We acknowledge that we are on the traditional, ancestral and unceded territory of the hən̓q̓əmin̓əm̓ speaking Musqueam people.

**iSchool Mission: Through innovative research, education and design, our mission is to enhance humanity’s capacity to engage information in effective, creative and diverse ways.**

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| **INFO 300 – Information and Data Design** |

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| **Program**:  | **BA Minor in Informatics** |
| **Term**: | **2022/23 WT2** |
| **Course Schedule**: | **Tuesday and Thursday 11am to 12:30pm** |
| **Location**: | **IKBLC 185** |
| **Instructor**: | **Dr. Olivier St-Cyr** |
| **Office location**:  | **IKBLC 493** |
| **Office hours**: | [**https://profstcyr.youcanbook.me/**](https://profstcyr.youcanbook.me/) |
| **E-mail address**: | **ostcyr@mail.ubc.ca** |
| **Learning Management Site:** | [**http://lthub.ubc.ca/guides/canvas/**](http://lthub.ubc.ca/guides/canvas/) |

**Calendar Description:** Design of interactive information systems informed by human capabilities and behavior. Application of contemporary information design principles and practices to the conceptualization, creation, and testing of real-world prototypes of information objects and applications.

**Course Overview:** Designing effective interactive information systems of any kind requires understanding the needs and capabilities of the people who will be using them, and the purposes for which the system will be used. “Good information design makes information accessible (easily available), appropriate (to its contents and users), attractive (inviting), concise (clear and without embellishments), relevant (connected to the purpose of the user), timely (available when the user needs it), understandable (without doubts or ambiguities), . . . “ (Frascara, 2015). Above all, it needs to be usable. In this course we will examine human capabilities and behavior as they relate to the design of these interactive information systems. We will survey contemporary theories and findings from the social sciences and information design literature, with special attention given to how these concepts influence the way we design for human interaction with information. Though based firmly in the research literature, the course is design forward, and students will learn not only principles of information use and interaction, but will be actively involved in designing and building their own information artifacts. Although our discussion in class is framed around more traditional digital “interfaces” to information, and the processes that support their development, the scope of objects are not limited by traditional forms, and students are encouraged to experiment in new ways of thinking about information and interaction in our contemporary information environment.

**Learning Outcomes**:

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| **Upon completion of this course students will be able to:** |

1. *Recognize* the various outcomes of the human-centred design approach as ways of creatively solving cognitive, social, and ethical information design challenges.
2. *Differentiate* the various work roles involved in collaborative design processes and the relationships between these roles.
3. *Apply* human-centred design methods and techniques in investigating and solving information design problems.
4. *Analyze* data collected from the application of these design methods and techniques.
5. *Apply* principles of visual design and aesthetics.
6. *Create* physical prototypes of design solutions through application of techniques and tools suitable at various points in the design lifecycle.
7. *Evaluate* the usability of the design prototypes created.
8. *Create* effective ways of communicating the design outcomes to stakeholders.

**Course Topics**:

* Human-centred design, and the information design lifecycle
* Design Thinking and related perspectives in information analysis and design
* Identifying and assessing information needs and information tasks
* Theories of human visual perception and cognition
* User modeling including personas and scenarios
* Information architecture
* Information representation
* Visual display of information
* Prototyping
* Usability evaluation and assessment

**Prerequisites**: INFO 200 required; INFO 100 recommended.

**Format of the course**: Lectures, in-class discussions, studio activities, and project-based exercises. Students are expected to get familiar with all the preparatory materials before each class, attend classes, and actively participate in the discussions and studios. For each class, a series of topics are provided to guide students through the readings and activities, and to frame the lectures and studios.

**Estimated number of weekly hours students should dedicate to this class**: 3 hours (class time) and 7 hours (outside class time)

**Required readings**:

* Berkun, S. (2020). How Design Makes the World. Berkun Media. ISBN: 978-0-983-87318-1. <https://www.amazon.ca/Design-Makes-World-Scott-Berkun/dp/0983873186> **Referred as Berkun**
* Norman, D. (2013). The Design of Everyday Things: Revised and Expanded Edition. Basic Books. ISBN: 978-0-465-05065-9. (Selected chapters). Freely available as an eBook through UBC Library, see: <https://go.exlibris.link/FPHyg7VV> **Referred as Norman**

