The student will work on a project under faculty supervision. The project may involve an extension, or more detailed coverage, of material presented in other courses. Credit for the course will involve a written report in paper format as well as a series of oral presentations at different stages of the process.

Learning Outcomes

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

Create a research question / hypothesis and a solution methodology for a problem in the Statistical or Data Sciences that is feasible, well-defined, specific, and relevant.

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Pautasso, M. (2013). Ten simple rules for writing a literature review. *PLoS computational biology*, *9*(7), *e1003149*. Available online here: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3715443/

Students are responsible for checking the course OWL site (http://owl.uwo.ca) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class.

All course material will be posted to OWL: http://owl.uwo.ca.

If students need assistance with the course OWL site, they can seek support on the OWL Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

Technical Requirements

A notebook with internet access is required.

5. Methods of Evaluation

The overall course grade will be calculated as listed below:

Reports (3) 65 % Presentations (3) 35 %

The course includes the following activities:

Project Proposal

The project proposal stage is focused in designing the research question / hypothesis to tackle and placing it in the context of the literature review. During the first month, students will work with their supervisors defining the problem to work on during the thesis year. After the problem has been agreed, these activities follow:

General problem presentation (Week 4, 5% of final grade): In this week, the students will present the research question / hypothesis to tackle, the motivation for the problem (why it is important) and a skeleton methodology (vignettes with what techniques to explore, what data to use, etc). The presentation should last no more than 15 minutes with 5 minutes for questions.

Project proposal report (Week 6, Deadline in OWL, 10% of final grade, marked by supervisor):

Project proposal report (Week 6, Deadline in OWL, 10% of final grade, marked by supervisor): Project report of maximum 2000 words including:

- o Title.
- o Tentative abstract.
- o Introduction discussing the motivation of the problem, the research questions and hypothesis, an introduction to the methodology used and why it was selected and a plan for the paper structure.
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Preliminary Results Report

Presentation (worth 15% of the final grade): Students will present their final problem and Research Questions / Hypotheses, the final literature review and how their research is placed within the context of the literature, and the methodology proposal.

Preliminary results report (worth 20% of the final grade. Deadline Week 8 of the Winter semester). This section includes a report with the preliminary results, a report, marked by the supervisor, up to 8000 words including:

- o Title.
- o Final abstract proposal
- o Introduction discussing the motivation of the problem, the research questions and hypothesis, an introduction to the methodology used and why it was selected, and the final paper structure.
- o Literature review.
- o Methodology.
- Data description.
- o Experimental setting and preliminary results.
- o Conclusions draft.

Final Report and Final Presentation

Final Presentation: The last stage of the course includes the final presentation of the thesis and the final report. The final presentation is a 20-minute presentation of the project which must include all topics covered. The presentation will occur during the exam period of the Winter semester and is worth 15% of the final grade.

The final presentation will be followed by the final thesis (worth 35% of the final mark), a document in paper format of between 5,000 and 10,000 words. The paper must include the following sections (or similar alternatives if appropriate):

Students who are unable to secure a project by the submission of the report (second week of October) will be eliminated from the course.

As this is an essay course, the written part of the course must be approved with mark over 50%. Students who do not reach that mark will fail the course independently of the mark in the presentation component of the course.

Accommodated Evaluations

Attendance to all presentation sessions is mandatory and all deadlines are final. In case of excused absences due to illnesses or other excused situations, an alternative date will be agreed for presentations. For report submissions, the deadline for the report will be 24 hours after the last excused absence.

Unexcused late submissions will be subject to a late penalty of 20% per day, starting at 00:00 the day after the submission date.

6. Student Absences

Academic Consideration for Student Absences

Students who experience an extenuating circumstance (illness, injury or other extenuating circumstance) sufficiently significant to temporarily render them unable to meet academic requirements may submit a request for academic consideration through the following routes:

(i)

https://multiculturalcalendar.com/ecal/index.php?s=c-univwo.

Absences from Final Examinations

If you miss the Final Exam, please contact the Academic Counselling office of your Faculty of Registration as soon as you are able to do so. They will assess your eligibility to write the Special Examination (the name given by the University to a makeup Final Exam).

than 2 exams in 23-hour period, more than 3 exams in a 47-hour period).

6. Accommodation and Accessibility

Accommodation Policies Students wit Please visit the Science & Basic Medical Sciences Academic Counselling webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters: https://www.uwo.ca/sci/counselling/.

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Accessible Education at (519) 661-2147 if you have any questions regarding accommodations.

Western University is committed to a thriving campus as we deliver our courses in the mixed model of both virtual and face-to-face formats. We encourage you to check out the Digital Student Experience website to manage your academics and well-being: https://www.uwo.ca/se/digital/.