

CARLETON UNIVERSITY
SCHOOL OF INDUSTRIAL DESIGN

COURSE OUTLINE IDES 5102 - DESIGN RESEARCH METHODS - FALL (2019)

Instructor: Chantal Trudel
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Teaching Assistant: N/A
Office Hours: During studio/lecture hours or by appointment.

Time and Location: Please refer to Carleton Central under Student Services – Registration – Search Schedule: <https://admissions.carleton.ca/faqs/where-can-i-find-the-class-schedule/>

Course Description:

Critical review of qualitative and quantitative research methods to support interdisciplinary design. Methods used by collaborators from the sciences and humanities as well as methods designers bring to interdisciplinary collaborations are introduced. Research for design, research through design and theoretical frameworks are discussed.

Includes: Experiential Learning Activity

Also listed as HCIN 5404.

Learning Outcomes:

By the end of this course, students will be able to:

1. Critically review literature on research approaches or theoretical frameworks.
2. Identify and select appropriate qualitative and quantitative research methods.
3. Design and evaluate research methods and a methodology appropriate to a study's objectives.
4. Plan a design research study.
5. Create an ethics application.
6. Effectively communicate a research approach and rationale through written, visual and oral mediums.
7. Demonstrate professional behaviour.

Required Materials:

Materials required for the course are listed below. You may be asked by your instructor to refer to cuLearn and ARES for a more comprehensive list of required materials.

These are key textbooks that will be used throughout this course. Hardcopies have been ordered through the Carleton bookstore with the exception of Robson & McCartan's *Real World Research* which is available as an eText through the VitalSource bookshelf which you can buy to have permanent access (please consult with Carleton bookstore if you are interested in this option). Alternatively, these books are available through the MacOdrum Library (see ARES on cuLearn).

Robson, C. & McCartan, K. (2016) *Real World Research* (4th ed.). John Wiley & Sons Ltd., West Sussex, UK.

Muratovski, G. (2016). *Research for Designers*. Los Angeles CA: Sage Publications.

Rogers, Y., Sharp, H., & Preece, J. (2011). *Interaction Design - beyond human computer interaction*. 3rd ed. John Wiley & Sons, West Sussex.

Wilson, J. & Sharples, S. (2015) *Evaluation of Human Work* (4th ed.). Boca Raton, FL: CRC Press

Saldana, J. (2016). *The Coding Manual for Qualitative Research* (3rd . ed.) London, UK: Sage Publishing.

Course Deliverables:

These are the deliverables for this course. Please see Appendix A Course Schedule for more detailed information.

Assignment 1 Essay:	25%
Assignment 2 Mini-Study:	25%
Assignment 3 (Presentation/Report):	15%/25%
Statistics Workbook:	10%.

Individual/Group Work

Courses may include individual and group work. It is important in collaborative work that students clearly demonstrate their individual contribution.

Late Submission of Lecture & Studio Deliverables

Students who do not hand in deliverables on time will have their earned grade reduced by 5% per day up to a maximum of 3 days.

Participation and Professionalism

Active participation and professional conduct (e.g. class discussion, consultations with instructors, work ethic, etc.) are important in lecture and studio courses and may be formally evaluated by a grade.

Student Access to Quiz, Test and Exam Papers

Examinations will be returned to students with comments and explanations.

Requests for Academic Accommodation

You may require special arrangements to meet your academic obligations during the term. For an accommodation request for any of the following topics below, refer to the link provided for more information: <https://students.carleton.ca/course-outline/>

- Parental Leave
- Religious/Spiritual Obligation
- Academic Accommodations for Students with Disabilities
- Survivors of Sexual Violence
- Accommodations for Student Activities

Academic Integrity

Carleton's Policy on Academic Integrity is available at: <https://carleton.ca/registrar/academic-integrity/> and covers the following topics:

Plagiarism (e.g. submitting work in whole or in part by someone else, failing to acknowledge sources through the use of proper citations when using another's work).

