

Instructor: Roberta Flemming: B&GS 0172 (rflemmin@uwo.ca)

Public Version

TA: Morgan Gabor (mgabor2@uwo.ca)

Purpose: The objectives of this course are to increase the graduate student's competency in critical thinking and communication of research. Students will learn effective literature search techniques/management from Taylor library by researching the topic of their research project or thesis, and will learn writing skills by writing a conference-style abstract and a research proposal which includes a clear statement of the research problem, their proposed objectives, background, research plan/methodology and anticipated impact. Students will effectively communicate their proposed research orally in a brief, Three Minute Thesis (3MT)-style presentation to the department. Students will experience the peer review process by critiquing scientific papers, as well as by reviewing each other's work and incorporating their peers' suggestions into their own revised proposals. Students will also receive training in preparation of an effective resume, interview & Team work skills. Students will experience a 'Mock Interview' for an imaginary job in the industrial or government sectors. Grant application writing will be taught by Western's Writing Support Centre. As part of the practice of communication, attendance at our Colloquium series is mandatory; it will be given a participation grade.

Tentative Schedule

Week#	Week of	Topic/Activity
Week 1:	Jan 17	Introductions (Teamwork exercise) Course Outline. Notes about Artificial Intelligence, Health & Wellness Resources
Week 2:	Jan 24	Scientific Method – Communication Thesis proposal writing - Research problem and objectives
Week 3:	Jan 31	Thesis proposal writing - Significance/impact of research "Scrutiny of the Abstract"
Week 4:	Feb 7	Guest Lecture by <i>Charlotte McClellan, Faculty of Information and Media Studies</i> Information searching and discovery – research databases and tools
Week 5:	Feb 14	Critical thinking and peer review Professional skills: Resume writing; Guest: <i>Bruce Hart</i> - Working in Teams
Week 6:	Feb 21	***** Reading Week (No Class) *****
Week 7:	Feb 28	Mock Interviews will be conducted (schedule TBD) (<i>Nigel Blamey, Roberta Flemming, David Good, Alina Shchepetkina</i>)
Week 8:	Mar 6	Communication - Scientific presentation; Three Minute Thesis (3MT) Discussion of proposal with peer reviewer
Week 9:	Mar 13	Guest Lecture: <i>Paul Schmidt, Writing Support Centre</i> - Grant Writing
Week 10:	Mar 20	Critical Reading of scientific literature - Seminar discussions
Week 11:	Mar 27	Practice your 'Three Minute Thesis' (3MT)-style presentations
*** Tuesday	April 2, 1:30 - 2:20	** 'Three Minute Thesis'-style presentations - Colloquium *****
Week 12:	April 3	3MT Presentations, continued... (those not given during Colloquium)

Evaluation

Participation:	Date (tentative)	Grade
Participation in class discussions – level of engagement	ongoing	5%
Attendance at Department Colloquia – Blog/report on one	mandatory	5%
Professionalism:		
Resume / Curriculum Vita (CV):	Feb 28	5%
Mock Interview:	Feb 28	15%
Scientific Critique:		
Critique a scientific paper	Mar 20	5%
Critique as peer reviewer of fellow student's proposal	Mar 6	5%
Scientific Writing and Communication:		
Research proposal due for peer review	Feb 25	15%
Peer review (Comments back - discuss with author)	Mar 6	-
Conference-style abstract (e.g. GAC-MAC or AGU)	Mar 27	10%
"Three Minute Thesis" 3MT-style Oral presentation	Apr 2 or Apr 3	15%
Revised research proposal due for grading	Apr 8	20%

Course Details:

Weekly Graduate Seminar: (5%) Your participation is mandatory. Level of engagement will be assessed.

Departmental Colloquium (5%)

Please note that one of the requirements for Geology-Geophysics 9580 is attendance at the monthly Departmental Colloquia. The colloquia are held on Tuesdays from 1:30-2:30 pm in BGS 0153 and sometimes on Fridays from 2:30-3:30 pm. Students in 9580 are required to attend as many of these monthly guest lectures as possible. Attendance at colloquia will make up 5% of your final grade. For full marks you must write a brief paragraph, or **Blog**, about one of the lectures you saw. Please email your paragraph to me. Please note that your Blogs will be posted on the OWL site.

Resume (5%): This will be given to Flemming and interviewer before the Mock Interviews. **Due Feb 28.**

Mock Interview (15%):

Participate in a Mock Interview for a company owned by one of the Faculty/Staff members. You will be graded on your professionalism and preparation. A Resume will be required.

Research Proposal: Over much of this term, you will be formulating a research proposal based on your proposed research project or thesis here at Western. This will include a title, abstract, background survey of the current literature in the field and how your research will contribute to that field, leading to a statement of the problem and objectives for your planned research as well as a statement of the significance or impact this research will have in your field. The two-step submission of your research proposal is described below:

Submission of Research Proposal (15%): Due Sun February 25. Each student shall submit a research proposal based on a format which will be given in an example template. This will be a maximum of 7 pages of text, double spaced (extra pages are allowed for figures & tables & references) with a minimum of 15 references.

