GBDA 414
Special Topics in Interaction Design: Design for Trust, Transparency, and Safety

Class schedule
Section 001 (Online): 2:00-2:50, Thursday
Section 002 (Online): 3:00-3:50, Thursday
Section 003 (Stratford): 9:00-11:50, Thursday, DMS2 0006

Fall Term 2021
Stratford School of Interaction
Design and Business,
University of Waterloo

Description
In this special topic course in interaction design, we focus on studying privacy-aware interactions and experiences in digital products. Students will develop a critical understanding of users' perceptions, the related behaviour, and challenges in managing their data privacy through an exploration of theory, research, and methods from human-computer interaction and the social sciences, such as work in decision-making, learning, social behaviour, and communications. Students will examine and create interfaces and interactions that support transparency, safety, and trust.

Contact
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Objectives
- Through a series of topical readings, analyses, and discussions, students understand the potential security and privacy issues that arise through users' interaction with technology.
- Hand-on assignments and design exercises will help students develop a privacy-conscious mindset when creating digital solutions for end-users.
- Students will explore the design space for creating privacy-aware design solutions.

Required Readings and Resources
Each week required readings will be posted in advance to LEARN. You should complete the assigned weekly readings BEFORE CLASS.

Course Assessments

Participation: 10% (Presentation discussions and Q&A)

Exercises: 10% (5 exercises @2% each)

Assignments: 60%

- 15% Assignment 1: Privacy notice redesign
- 15% Assignment 2: Consent Experience for IoT Devices
- 30% Assignment 3: Privacy and Safety for Young People

Group paper presentations: 20%

- Paper Presentation:10%
- Slides and summary notes: 10%

Course Requirements

Assignments
All assignments can be completed individually or with a partner. If you decide to work with another student, you are responsible for selecting your own partner and can change partners between assignments or work individually. Pairs of students working together on an assignment will receive the same grade on that assignment. For all sections, working with a partner is optional.

Assignment 1: Privacy Notice Redesign
Using the text-based privacy policy template provided, redesign a usable and useful interface for displaying the privacy policy content. For example, you might consider a layered privacy policy, a privacy "dashboard", consent dialogues boxes, or the "nutrition label" approach. You are also encouraged to explore non-traditional privacy interfaces (e.g., Privacy assistant? Privacy flash cards?).

Assignment 2: Consent Experience for IoT Devices
This assignment will analyze and create a user journey map for obtaining users' consent for an Internet of Things (IoT) device that collects, analyzes, and stores the user's personal information. You can explore and analyze any IoT device, such as voice assistants, smart thermostats, refrigerators, smart street lights etc through primary and/or secondary research. Your journey map should analyze and highlight the potential security and privacy issues that arise due to the users' interaction with a device.

Assignment 3: Young People's Privacy and Safety
Design a fictional mobile or web application that enables transparent interactions and provide safe personalisation and control for young people on digital services while providing a great user experience. Create an interactive proof-of-concept prototype of the application. As a starting point, consider the following questions: How might we motivate young people to protect their privacy, verify identity (e.g., age) for a safe digital ecosystem, encourage honesty, enable meaningful customization of privacy settings, and support their privacy preferences as they grow?

Exercises:
Students will complete up to five hands-on exercises relating to the weekly topics. The exercises are meant to extend your knowledge of the course topics and are evaluated based on participation and the quality of engagement with the assigned tasks. All sections should complete the exercises during the week they are assigned. However, students have a grace period to submit exercises 1-2 before Fall Break and exercises 3-5 on or before the last day of class without late penalties. After the grace period, late exercises will not be graded. Details about the exercises will be announced when they are assigned.

Like assignments, all exercises can be completed individually or with a partner. Pairs of students working together on an exercise will receive the same grade.

- **Sections 001, 002 (Online):** Students enrolled in the online sections will complete the exercises asynchronously during the week they are assigned or before the end of the grace period. You can work with other students, but must submit your own work to the Dropbox.
- **Section 003 (Stratford):** Students enrolled in the in-person section will complete the exercises and submit it to the Dropbox on the day they are assigned or before the end of the grace period. You can work with other students but must submit your own work to the Dropbox.

Group paper presentation

Each student will select ONE paper/topic from the collection of assigned weekly readings, enrol yourself in a Group associated with the paper on LEARN (your spot is not secured until you enrol yourself in a team), and create a 10-15 minute summary presentation of the paper with your team, ending the presentation with discussion questions/prompts for the class. **All team members must speak during the presentation.** Topics are limited and will be selected on a first come, first-served basis. The topic you choose will determine your group's presentation date according to the course schedule. Each group must make available their slides with notes for the class.

- **Sections 001, 002 (Online):** Teams enrolled in the online sections will submit a pre-recorded presentation 24 hours before class in the designated Dropbox. The recording will be played during the scheduled class time, followed by a 20-minute live Q&A and discussions.
- **Section 003 (Stratford):** Teams enrolled in the in-person section will present during regular scheduled class time, followed by Q&A and discussions.

Participation and course readings

A participation grade will be calculated based on students' participation in the exercises and engagement with the weekly topics. Students should read the assigned paper each week BEFORE CLASS and be prepared to discuss the content. Your participation grade will partly reflect your engagement with the class discussions.

