%	G0: Team Information (3%)
	G1: Formative Study (15%)
	G2: Design Concepts and Prototypes (15%)
	G3: Summative Evaluation (15%)

Quizzes: Every block of lectures will be followed by a brief quiz. These quizzes are "open notes" (i.e., you may refer to the course materials while completing them), but you can only complete them once.

Group assignments G1–G3: Throughout the semester, you will go through the iterative design process in a small team of five students to create a high-fidelity prototype that addresses a problem of your choosing. There will be periodic milestones to ensure that progress is being made throughout the semester. Each team will submit a single report per milestone, which will be assessed at the group level. Individual grades are derived from the group's assessed score and may be adjusted using a contribution multiplier based on each student's documented contribution to that assignment.

Before beginning substantive work on G1, G2, and G3, your group must submit and receive TA approval for a Contribution Plan indicating which team members are primarily responsible for each major artifact and how responsibilities are distributed proportionally across the group. Along with the G1, G2, and G3 submissions, each team will also submit a Contribution Report documenting how responsibilities were actually fulfilled and

noting any significant changes (e.g., when someone had to take over work originally assigned to another member).

The contribution multiplier for each student is determined by comparing their documented actual contribution to their planned contribution, as determined from the approved Contribution Plan and Contribution Report, and is bounded between 0.6 and 1.15. As a result, individual grades may differ within the same group, and students who contribute very little may receive a low grade or fail the assignment even if the group submission is strong.

In-studio group presentations and critiques: Some of the studios will be used as feedback sessions. During these times, groups present their progress to the rest of the class and receive feedback from their peers. After those sessions, students will be assigned a team for whom they have to provide a written critique based on the content of their presentations.

Individual forms: For group assignments, you will also be required to fill out short peer-feedback forms. These are used to support evaluation of group work.

Paper prototype evaluation session - individual contribution: Mid-way through the term, we will run a paper prototype evaluation session. This component evaluates your individual preparedness and contributions to helping your team, and other groups run a usability evaluation.

Assignments & Due Dates

Date	Assignment
Jan 10, 2026	G0-Short Bio
Jan 19, 2026	G0-Team Information
Jan 20, 2026	S1
Jan 21, 2026	S1 Critique
Jan 22, 2026	Q1
Jan 27, 2026	S2
Jan 28, 2026	S2 Critique
Jan 30, 2026	G1 Contribution Plan
Feb 9, 2026	G1; G1 Individual Form
Feb 10, 2026	S3
Feb 11, 2026	S3 Critique
Feb 12, 2026	Q2

Feb 23, 2026	G2 Contribution Plan
Feb 24, 2026	Expert Evaluation Session; Paper Prototype Evaluation Session Feedback Form
Mar 3, 2026	Q3
Mar 5, 2026	G2; G2 Individual Form
Mar 10, 2026	S4
Mar 11, 2026	S4 Critique
Mar 17, 2026	S5
Mar 18, 2026	S5 Critique
Mar 22, 2026	G3 Contribution Plan
Mar 31, 2026	S6
Apr 1, 2026	S6 Critique
Apr 1, 2026	G3; G3 Individual Form

Course Resources

How to Prepare for Class?

It is important for your learning that you study the materials prior to coming to class. Read the assigned readings and/or homework before we meet in class. Doing so will allow you to better absorb the lecture content, ask questions about what you did not understand when preparing for class, and make the best of practice exercises and in-class activities.

PART 1. DESIGN THINKING & FORMATIVE RESEARCH

Jan 6, 2026 - Lecture 1: Design Thinking

Lecture Slides	Readings / Homework (do before class)	Discussion	Quiz
L1 Slides	Chapter 6 of <i>The Design of Everyday Things</i> ; Video of <i>The Deep Dive</i>	L1 Discussion	

Jan 8, 2026 - Lecture 2: User Research

Lecture Slides	Readings / Homework (do before class)	Discussion	Quiz
L2 Slides	User Need Statements: The 'Define' Stage in Design Thinking.; Chapter 1 of Workbook	L2 Discussion	