**Recommended:**

* Sharp, H., Preece, J., & Rogers, Y. (2019). Interaction Design: Beyond Human-Computer Interaction (5th Ed.). Wiley. ISBN: 978-1-119-54725-9. (Selected chapters). Freely available as an eBook through UBC Library, see: <https://go.exlibris.link/yqdP8cJl>. **Referred as SPR**
* Rosenfeld, L., Morville, P., & Arango, J. (2015). Information Architecture: For the Web and Beyond. O’Reilly Media. ISBN: 978-1-4919-1168-6. Freely available as an eBook through UBC Library, see: <https://go.exlibris.link/pqNxZT79> **Referred as SMA**
* Tidwell, J., Brewer, C., & Valencia, A. (2020). Designing interfaces: Patterns for effective interaction design. O’Reilly Media. ISBN: 978-1-4920-5195-4. Freely available as an eBook through UBC Library, see: <https://go.exlibris.link/3CZzH8J0> **Referred as TBV**
* A series of supplemental readings may be provided on Canvas for some weekly meeting to guide students in their learning.

**Course Assignments**:

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| **Assignment Name** | **Due Date** | **Weight** | **Learning Outcomes** |
| Group Design Project | See weekly schedule | 50% | LO2; LO3; LO4; LO5; LO6; LO7; LO8 |
| In-Class Quizzes (2) | See weekly schedule | 30% | LO1; LO3; LO4 |
| Information Design Journals (2) | See weekly schedule | 20% | LO3; LO5; LO7; LO8; |

Team Project (50%):

The major assignment for INFO 300 is a group project with a group size of five students. The project is broken down into two parts, each part providing students a means to explore specific components of the design lifecycle (Discovery, Interpretation, Ideation, Prototyping, and Evaluation), along with gaining experience in applying associated tools and techniques. Each group will present their project to the class in the last week of the course. The project will have three milestone deliverables:

1. Design Part 1 (20%)

In this deliverable, teams will first define a design challenge, gain an understanding of the problem space, prepare for data collection, and collect data. Then, students will analyze the data collected to create personas, empathy maps, and as-is scenarios. They will identify and frame design opportunities and create an as-is design story (storytelling). Finally, teams will create needs statements.

1. Design Part 2 (25%)

In this deliverable, teams will first generate and refine big ideas and prioritize their ideas. Then they will create storyboards and prototypes for their design ideas. They will also create to-be scenarios and user stories (design hypotheses) to frame their design ideas. Then, they will evaluate their design with representative users and iterate on the findings. Finally, students will review their design and their findings from the entire project and will propose steps to move forward. They will also create a pitch to tell their whole design story.

1. Presentation (5%)

Each group will present their design project through storytelling. Students will share the design story of their entire course project.

In-Class Quizzes (30%):

There will be two (2) quizzes of 60 minutes comprising multiple choice, short answers, and case study questions, covering lectures materials, readings, and studios. Quizzes will focus on acquired definitional and application knowledge of tools, methods, procedures of design as provided in the slides, required textbooks, and recommended readings.

Design Journals (20%):

Each student will prepare two (2) individual design journals in which the student applies their knowledge of design to the analysis of design objects of their choosing. The purpose of the journals is to encourage a focus on specific design aspects of information objects encountered in the everyday world, and to relate the critical design skills learned in class, and from the readings, to observations about these objects.

Each Design Journal is independent of the major Design Project and should focus on an information object that is different (in the specifics). For example, student can focus on websites in both the Design Journals and the major project, just not websites in the same domain, or for the same, specific purpose (i.e., they must involve distinct contexts).

The first journal will focus on a critique (good or bad design) of an everyday design object. The goal of the first journal is to explain why the design is usable or not given the intended user group. The second journal will focus on the analysis of a dark design pattern of an everyday design object. The goal of the second journal is to dissect a dark design pattern and propose an alternative design. Students can pick examples of virtual objects, e.g., a favourite music app, website, digital magazine, blog, etc. or physical objects, e.g., a TV remote, microwave oven controls, portable tent, etc. Each journal will be no longer than 750 to 1000 words (single spaced, 12-point Calibri) exclusive of screenshots, drawings, references.