Submission of Revised Research Proposal (20%): Due Monday April 8 (last day of classes). You will receive your peer-reviewed proposals back on March 8. Both your original and revised proposals will be submitted for final grading by April 10. Submission of a revised proposal both allows you to 'learn from your mistakes' as well as experiencing a process similar to that of professional peer review. Take care in making your revisions, as this step is worth over half of your grade for the proposal. If you decide to refute some of the proposed changes to your proposal, you will need to explain your decision on a separate *letter to the editor*, submitted with your revised proposal.

Peer Review of Proposals (5%): By Monday February 26, you will each be given one of your peer's research proposals to review. Pay attention to both style and content of this paper. 5% of your mark will be awarded on the basis of your review of this paper. Constructive criticism only please! **Due Wed March 6.**

Critique a scientific paper; discuss with your peers (5%): Wed March 20: Everyone will participate in group discussions where we critique pre-selected scientific papers which you will read in advance. For one paper (TBD), you will have an opportunity to co-lead the group discussion.

Conference-Style Abstract (10%): Due Wed March 27: A large part of scientific communication involves short communications such as conference abstracts. To practise this, you will submit an abstract, formatted as for GAC-MAC or AGU, together with a list of references (no more than one page of references), compiled in a standard format. The abstract and references should be no more than one page each. These must be received by March 27. This abstract will accompany your "Three Minute Thesis" (3MT)-style presentation.

"Three Minute Thesis" (3MT)-style presentation (15%): On April 2 (1:30 - 2:30 pm) or April 3 (11:30 am - 1:30 pm) each student will be expected to present a 3-minute long lay summary of their research proposal to the public with a 2 minute question period. These presentations will be made public and attended by a general audience. **Attendance for the entire session is mandatory. Participation is expected (i.e. ask questions!).**

We will practise these presentations prior to this event. The practice session will not be graded.

Note: There is **no final exam** in this course.

Ethical Conduct: Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:
http://www.uwo.ca/univsec/handbook/appeals/scholastic_discipline_grad.pdf

Plagiarism: Students must write their assignments in their own words. Whenever you take an idea, or a passage from another author, you must acknowledge this both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. **Plagiarism is a major academic offence.** All required papers may be subject to submission for textual similarity review to the commercial plagiarism-detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

Use of Artificial Intelligence (AI): Students may not use generative AI (e.g. ChatGPT) to write any component of their submissions for this course.

Course Website: Students should check OWL (<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. Students are responsible for checking OWL on a regular basis.

Policy on late assignments: All assignments are due on the date specified on the assignment. 10% will be deducted for every day late. If you have exceptional circumstances, please contact Dr. Flemming.

Contingency plan for an in-person class pivoting to 100% online learning

In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction, affected course content will be delivered entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The grading scheme will **not** change. Any remaining assessments will also be conducted online as determined by the course instructor.

Course Website:

Students should check OWL (<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. Students are responsible for checking OWL on a regular basis.

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

If students need assistance, 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.

Student Absences:

If you are unable to meet a course requirement due to illness or other serious circumstances, please follow the procedures below.

Assessments worth less than 10% of the overall course grade:

For missed assignments (< 10%) you need to contact the professor to arrange accommodation. This should be done before the assignment is due, or within 24 hours of your absence.

Assessments worth 10% or more of the overall course grade:

For work totaling 10% or more of the final course grade, you must provide valid medical or supporting documentation to the Academic Counselling Office of your Faculty of Registration as soon as possible. For further information, please consult the University's medical illness policy at https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf.

The Student Medical Certificate is available at

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf.

Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. **All documentation required for absences that involve course work \geq 10% must be submitted to the Academic Counselling office of a student's Home Faculty.**

Accommodation and Accessibility:

Religious Accommodation:

When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday to the course instructor and/or the Academic Counselling office of their Faculty of Registration. Please consult University's list of recognized religious holidays (updated annually) at <https://multiculturalcalendar.com/ecal/index.php?s=c-univwo>.

Accommodation Policies

Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf.

Academic Policies:

The website for Registrarial Services is <http://www.registrar.uwo.ca>.

In accordance with policy, https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

Support Services:

Please visit the Science & Basic Medical Sciences Academic Counselling webpage for information on add/drop courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters: <https://www.uwo.ca/sci/counselling/>.

Students who are in emotional/mental distress should refer to Mental Health@Western (<https://uwo.ca/health/>) for a complete list of options about how to obtain help.

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at https://www.uwo.ca/health/student_support/survivor_support/get-help.html.

To connect with a case manager or set up an appointment, please contact support@uwo.ca.

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 http://academicsupport.uwo.ca/accessible_education/index.html if you have any questions regarding accommodations.

Learning-skills counsellors at the Student Development Centre (<http://www.sdc.uwo.ca>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered in the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

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/>.