



École des sciences de l'information
School of Information Studies

ISI 5307: Research and Evaluation in Information Studies

Winter 2020, Thursday 17:30-20:30, Desmarais 10161 (HYBRID)

COURSE OUTLINE

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Office hours: Thursday 16:00-17:00 or by appointment

Course description

ISI5307: RESEARCH AND EVALUATION IN INFORMATION STUDIES (3cr.)

Analysis of the research process from qualitative, quantitative, and evaluative perspectives. The course addresses each specific element of the research and evaluation process, articulation of a research problem or evaluation goal, data collection and analysis, and dissemination of findings through a combination of critical analysis of existing research and in-class experimentation.

Course objectives and learning outcomes

Upon completion of this course, students will be able to:

- Demonstrate an understanding of the research process
- Describe the purpose, concepts and principles of research in information science
- Develop research questions
- Evaluate the research literature in information and library science
- Compare and select various quantitative and qualitative research methods
- Develop a research proposal

Language of instruction

English

Students may submit their work in either English or French in accordance with the University of Ottawa's Regulation on Bilingualism: <http://web5.uottawa.ca/admingov/bilingualism.html>

Teaching methods

The course will include lectures, in-class discussions and exercises. For optimal class time, students are required to prepare mandatory readings. In class, students are expected to contribute to discussions and take part in the various activities. ISI 5307 is a blended learning course (HYBRID) with three classes taking place online.

Communication

Students are encouraged to use the course Slack (invitation via email) to engage in online discussions and share information relevant to the course with each other. The preferred mode of communication with the professor is in person during office hours, before and after class or during individual appointments arranged via Slack or email. Alternatively, the professor can be contacted via Slack or email.

Evaluation methods and distribution of grades

Assignment 1: Presentation of research paper	10%
Assignment 2: Research question	10%
Assignment 3: Research ethics	5%
Assignment 4: Literature review	20%
Methodology presentation	15%
Research proposal	35%
Class participation	5%
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	100%

The participation component of the grade will take into account preparation and active participation in class discussions and activities. Absences from class must be discussed with the professor.

Deadlines for assignments and the final paper must be respected.

Required readings

Students are expected to retrieve, read and prepare all required readings and at least one recommended reading per week ahead of class and participate in discussions based on those readings.

Academic Regulations

Please consult the University of Ottawa's regulations on:

- **Academic Fraud:** <http://www.uottawa.ca/about/academic-regulation-14-other-important-information>
- **Plagiarism:** <http://www.uottawa.ca/vice-president-academic/sites/www.uottawa.ca.vice-president-academic/files/academic-integrity-students-guide.pdf>
- **Examinations & Grading:** http://www.uottawa.ca/graduate-studies/students/general-regulations?cat_1=89

Sexual Violence

The University of Ottawa does not tolerate any form of sexual violence. Sexual violence refers to any act of a sexual nature committed without consent, such as rape, sexual harassment or online harassment. The University, as well as student and employee associations, offers a full range of resources and services allowing members of our community to receive information and confidential assistance and providing for a procedure to report an incident or make a complaint. For more information, visit <http://www.uottawa.ca/sexual-violence-support-and-prevention>

Mental Health

The University of Ottawa and your professors are committed to your wellbeing. The University's core values include preparing students to become leaders and encouraging and enabling them to achieve personal growth and wellness. As such, the Mental Health and Wellness website acts as a central location for information and resources at our University and in the surrounding community. It is also an excellent tool for family members, friends and colleagues who may need to help someone close to them that is studying or working at the University. For more information, visit <https://www.uottawa.ca/wellness/>.

For 24/7 support, students can call *Good2Talk* at +1 (866) 925-5454. *Good2Talk* is a post-secondary student helpline which provides professional and confidential support for students in Ontario free of charge.

Calendar of activities and evaluations

Date	08.01.	15.01.	22.01.	29.01.	05.02.	12.02.	19.02.	26.02.	04.03.	11.03.	18.03.	25.03.	01.04.	08.04.	15.04.
Week	1	2	3*	4	5	6	Reading week	7	8*	9	10*	11	12	13	14
Assignment	#1		#2	#3	#4										
Group project															
Final paper															

Class presentations and discussions

Week 1. Introduction (08.01.)

Outline of the scope, objectives, and requirements of the course; introduction to the scientific method and research and evaluation in information science



Assignment 1: Short presentation of an information studies research paper (*due dates t.b.d.*)

Recommended reading:

Wildemuth, B. M. (2017). Application of social research methods to question in information and library science. Santa Barbara, CA: Libraries Unlimited.
Chapter 1. Using Research Results to Improve Practice in the Information Professions (pp. 3-7)

Week 2. Research approaches (15.01.)

Research design; overview of quantitative, qualitative and mixed methods; epistemology

Required reading:

Creswell, J.W., & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.
Chapter 1. The Selection of a Research Approach (pp. 3-22)

Recommended reading:

Creswell, J.W., & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.
Chapter 1. The Selection of a Research Approach (pp. 3-22)

Week 3. Research ethics (22.01., online)

Tri-Council Policy Statement (TCPS): Ethical Conduct for Research Involving Humans;



Assignment 2: *TCPS 2 Course on Research Ethics (CORE)* (*due 27.01.*)

Required reading:

Creswell, J.W., & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.
Chapter 4. Writing Strategies and Ethical Considerations (pp. 75-98)

Recommended reading:

Creswell, J.W., & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.
Chapter 4. Writing Strategies and Ethical Considerations (pp. 75-98)

Week 4. Research questions, hypotheses and the use of theory (29.01.)

