THE UNIVERSITY OF BRITISH COLUMBIA
School of Information
Faculty of Arts

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.

LIBR 555: Information Design 1 – Systems (3)

*This .pdf version of the syllabus is preliminary (updated 07/09/20). The Canvas course site will be the 'document' of record starting first day of class.

Program: MLIS
Year: Winter Session 1, 2022-23
Course Schedule: Monday, 2pm
Location: Terrace Lab, Rm. 458
Instructor: R. Kopak
E-mail address: r.kopak@ubc.ca
Office location: Barber 495
Office phone: 604-822-2898
Office hours: Monday and Tuesday, 12:30 - 1:30 pm; or by appointment
Canvas: canvas.ubc.ca

Course Goal:

The goal of this course is to develop within students a user-centred design perspective that can be used to optimally frame the logical and physical design of information systems in a variety of information use environments. An additional goal of the course is to ground students in "Design Thinking," providing them with a methodology that can be applied to a wide variety of contexts in which 'design' is an important component.

Course Objectives:

Upon completion of this course students will be able to:

- Knowledgeably apply a user-centred analysis and design perspective throughout the entire information design lifecycle [1.1, 4.1]
- Collect and analyse data on user needs [4.2, 2.2]
- Assess usability of design artifacts [4.2]
- Think critically about the role of both analysis and design and its place in a variety of information system contexts [1.4]
- Apply the components and practices of Information Architecture [1.2]
- Design a Website, or similar system, at the macro (prototype) level [1.3]
- Effectively report the outcomes of their design practice and artifacts [2.1]
- Effectively work in both individual and team settings [3.1]
- Employ "design thinking" and the methods associated with it to a variety of other design problems and environments [1.1]

*Numbers in brackets [e.g. 2.2] indicate relationship of objectives to the iSchool's list of core competencies.

The course will cover the following topics:

- The information system design lifecycle
- Research practices in information design
- Design Thinking and other problem-solving perspectives in information analysis and design
- Contextual design
- Missions, goals, objectives and design within constraints
- Identifying and assessing stakeholder requirements and user needs
- Analysis of tasks
- User modeling including development of personas and scenarios
- Information architecture
- Information representation
- Usability evaluation and assessment

Prerequisites:

- MLIS and Dual MAS/MLIS: MLIS core
- MAS: completion of MAS core and permission of the iSchool Graduate Adviser

Format of the course:

Lectures, group tutorials and practice demos, practical group assignments.

Required and Recommended Reading:

Required:

- Unger, R., and Chandler, C. (2012). A Project Guide to UX Design for User Experience Designers in the Field or in the Making, 2nd edition. Berkeley, CA: New Riders.
  - A digital version of this book is available on UBC reserve. If you wish to purchase a copy, it is cheapest to do so through an online source. For example, both Indigo and Amazon carry hard copy and e-versions of the book. You can also obtain an DRM free, PDF version from Peach Pit Press. No copies have been ordered through the bookstore.
  - Though the book is showing its age, it is still excellent considering coverage, availability, and cost

- Morville, P., and Rosenfeld, L., Arango, J. (2015). Information Architecture for the Web and Beyond, 4th ed. Sebastopol, CA: O'Reilly.
  - A digital edition of this book is available on UBC reserve. Both paper and digital editions of the text are available through the regular channels including both Indigo and Amazon.
  - This is generally a great book to have, and the 3rd edition would suffice. If it is beyond your budget, then there is the UBC reserve copy.

Recommended General (Chrono)

In addition to the following texts you will find it useful to familiarize yourself with the **O'Reilly for Higher Education** collection available through UBC Library (Indexes and Databases). I will be assigning supplementary readings from this collection.

- Tidwell, J., Brewer, C, and Valencia, A. (2020). Designing interfaces: Patterns for effective interaction, 3rd ed. Sebastipol, CA: O'Reilly.
  - A copy of this book is available online through UBC Library through reserve. It is quite good, but a bit more expensive.

