Course: DMED 540: Special Topics in Digital Media: Data Driven Design (3 credits)
Term: Spring 2025
Instructor: Krisha Maclang
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Acknowledgement of Coast Salish Peoples and Land
We respectfully acknowledge the xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh Úxwumixw (Squamish), səlilwətaɬ (Tsleil-Waututh) peoples on whose unceded traditional territories our campus resides.

Course Description
Great design decisions don't come from intuition alone. They're grounded in evidence. In today's product landscape, the most effective teams know how to use data and research insights to make smarter, faster, and more user-centered decisions. This course equips students with the tools and mindset to confidently navigate both qualitative and quantitative data in the design process. Through lectures, discussions, hands-on exercises, and industry talks, students will learn how to plan and execute research that informs product direction, measure impact, and communicate findings that drive alignment across teams.

Students will deepen their research rigor and develop practical skills in collecting, analyzing, and communicating findings. Students will build data literacy, developing the ability to gather, interpret, and synthesize both qualitative and quantitative information to inform their design choices. They'll learn not just how to collect data, but how to evaluate its reliability, recognize bias, and combine multiple forms of evidence to see the full picture of user behavior and needs. The course emphasizes when and how to use research methods effectively throughout the product lifecycle—from early discovery to post-launch evaluation—and how to make informed, evidence-based decisions even with imperfect data.

They'll also learn how to connect insights to business and design decisions, understanding how data supports strategic prioritization, trade-offs, and impact measurement. By framing insights in the context of key performance indicators (KPIs), user outcomes, and organizational goals, students will strengthen their ability to advocate for users while aligning their recommendations with real-world business constraints.

By the end of the course, students will have stronger research rigor, refined practical skills, and greater confidence in their ability to uncover insights that drive meaningful, user-centered product decisions.

Course Objectives
Upon completion of this course students will be able to:

- Frame research questions that align with product and business goals.
- Collect, analyze, and interpret qualitative and quantitative data.
- Connect insights to actionable design and business recommendations
- Communicate research findings through compelling storytelling
- Critically evaluate data, recognize bias, limitations and ethical considerations

Format of the Course
The course will run for 13 weeks with 3-hour weekly class and will consist of graduate-level seminars, hands-on sessions, and presentations. Students will be expected to participate in classroom activities

and should show up prepared (having completed any necessary readings, or consumed any relevant media requested).

Course Schedule

The course will run on Thursdays, 5:30pm – 8:30pm, January 8 – April 9, 2026. The following schedule outlines most of the topics covered during the course. *Some topics may be added or modified during the semester at the discretion of the instructor.*

Class	Topic
Week 1 (Thursday, January 8)	**Introduction to Data-Driven Design** Focus**:** What "data-driven design" means and why it matters Objective: Understand why data matters in the design process and learn about the types of research data you might encounter in the product development cycle
Week 2 (Thursday, January 15)	**From Problem to Research Question** Focus: Framing problems like a product team Objective: Learn to translate product/design challenges into research questions and connect research goals to business goals
Week 3 (Thursday, January 22)	**Planning Research** Focus: Planning and structuring research across the product development cycle Objective: Learn about how to plan, structure, scope research to meet success criteria while incorporating important considerations like ethics, accessibility, consent, etc.
Week 4 (Thursday, January 29)	**Conducting Effective Interviews** Focus: Deep qualitative data collection across the product development cycle Objective: Learn how to write good interview questions, observation techniques, avoid bias and leading participants, note-taking, and other best practices
Week 5 (Thursday, February 5)	**Interviewing Workshop** Focus: Hands-on experience moderating an interview Objective: Learn how to facilitate user interviews, adapt your questions on the fly, and ensure you're getting the answers you need
Week 6 (Thursday, February 19)	**Analyzing Qualitative Data** Focus: Turning stories into insights Objective: Learn to analyze and synthesize qualitative data into key themes, surface contradictions and turn insights into opportunities