Jan 13, 2026 - Lecture 3: Observations

Lecture Slides	Readings / Homework (do before class)	Discussion	Quiz
L3 Slides	Chapter 9 of Observing the User Experience; Section 2.1 of Workbook	L3 Discussion	

Jan 15, 2026 - Lecture 4: Interview & Questionnaires

Lecture Slides	Readings / Homework (do before class)	Discussion	Quiz
L4 Slides	Chapter 4 of Learning from Strangers; Chapter 10 of Ways of Knowing in HCI; Sections 2.2 & 2.3 of Workbook	L4 Discussion	

Jan 20, 2026 - Studio S1: Presentation Session

- Project Progress Presentation: *project idea*
 - Peer Critique
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Jan 22, 2026 - Lecture 5: Job Stories, Experience Maps, Requirements

Lecture Slides	Readings / Homework (do before class)	Discussion	Quiz
L5 Slides	Chapter 11 of Experience Maps; Chapter 3 of Workbook	L5 Discussion	Q1

Jan 27, 2026 - Studio S2: Presentation Session

- Project Progress Presentation: *formative study plans*
- Peer Critique

PART 2. IDEATION & INITIAL DESIGNS

Feb 3, 2026 - Lecture 6: Ideation & Sketching the user experience

Lecture Slides	Readings / Homework (do before class)	Discussion	Quiz
L6 Slides	Chapter 4 of Sketching the User Experience: The Workbook; Chapter 4 of Workbook	L6 Discussion	

Feb 5, 2026 - Lecture 7: Prototyping & Thinking Aloud

Lecture Slides	Readings / Homework (do before class)	Discussion	Quiz
L7 Slides	Chapter 4 of Paper Prototyping; Chapter 5 & Section 6.1 of Workbook	L7 Discussion	

Feb 10, 2026 - Studio S3: Presentation Session

- Project Progress Presentation: *key findings about user problem & design ideas*
 - Peer Critique
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Feb 12, 2026 - Lecture 8: Heuristic Evaluation & Cognitive Walkthrough

Lecture Slides	Readings / Homework (do before class)	Discussion	Quiz
L8 Slides	Chapter 15 of Interaction Design; Sections 6.2 & 6.3 of Workbook	L8 Discussion	Q2

Feb 24, 2026 - Studio EE: Expert Evaluations of Paper Prototypes Session

- Come to your studio section to perform paper prototyping testing using other groups as your evaluators.
 - See Paper Prototype: Sign-Up & Evaluation Materials
 - See Paper Prototype: Evaluation: Participation & Peer-Review Form
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PART 3. HIGH FIDELITY PROTOTYPING & USABILITY TESTING

Feb 26, 2026 - Lecture 9: High-Fidelity Prototyping

Lecture Slides	Readings / Homework (do before class)	Discussion	Quiz
L9 Slides		L9 Discussion	

Mar 3, 2026 - Lecture 10: Usability Testing

Lecture Slides	Readings / Homework (do before class)	Discussion	Quiz
L10 Slides	Usability Test Plan Toolkit; Chapter 9 of Don't Make Me Think, Revisited: A Common Sense Approach to Web & Mobile Usability; Section 6.4 of Workbook	L10 Discussion	Q3

Mar 10, 2026 - Studio S4: Presentation Session

- Project Progress Presentation: *key findings about low-fidelity prototype and plans for revision & evaluation*
 - Peer Critique
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Mar 17, 2026 - Studio S5: Presentation Session

- Project Progress Presentation: *high-fidelity prototype demo*
 - Peer Critique
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Mar 24, 2026 - Lecture 11: Recap & Guest Speaker

Lecture Slides	Readings / Homework (do before class)	Discussion	Quiz
L11 Slides	No material to study before this session. Come and ask us anything!	L11 Discussion	

In this last formal lecture together, we will consolidate and reflect on our journey through an entire cycle of iterative design.

Next, we will have an invited speaker provide discussions of HCI work experience in industry (e.g., start-up, Google, Microsoft, etc.). Come to class with questions to gain insight, knowledge and advice about working in this field.

Mar 31, 2026 - Studio S6: Presentation Session

- Final project presentation
- Peer Critique