- **Sections 001, 002 (Online):** Each student is expected to complete the assigned readings, exercises, online peer evolutions for the paper presentations, and provide written questions, comments, and feedback for their peers.
- **Section 003 (Stratford):** Each student is expected to complete the assigned readings, exercises, participate in class discussions, complete online peer evolutions, and provide verbal feedback for their peers.

Project Extensions and Lateness Policy

Unless otherwise stated, **course deliverables are due on LEARN at 5:00 pm EDT (Eastern Daylight Time) on Fridays.**

Assignments: A 48-hours, no excuse-needed extension policy can be used for all assignments. After the extension, assignments handed in late will be penalized by a deduction of 10% per 24-hour period, or part thereof, out of the final mark received.

Group paper presentations: No late presentation will be accepted unless there are exceptional circumstances, subject to the instructor's judgement.

Exercises: You should submit completed exercises on the due dates. If you miss the first due date, you can still submit exercises 1-2 before Fall Break and exercises 3-5 before the last day of class without late penalties. After the grace period, late exercises will not be graded.

Submission of work

Follow the directives provided on your assignment outlines. Organize your files into a folder and upload them to LEARN as a **single ZIP file**. Label the submission in the format: **firstname_lastname_assignment-#**

Accommodations and Expectations for Section 003 (Stratford)

Potential In-Person Course Interruptions: In the event of a short-term or long-term cancellation of in-person classes, whether for the particular course or University-wide, meetings for students in Section 003 (Stratford) will take place online. The instructor will provide further instructions on LEARN.

Accommodation for students who cannot attend classes due to self-isolation: Please do not attend class if you are ill, have been in close contact with someone who is ill, or have travelled outside of Canada within the past 14 days.

In the event of absence due to influenza-like illness or required self-isolation, students shall submit an Illness Self-declaration. Students can find the Illness Self-declaration form in the Personal Information section of Quest. A doctor's note for accommodation is not required.

Face masks are required: Wearing of face-covering/mask is a requirement in common use areas on campus and must be worn in the classroom/lab. As such, no food is allowed to be consumed during the class. Beverages are allowed if a straw is used or if the mask is lowered only for a brief period.

Tentative Course Schedule

Below is a tentative timeline. The content of the lectures and order may change based on class progress and interest.

Week	Date	Topic	Reading	Assignments and Due Dates
1	Sep. 9	Course Overview	None	
2	Sep. 16	Topic: Designing Useful and Usable Privacy Interfaces	None	Teams selected for paper presentations #1-3
3	Sep. 23	Topic: Privacy notices	Paper #1: A Design Space for Effective Privacy Notices	Team paper presentations start
4	Sep. 30	Topic: Nudging users towards secure practices	Paper #2: Nudges for Privacy and Security: Understanding and Assisting Users' Choices Online	

5	Oct. 7	Topic: Privacy regulations and consumer understanding	Paper #3: "Whether it's moral is a whole other story": Consumer perspectives on privacy regulations and corporate data practices	DUE: Assignment 1 *Last week to submit Exercises 1-2* *Last week to select teams for paper presentations #4-8*
	Oct. 14	READING WEEK; NO CLASSES		
6	Oct. 21	Topic: User-Centred design for usable privacy and security	Paper #4: A User-Centered Model for Usable Security and Privacy	
7	Oct. 28	Topic: Privacy at home	Paper #5: Alexa, Are You Listening? Privacy Perceptions, Concerns and Privacy-seeking Behaviors with Smart Speakers	
8	Nov. 4	Topic: Privacy dark patterns	Paper #6: Tales from the Dark Side: Privacy Dark Strategies and Privacy Dark Patterns	Nov. 4 DUE: Assignment 2
9	Nov. 11	Topic: Toxic content online	Paper #7: Designing Toxic Content Classification for a Diversity of Perspectives	
10	Nov. 18	Topic: Young people and online spaces	Paper #8: Talking to Youth and Parents about Online Resiliency	
11	Nov. 25	Topic: Accessibility of security mechanisms	Paper #9: People with Visual Impairment in Authentication	*Last day to submit Exercises 3-5*
12	Dec. 2	Work week and project meetings		Dec. 3 DUE: Assignment 3

Notes on Avoidance of Academic Offenses

Academic Integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect, and responsibility. Check www.uwaterloo.ca/academicintegrity for more information.

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4, www.adm.uwaterloo.ca/infosec/Policies/policy70.htm. When in doubt please be certain to contact the department's administrative assistant who will provide further assistance.

Discipline: A student is expected to know what constitutes academic integrity (check www.uwaterloo.ca/academicintegrity) to avoid committing an academic offence, and to take

responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration

should seek guidance from the course instructor, academic advisor, or the undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Discipline, www.adm.uwaterloo.ca/infosec/Policies/policy71.htm. For typical penalties check Guidelines for the Assessment of Penalties, www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm.

Appeals: A decision made or penalty imposed under Policy 70 (Student Petitions and Grievances) (other than a petition) or Policy 71 (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) www.adm.uwaterloo.ca/infosec/Policies/policy72.htm

A Note for Students with Disabilities

The Office for persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations, please register with the OPD at the beginning of each academic term.