- Allen, J., and Chudley, J. (2012). Smashing UX Design: Foundations for Designing Online User Experiences. John Wiley & Sons. ISBN-10: 0470666854
    - A copy of this book is available online through UBC Library through reserve. It is quite good, and I've used in previous years. Unfortunately, hard to find in print.

- Hartson, R., and Pyla, P.S. (2012). The UX Book: Process and Guidelines for Ensuring a Quality User Experience. Waltham, MA: Morgan Kaufmann.
    - Copy available online through UBC Library, and physical copy available outside my office. Also, previously used as a main text, but a bit expensive to buy.

- Brinck, T., Gergle, D., and Wood, S.D. (2002). Usability for the Web. San Francisco: Morgan Kaufman Publishers.
    - Still a fave of mine, but getting a bit dated, and also not available digitally.

Course Assignments,

Assignment Name	**Due Date**	**Weight**	**Graduate Competencies**
Design Journal 1	October 03	10%	1.1, 1.3, 2.1
Design Project, Part 1	October 17	40%	1.1, 1.2, 1.3, 2.1, 3.1, 4.1
Design Journal 2	November 07	10%	1.1, 1.3, 2.1
Design Project, Part 2	December 05	40%	2.1, 3.1, 4.2

Course Schedule

(N.B. Changes to readings may appear in final Canvas version of syllabus available by first class meeting).

Week	**Date**	**Topics and Readings**
1	September 12	Introduction to Course • **A Project Guide to UX Design: 1,2**
2	September 19	Contextual Inquiry and Analysis • **A Project Guide to UX Design: 3-6** • **Information Architecture: 11**
3	September 26	User Requirements and Modeling • **A Project Guide to UX Design: 7, 8** • **Information Architecture: 12**
4	October 03	Conceptual Design and Design Thinking • **A Project Guide to UX Design: 9-11** Information Architecture I

		• **Smashing UXD: 15** • **Information Architecture: 1- 4**
5	October 10	No Class – Thanksgiving Day
6	October 17	Information Architecture II • **Information Architecture: 6–10** **Workshop for Design Part 1**
7	October 24	Guidelines and Patterns • **Smashing UXD: 19-33** [from Supplementary Readings] Start working your way through these chapters and continue throughout remainder of course
8	October 31	Production and Prototyping • **A Project Guide to UX Design: 12, 13** • **Information Architecture: 13**
9	November 7	Usability Testing and Evaluation • **A Project Guide to UX Design: 15**
10	November 14	Usability Testing and Evaluation
11	November 21	Project Workshop
12	November 28	Project Workshop
13	December 05	Windup and Presentation of Final Projects

Attendance:

- Attendance at scheduled tutorials and organized meetings is expected. If you know you are going to be absent be sure to inform me beforehand.
- Any penalties imposed for frequent absences from tutorials are at the discretion of the instructor.

*UBC graduate students are expected to spend, on average, 40 hours a week on research and coursework. This assumes a 4 course/term load (in non-thesis degree programs), suggesting that you devote 10 hours/week on this course including time in class. If you are not in class in any given week, the expectation is that the 3 hours gained will manifest itself in the increased quality of assignments handed in.

Evaluation: All assignments will be marked using the evaluative criteria given on the iSchool web site.

For late assignments, a deduction of ½ letter grade will be made for each 3 day period in which an assignment is handed in past the due date. For example, if an assignment is handed in (posted to Canvas) on the Tuesday, Wednesday, or Thursday after a Monday due date, the mark given to the assignment will be reduced a half letter grade, e.g., A- to B+. If handed in on the following Friday, Saturday, or Sunday, a further ½ mark deduction will be made, e.g., B+ to B. Any lateness beyond that, please be in touch.

Please see sections below on Academic Concession and Academic Accommodation for exceptions to the late deduction rule. Be sure to inform the instructor beforehand if either of these apply to you.

Required Materials

See 'Required Texts' section above for citation to texts used in the class. There are no other required or recommended course resources that are not available freely from the UBC Library, or designated other websites.