Week 7 (Thursday, February 26)	**Survey Design & Metrics** Focus: Collecting quantifiable data Objective: Learn how to design surveys, identify the right sample size, and avoid bias, get a sense of basic product metrics
Week 8 (Thursday, March 5)	**Analyzing Quantitative Data** Focus: Interpreting numbers Objective: Learn the basics of descriptive statistics, identify trends and anomalies, and understand survey data to guide decision-making
Week 9 (Thursday, March 12)	**Triangulating Data through Mixed Methods** Focus: Combining multiple data sources to get the full picture Objective: Learn how to synthesize qualitative and quantitative data, identify gaps and contradictions in data. Understanding what all of this data is telling us.
Week 10 (Thursday, March 19)	**Translating Insights into Decisions** Focus: Making insights meaningful to product teams Objective: Learn how to translate insights into opportunities, connect them with business goals and KPIs, make trade-offs and prioritize action items on the roadmap
Week 11 (Thursday, March 26)	**Persuasive Storytelling** Focus: Influence your stakeholders with data Objective: Learn how to turn your data and insights into compelling storytelling to influence stakeholders, gain approval from clients/stakeholders/organization leadership
Week 12 (Thursday, April 2)	**Final Project Working Session** Focus: Work on your final project and prepare for presentation Objective: Create a presentation of your insights report and make data-driven recommendations for feature prioritization and design direction.
Week 13 (Thursday, April 9)	**Final Presentations** Overview: Groups will present their final project to panel of industry professionals Objective: Pitch your insights report and recommendations to a panel of industry speakers who will act as your cross-functional stakeholders.

Course Assignments

Note: Assignments, due dates, and weighting are subject to instructor revision if deemed necessary

Assignment	Weight	Due Date	Details
Assignment #1	20%	TBD	Research Planning
Assignment #2	20%	TBD	Collecting and Analyzing Data
Assignment #3	20%	TBD	Making Data-driven Business and Design decisions
Final Presentation	25%	Week 13	
Class Participation	15%	Week 1 - 13	Contribution to class discussion, participation and group activities.

Required Readings

- Just Enough Research - Erika Hall

Recommended Readings

- Interviewing Users - Steve Portigal
- Quantifying the User Experience - Jeff Sauro & James Lewis

Attendance and Participation

Regular attendance is expected of students in all their classes (including participation, group work, tutorials, seminars, online etc.). Students who are unavoidably absent due to illness or disability should notify their instructors of their situation.

- Students are expected to attend every class on the schedule (based on their assigned group) and be fully present**.** While sickness is sometimes inevitable, understand that due to the experiential nature of the material, classes cannot be made up.
- Lateness also informs grading. Classes start punctually every week according to the schedule. Instructions will not be repeated, nor will it be tolerated if a latecomer bothers another student for instructions. If arriving later than half an hour into a class, a student may be marked as absent.
- Due dates: Assignments granted an extension beyond the due date will have no extended comments; assignments handed in late without prior permission will be returned with a grade only, no comments, and 2% per day late, including weekends (i.e., 4% for Saturday and Sunday), deducted from the grade assigned to your paper. Assignments submitted after the assignment has been returned to the rest of the class will not normally be accepted.

https://www.sfu.ca/students/enrolment-services/policies-and-procedures/academic-concessions.html

Grading Profile

A+	95-100	Exemplary expectations
A	90-94	Exceeding expectations
A-	85-89	Meet expectations
B+	80-84	Approaching expectations
B	75-79	
B-	70-74	Below expectations
C	60-69	Far below expectations
F	0 – 59	Fail (Students must retake the course).

A student in a master's or doctoral program must maintain a CGPA of 3.0. Under no circumstances will a student whose CGPA is below 3.0, be awarded a graduate degree.
https://www.sfu.ca/students/advising-resources/calculators/gpa-calculator.html

Laptops & Cell Phones
The use of laptops and cell phones during class is at the discretion of the instructor. *Please respect your classmates and instructors and refrain from text messages, social media, games and videos during class and workshop times.* Please note you should always bring pen and paper to class.

Written & Spoken English
English is the official language of the school and all communication (written and spoken) is expected to be conducted in English. SFU and the MDM Program provide a wide range of free language support for those who need and it's up to each learner to seek that support.

Accommodations
The university accommodates students whose religious obligations conflict with attendance, submitting assignments, or completing scheduled tests and examinations. Please let your instructor know in advance, preferably the first week of class, if you will require any accommodations on these grounds. The Centre for Accessible Learning (CAL) will make every effort to assist students with disabilities so that they achieve their educational goals. https://www.sfu.ca/students/accessible-learning/establishing-accommodations/accommodation.html

Academic Integrity: Your Work, Your Success
SFU's Academic Integrity website http://www.sfu.ca/students/academicintegrity.html is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating.

Each student is responsible for their conduct as it affects the university community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the university. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the university. http://www.sfu.ca/policies/gazette/student/s10-01.html .

Inappropriate use of technology in coursework
If you are using any technology, including generative AI, to produce or edit content that will be part of your graded work in the course, you must be transparent about the tools that you use. Undeclared use of the tool/technology will be considered a violation of the academic integrity policy. Be aware that any tool used will require you to evaluate the output for accuracies and be responsible for making the appropriate corrections.

Graduate Studies Notes
Important dates and deadlines for graduate students are found here: http://www.sfu.ca/dean-gradstudies/current/important_dates/guidelines.html.

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