Test and Exam Rules (e.g. attempting to read another student's exam paper, speaking to another student even if the subject matter is irrelevant to the text, using material not authorized by the examiner).

Other Violations (e.g. improper access to confidential information, disruption in classroom activities, misrepresentation of facts for any academic purpose).

The policy governs the academic behavior of students. In industrial design, ideas and concepts come from a multitude of sources and may be modified and utilized in the design and development process. The student should reference such sources appropriately and it is strongly advised that you read Carleton's Policy on Academic Integrity prior to conducting any work at the University.

Student Responsibility

The student is responsible for knowing the content of this course outline; the schedule of classes, assignments, and/or Reviews; and the material that was covered when absent. The studio is a professional environment and students should be working during the scheduled hours.

Unless otherwise arranged, the class will meet during scheduled class hours. Please note that attendance is important since issues and questions may be raised in class, and announcements made, along with information disseminated through cuLearn. As external professionals are often involved in our work, scheduling changes for guest lectures, presentations, and Reviews may occur at short notice, requiring students to stay informed.

Changes to the Course Outline

The course outline may be subject to change in the event of extenuating circumstances.

Appendix A - Course Schedule

There are a variety of schools of thought on research approaches, a variety of methods from social sciences and humanities and a variety of methods used in design. This course provides an introduction to this landscape through a variety of readings from experts in the field, complemented by activities and assignments where you can practice applying what you've learned. In order to become adept at defining a research problem and understanding, selecting and applying research methods to answer our questions, we need to read about the methods available to us in detail and find the right fit. This course provides a reading framework designed to help bring you through this material and build your confidence in conducting research.

APPENDIX A

IDES 5102/HCIN 5404 Research Methods – Readings, Activities & Deliverables

Week	Readings/Activities in Qualitative vs. Quantitative Research Methods in Design and Related Deliverables	
Wk1 S6	Topic 1: Course Introduction Course overview.	Statistics for Design Readings and Activities
Wk2 S13	Topic 2: Discourse in Research in/on/for Design	1 Introduction to statistics and experimental design
Wk3 S20	Topic 3: Philosophical Roots of Research & Essentials	2 Descriptive statistics
Wk4 S27	Topic 4: Basic Methods of Data Collection through Inquiry (Asking) <i>Deliverable: Assignment 1 Essay (digital submission).</i>	3 Normal distribution
Wk5 O4	Topic 5: Creative Methods for Data Collection through Inquiry (Asking)	4 Using the Normal Distribution
Wk6 O11	Topic 6: Basic Methods for Data Collection through Inquiry (Asking)	5 Choosing statistical tests
Wk7 O18	Topic 7: Basic Methods for Data Collection through Observation (Looking) <i>Deliverable: Assignment 2 Mini-Study (digital submission and print if appropriate).</i>	6 Two level non- parametric tests: within subjects
OCTOBER 22-26 FALL BREAK – NO CLASSES		
Wk8 N1	Topic 8: Creative Methods for Data Collection through Observation (Looking)	7 Two level non- parametric tests: within subjects
Wk9 N8	Topic 9: What Frames my Approach? Theoretical Frameworks, Tools for Problem Identification	8 K-Sample non- parametric tests: within subjects
Wk10 N15	Topic 10: Creative Methods of Analysis, Interpretation & Presentation	9 K-Sample non- parametric tests: between subjects
Wk11 N22	Topic 11: Coding and Diagraming Approaches for Interpretation	10 Parametric two sample tests: between subjects
Wk12 N29	Topic 12: Review of Mock Research Proposal <i>Deliverable: Assignment 3 Progress Review (digital submission, physical media as appropriate)</i>	11 Parametric two sample tests: within subjects Test Questions Posted to cuLearn
Wk13 D6	Topic 13: Review of Mock Research Proposal <i>Deliverable: Assignment 3 Progress Review (digital submission, physical media as appropriate)</i> <i>Deliverable: Hand in Statistics Workbook + Test Questions.</i>	
D21 Take Home	<i>Deliverable: Hand in Mock Research Proposal (digital submission, print if appropriate).</i>	