If you purchase a text, you may find prices vary for the texts depending on where you source them. If we use Amazon.ca (paper and digital) as an example, you can expect the following associated costs:

- Unger, R., and Chandler, C. (2012). A Project Guide to UX Design for User Experience Designers in the Field or in the Making, 2nd edition. Berkeley, CA: New Riders.C$110 for paperback version
    - $50Paper
    - $19 Digital
- Morville, P., and Rosenfeld, L., Arango, J. (2015). Information Architecture for the Web and Beyond, 4th ed. Sebastopol, CA: O'Reilly.
    - $68 Paper
    - $48 Digital

Academic Concession: If you miss marked coursework for the first time (assignment, exam, presentation, participation in class) and the course is still in-progress, **speak with me immediately** to find a solution for your missed coursework. Any concessions that will result in a change to the student record (such as late withdrawal from the course) will be referred to the Faculty of Graduate and Postdoctoral Studies for evaluation. If this is not the first time you have requested concession or classes are over, please consult the Faculty of Graduate and Postdoctoral Studies' webpage on academic concession, and then contact me where appropriate.

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. 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 (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). 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.

Assignments

Assignment 1 & 3 – Design Journals

Weight: 2 journals at 10% each

The purpose of the design journals is to encourage you to focus on design aspects of systems encountered in the everyday world, and to relate what you've learned in class, and in your readings, to your observations concerning these systems. Each member of the class is expected to document at least two different examples of poorly, and/or well-designed information system or artifact. More specifically, we are most interested in the 'user interface' aspect of information systems and artifacts are understood to include objects like websites, apps, and other interactive software of various kinds that are predominantly involved in the transmission or understanding of information content, or that perform useful tasks. More broadly we might even consider physical objects such as TV remote controls, or the control interface on a microwave oven to qualify.

The journal entries will be evaluated on the basis of:

- Appropriateness and relevance – Does your example capture some important element or issue of design?
- Description – Is your description clear and informative?
- Theory and Design Thinking - How does this issue relate to the literature of design? Base your analysis on what you've learned about design.
- Recommendation - how might the issue be resolved?

Journal entries should be no more than three pages each (standard type-size, margins, and spacing), so be concise and to the point. Entries longer than this will be accepted if drawings, pictures, or some other non-textual component is included to help make your point.

I will provide links to exemplary design journals from the previous years, via the Canvas course site.

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Assignment 2 – Design Project Pt. 1

Weight: 40%

The purpose of the design project is to gain experience in implementing some of the approaches and methods learned in the course. You will design a website or app that can be anything you choose for a domain (area, subject, organization, etc.) that interests you, but it should be of sufficient complexity to fully demonstrate your understanding of the various stages of the design process.

The Design Project will be carried out in two parts. This is Part 1.

In Part 1 you will carry out the initial stages of the design lifecycle which will provide the foundation for Part 2 of the Design Project. The stages to be addressed in Part 1, and the minimal requirements for each stage are:

Description of the website/app to be built

- provide a mission statement
- state goals and objectives of the website (i.e. what is its purpose in the context of the domain (e.g. organizational goals).
- identify the major stakeholders and describe why (and how) they are important.

User Needs Analysis

- identify major users of the website/app from amongst the stakeholders.
- describe the process and methods you used to collect user needs data, e.g. did you do interviews, questionnaires, observe potential users, and/or carry out competitor analysis. If so, what did you find out? Provide samples of all instruments (e.g. questionnaire, observation notes) used.
- create two or three personas that describe typical users.
- create an inventory of the content the website/app will have.

Task Analysis

- develop five or six scenarios, based on the previous needs analysis that describe important and/or typical tasks that users need to accomplish, e.g. finding important content, using search engine, filling in forms, reading, etc.
- describe steps required to accomplish task

Information Architecture (not required IA not a major component of the design object)

Describe (based on analysis)

- major sections of the website/app
- relationship between sections, e.g. functional, topical, etc.
- global and local navigation
- labeling and grouping

Write-up (Pre-design Report)

It is important to elaborate the rationale for each of the major decisions made in this part of the design process, especially where this may not be clear otherwise.