Developing research questions and hypotheses; researchability of a research topic; purpose statement; the role of theories in information science



Assignment 3: Research question (due 03.02.)

Required reading:

Creswell, J.W., & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.
Chapter 3. The Use of Theory (pp. 49-74)
Chapter 5. The Introduction (pp. 101-115)
Chapter 6. The Purpose Statement (pp. 117-132)
Chapter 7. Research Questions and Hypotheses (pp. 133-146)

Recommended reading:

Wildemuth, B. M. (2017). *Application of social research methods to question in information and library science*. Santa Barbara, CA: Libraries Unlimited.
Chapter 2. Developing a Research Question (pp. 11-20)
Chapter 3. Questions Originating in Library and Information Practice (pp. 21-27)
Chapter 5. Testing Hypotheses (pp. 34-40)
Chapter 7. Questions Related to Theory (pp. 41-48)

Week 5. Literature review, research tools and services (05.02.)

Retrieving, reviewing and managing literature; resources and tools supporting the research process; library research services



Assignment 4: Literature review (due 24.02.)

Required reading:

Creswell, J.W., & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.
Chapter 2. Review of the Literature (pp. 23-47)

Recommended reading:

Creswell, J.W., & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.
Chapter 2. Review of the Literature (pp. 23-47)

Week 6. Quantitative methods (12.02.)

Collecting, analyzing, summarizing and interpreting quantitative data; sampling; validity; survey research; experimental research; descriptive and inferential statistics

Required reading:

Creswell, J.W., & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.
Chapter 8. Quantitative Methods (pp. 147-177)

Recommended reading:

Creswell, J.W., & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.
Chapter 8. Quantitative Methods (pp. 147-177)

Week 7. Qualitative and mixed methods (26.02.)

Explanatory and exploratory research; observation studies; interviews and focus groups; content analysis; purposeful sampling; integration of quantitative and qualitative methods

Required reading:

Creswell, J.W., & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.
Chapter 9. Qualitative Methods (pp. 179-211)
Chapter 10. Mixed Methods Procedures (pp. 213-246)

Recommended reading:

Creswell, J.W., & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.
Chapter 9. Qualitative Methods (pp. 179-211)
Chapter 10. Mixed Methods Procedures (pp. 213-246)

Week 8. Data analysis and visualization (04.03., online)

Summarizing and visualizing research results; quantitative and qualitative data; data visualization idioms; effectiveness of marks and channels

Required reading:

Munzner, T. (2014). *Visualization Analysis & Design*. Boca Raton, FL: CRC Press.
Chapter 2. What: Data Abstraction (pp. 21-40)

Required reading:

Munzner, T. (2014). *Visualization Analysis & Design*. Boca Raton, FL: CRC Press.
Chapter 2. What: Data Abstraction (pp. 21-40)

Week 9. Bibliometrics (11.03.)

Quantitative analysis of publication and citation behavior; Science Citation Index and Web of Science

Required reading:

Garfield, E. (1955). Citation indexes for science: New dimensions in documentation through association of ideas. *Science*, 122(3159), 108–111. <https://doi.org/10.1126/science.122.3159.108>
Garfield, E. (1970). Citation analysis as a tool in journal evaluation – Journals can be ranked by frequency and impact of citations for science policy studies. *Science*, 178(4060), 471–6. <https://doi.org/10.1126/science.178.4060.471>

Recommended reading:

Creswell, J.W., & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.
Chapter 1. The Selection of a Research Approach (pp. 3-22)

Week 10. Social network analysis (18.03, online)

Social network analysis (SNA); concept maps and knowledge networks; clustering and similarity

Required reading:

Börner, K., Klavans, R., Patek, M., Zoss, A.M., Biberstine, J.R., Light, R.P., Larivière, V., & Boyack, K.W. (2012). Design and update of a classification system: The UCSD map of science. *PLOS ONE*, 7(7), e39464. <https://doi.org/10.1371/journal.pone.0039464>


Recommended reading:

Van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538.

Week 11. Planning a research/evaluation project (25.03.)

Planning, design and evaluation of research/evaluation projects

Week 12. Presentation of research/evaluation proposals (01.04.)

 Presentation and peer evaluation of research methodology

Assignments

Assignments need to be submitted via BrightSpace and are due at 8 PM of the respective date. Late submissions are not accepted. Exceptions must be discussed with the professor in advance.

Assignment 1: Presenting a research paper (*due tbd.*)

Assignment 2: Research ethics (*due 27.01.*)

Assignment 3: Research question (*due 03.02.*)

Assignment 4: Literature review (*due 24.02.*)

Research proposal

Students will create a research/evaluation proposal as their final paper. Instructions are provided in BrightSpace.

Presentation of research/evaluation methodology (*slides 30.03.; oral presentation 01.04.*)

Research proposal (*due 14.04.*)