**Course Schedule [week-by-week]:**

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| **Week** | **Topics (with required readings, available on Canvas)** | **Studio (TR)** | **Due** |
| 1January 10 & 12 | * Intro to the course
* What is design?
* Intro to Human-Centered design
* **Berkun Chapters 1-4**
* **SPR Chapters 1 and 2**
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| 2January 17 & 19 | * Basic Design Principles
* Understanding a design problem
* Data collection methods: observations, interviews, surveys
* **Berkun Chapters 5-7**
* **SPR Chapters 3 and 8**
 | Data Collection |  |
| 3January 24 & 26 | * Preparing for research
* Gathering data
* Data analysis, interpretation, and presentation
* Affinity diagram
* **Berkun Chapters 8-10**
* **SPR Chapters 9 and 10**
 | Affinity Diagram |  |
| 4January 31 & February 2 | * Personas
* Empathy maps
* **Berkun Chapters 11-13**
* **SPR Chapter 11**
 | PersonaEmpathy Map | DesignJournal #1(Feb 5) |

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| 5February 7 & 9 | * As-is scenario / Journey Maps
* Storytelling #1
* Needs statements
* **Berkun Chapters 14-16**
* **SPR Chapter 11**
 | As-is JourneyStorytellingNeeds statements |  |
| 6February 14 & 16 | * Brainstorming
* Generating Big Ideas
* **Berkun Chapters 17-20**
* **SPR Chapter 12**
 | Group Project: Working with your TA |  |
| 7February 28 & March 2 | * Refining and prioritizing ideas
* To-be scenario
* Storyboards & Prototyping
* Storytelling #2
* **Berkun Chapters 17-20**
* **SPR Chapter 12**
 | Quiz #1 | Group Project: Design Part 1(March 5)Quiz #1(March 2) |
| 8March 7 & 9 | * Introduction to Information Architecture #1
* Anatomy of AI
* Organization of Information
* <https://www.deceptive.design/>
* **Norman Chapters 1 and 2**
* **RMA Chapters 2, 5, and 6**
* **TBV Chapters 2 and 3**
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| 9March 14 & 16 | * Labelling of Information
* Navigation of Information
* Searching Information
* Dark Design Patterns
* **RMA Chapters 7, 8, and 9**
* **Norman Chapter 3**
* **TBV Chapters 4 and 5**
 | Dark Design |  |
| 10March 21 & 23 | * Introduction to Information Architecture #2
* Layout
* Visual aesthetics
* **Norman Chapter 4**
* **TBV Chapters 4 and 5**
 | Prototyping |  |
| 11March 28 & 30 | * Evaluation #1
* Introduction
* Usability Testing
* **Norman Chapter 5**
* **SPR Chapters 14 and 16**
 | Quiz #2 – Start in class, finish at home | Quiz #2 – Take Home(April 2) |
| 12April 4 & 6 | * Evaluation #2
* Heuristics
* Prioritizing findings
* **Norman Chapters 6, and 7**
* **SPR Chapter 15**
 | Group Project: Working with your TA  | DesignJournal #2(April 6) |

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| 13April 11 & 13 | * Project Presentations
* Portfolio
* Conclusion
 |  | Group Project: Presentation(April 11 & 13)Group Project: Design Part 2(April 16) |

**Evaluation**: All assignments will be marked according to [UBC grading policy](http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,42,96,0). This course requirements and weights are final and will not be modified throughout the term. The penalty for late assignments is set to **5% per day**, to a maximum of one week; submissions will not be accepted after one week. Exceptions will be made only when supported by appropriate documentation.

**Required Materials:** None. All resources will be provided on Canvas.

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**Attendance:** Attendance is required in all class meetings. If you know you are going to be absent you must inform the instructor beforehand if at all possible.

**Policies and Resources to Support Student Success**: UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available here (<https://senate.ubc.ca/policies-resources-support-student-success>).

**Academic** **Integrity:** The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply when the matter is referred to the Office of the Dean. Careful records are kept in order to monitor and prevent recurrences. A more detailed description of academic integrity, including the University’s policies and procedures, may be found in the [UBC Calendar: Student Conduct and Discipline](http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,54,0,0). Academic misconduct includes cheating, plagiarism, and self-plagiarism <http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,54,111,959> (§7).

**Academic Accommodation for Students with Disabilities:** Academic accommodations help students with a disability or ongoing medical condition overcome challenges that may affect their academic success. Students requiring academic accommodations must register with the [Centre for Accessibility](https://students.ubc.ca/about-student-services/centre-for-accessibility) (previously known as Access & Diversity). The Centre will determine that student's eligibility for accommodations in accordance with [Policy LR7: Accommodation for Students with Disabilities (Joint Senate and Board Policy)](https://universitycounsel.ubc.ca/files/2019/02/policy73.pdf). Academic accommodations are not determined by your instructors, and instructors should not ask you about the nature of your disability or ongoing medical condition, or request copies of your disability documentation. However, your instructor may consult with the Centre for Accessibility should the accommodations affect the essential learning outcomes of a course.