- Include any instruments used, examples of data you collected, and results of data analysis, e.g. an interview script and examples of the interview results, card sorting/cluster analysis, etc.

- It should be of professional quality and fully describe each of the major components.

- The Pre-design report should also include a summation of the major outcomes of these first stages.
- Include a description of any major problems encountered and how these affected the outcomes.

Remember that the purpose of these first stages of the design lifecycle are to guide the design of the site in Part 2. The better articulated the overall requirements in this first part, the easier it will be to do the physical design in Part 2.

Assignment 3 – Design Project Pt. 2

Weight: 40%

The major assignment in the course is to design, prototype, and test a website or app. The purpose of the assignment is to help you gain experience in implementing some of the approaches and methods learned in the course toward designing and building better information artifacts. As stated in Part 1 of the major project description, the website/app may be of anything you choose for a domain (area, subject, organization, etc.) and that interests or is useful to you, but should be of sufficient complexity to fully demonstrate your understanding of the various stages of the design process.

This page describes Part 2 of the assignment.

In Part 2 you will carry out the final stages of the design lifecycle which will result in the development and testing of a prototype web site or app built on the foundation provided in Part 1 of the Design Project. The stages to be addressed in Part 2, and the minimal requirements for each stage are:

Summary of the results of Part 1 of the design

- include those elements that most inform the actual physical design prototyped. This section should provide the necessary continuity between Part 1 and Part 2 of the assignment.

Pencil and paper prototype drawings

- provide drawings of the top level page of the website, and of the other major sections of the website. These should be based on the initial architecture described in Part 1.
- include local and global navigation features, major labeling, etc.
- show alternate versions of those sections that you feel are interesting and describe the various ideas, challenges, etc. that you had to face in conceptualizing these parts.
- if you had difficulty in deciding which of two versions (e.g. of a particular page or section) you should go with explain why you chose the one you did. The decision might, for example be based on a heuristic analysis, or cognitive walkthrough.

Working Prototype

- based on the pencil and paper prototypes, create a higher resolution prototype in HTML, Powerpoint/Keynote, or using a prototyping app like Balsamiq.
- this higher resolution prototype should reflect decisions made in the paper prototyping phase, and include all major sections elaborated in the Information Architecture described in Part 1
- show any global and local navigation features, major labeling, etc.
- do not spend an excessive amount of time on page design (i.e. fancy graphics, elaborate effects, etc.). This is a formative prototype so many of the refinements included in a final product need not be included. In fact, whole areas of actual content, i.e. text and or graphics, may be left out, using placeholders (greeting, or lorem ipsum) instead.
- Use analytical evaluation techniques, as needed, to test your prototype as you proceed throughout the prototyping/testing process.

User testing

- find potential users of this site (maybe those participating in the user needs analysis in Part 1) and test your design. You do not need a large number of testers here (e.g. 4 or 5 will do in most cases).
- the testing should be based on the initial scenarios created and reflect those (or similar) tasks described in Part 1, unless you feel these have substantially changed based on newer information collected.
- report on the results of these tests

Write-up (Design Report)

- The design report should address thoroughly each of the major areas of the latter stages of the design lifecycle, i.e. prototyping and testing.

- It should be of professional quality and fully describe each of the major components.

- Include pencil and paper pro-types that reflect the working out of design issues encountered or alternatives that you considered. (Do not include those that are repeats or very nearly similar to other pages or sections).

- Include the final prototype tested, or a link to where the prototype can be viewed.

- Include any instruments used and examples of data you collected, e.g. set of user tasks and examples of the results of user testing.

- Again, it is important to elaborate the rationale for each of the major decisions made in this part of the design process, especially where this may not be clear otherwise.

- Include a description of any major problems encountered and how these affected the outcomes.

- Include a summative section that outlines the perceived successes and shortcomings of your design. How would you change it based on the outcomes of the user testing? What sections or elements might you have added, had you more time? What do you think are the best parts of your design? Which stage of the design lifecycle was most problematic? What were the most important lessons you learned?