

ONE HEALTH 4980E

RESEARCH PROJECT AND SEMINAR
METHODOLOGY, EXPERIMENTATION AND COMMUNICATION IN ONE HEALTH

DEPARTMENT OF PATHOLOGY & LABORATORY MEDICINE

COORDINATOR:

Dr. Francisco Olea Popelka,
One Health Program Chair
HSA H408A
foleapop@uwo.ca

SUPPORT STAFF:

Cheryl Campbell, Undergraduate Assistant, Dept of Pathology & Laboratory Medicine

1. GENERAL OUTLINE

The goal of this seminar and research-based course and research project in 4th year is to introduce you to the qualitative and quantitative skills required to pursue a career in research. Students will undertake a research project that will cross disciplines and be supervised by faculty from either the medical or health sciences, social sciences or public health or in some cases, depending on the project, under co-supervision.

This will involve:

- the formulation of a research proposal and research hypothesis,
- collection of data to test your hypothesis or the development of an appropriate application to solve an existing problem,
- statistical analysis of the data, where appropriate, and
- the oral and written presentation of the methodology, results and conclusions.

Independent study, self-directed experimental design and analysis, and effective communication skills will be emphasized. Students are required to spend at least 10-12 hours/week working with their supervisor(s) on their chosen research problem. Specific projects and assignment to supervisors will be worked out between the student and supervisor early in September.

In addition, we will hold a **weekly seminar session on Wednesdays from 10:30 am to 1:30 pm** (tentative timetable and schedule is attached), but there is some flexibility in order to accommodate supervisor's schedules during those sessions in which you will present your proposals or final research projects. You will be required to present your project proposal report during the Fall term (in written and oral form), and a final report (written and oral form) during the Winter term.

2. COURSE OUTLINE

INTRODUCTION & ORIENTATION

During the first two to three weeks of September you will meet with and be assigned to your supervisor(s). In consultation with student and supervisor, attendance within the laboratory and weekly expectations will be delineated.

RESEARCH PROJECT

There are two main mechanisms for research project placement.

1) Students who were working/volunteering in a research laboratory or project (in Pathology or other Schulich departments) prior to starting their 4th year thesis projects may be able to continue in the same project laboratory, provided that the thesis portion 'builds' on the project (i.e. students cannot use the data obtained prior to the thesis project start date of September to satisfy the requirements), and the supervisor agrees on taking the student as a 4th year thesis student.

2) A list of potential research supervisors (projects) is provided to students. These projects cover a wide range of topics, thus, students review these projects and inform the coordinator of their preference. Every effort is made to match the student and their preferred project. It is possible, however, that students may not be matched to their first choice.

Once the project/laboratory placements are finalized, students should report to their faculty supervisor to discuss weekly hours, research projects and the initial research proposal. **Students will report to their faculty supervisor by no later than Wednesday, September 25**, to discuss weekly hours, your project and the initial research proposal.

A written research project proposal is due by December 11th (copy to supervisor and copy to Dr. Olea Popelka).

The final written research project report will be due the last week of class in the Winter term (April 8th, 2019) (copy to supervisor and to Dr. Olea Popelka).

SCIENTIFIC COMMUNICATION

During the weekly seminar sessions, students will have an opportunity to practice their oral presentation skills and to present their initial research proposal (in Fall) and a final research project report (Winter). We will also have a *Research Day* where students will be expected to present your work-in-progress in the form of a poster and be available to answer questions from fellow students and faculty (typically scheduled during the last week of March).

You will also present a critique of one of the key journal articles in One Health (provided in the OWL site and or selected by the student in consultation with the course coordinator) during the winter semester as you develop your project proposal and participate as a discussant in other journal critiques (see tentative schedule attached)

OBJECTIVES AND EVALUATION

I. One Health Approach

Objectives: To develop a familiarity with a variety of methodologies and approaches to problem solving in One Health (through journal article critiques and your research project).

II. Research Projects

Objectives:

- To develop skills in the formulation of hypothesis and the design and execution of a research project.
- To develop the analytical skills required to conduct research in One Health and to derive appropriate conclusions.
- To develop skills in critical evaluation of medical, scientific, and One Health information.

III. Scientific Communication

Objectives: To develop skills in oral and written communication.

EVALUATION:

Research Project		80%
^a Written proposal	20%	
Oral Presentation	15%	
^b Final written report	20%	
Oral Presentation	15%	
^c Research Day Poster Presentation	10%	
Critical Evaluation / Communication		20%
Journal paper critique presentation (1 x 25%)	25%	
Journal critiques peer evaluations (5 x 15%)	75%	

^a Research Proposal – The proposal should be prepared in consultation with your supervisor. Detailed guidelines will be provided to all students before the submission deadline. In brief, proposal reports should include the following sections:

- Overall objective(s)
- Background – brief introduction and evidence that led to formulation of hypothesis
- Hypothesis or research focus/Specific aims (when appropriate)
Main goal and specific objectives/aims
- Outline of methodology - how are you going to test your hypothesis or explore the issue chosen for investigation, including relevant experimental model and approaches (qualitative or quantitative including statistical analyses when appropriate) to be used
- Significance of research- What is the significance of the study? You may also include the expected results. How are you using the One Health approach in your project
- References- A complete list of literature cited.

^b Final Report – The written report should be in the format of a scientific article (can use an appropriate format for submission, e.g. Journal of medicine and Internet Research, JAMIA, IJMI, BMC Medical Informatics and Decision Making. Include:

- < a general discussion of the problems encountered and the possible solutions,
- < the direction of the research if the project were to be continued.

^c Poster presentation – Evaluation provided by invited faculty and course coordinator. General format to include: Objectives & Aims, brief outline of Methodology, Results to date, Summary and Significance of Research. Student will also be evaluated on how well they understood the research methodology, results and significance of research in answering questions.

KEY DATES – FALL TERM:

September 11th **Decision on project(s)/supervisor(s)**

During the following week set up times with faculty member(s) to discuss:

1. the project (outline, scope, background information)
2. time commitment
3. Safety workshops, any necessary training etc.

September 25th **Start work on project**
Meet with supervisor on expectations and requirements of the project.

Nov 27th - Dec 4th **Proposal Oral Presentation**
Prepare and deliver proposal, methods and approach to fellow students and faculty supervisors

December 11th **Written proposal reports due**
Formatting guidelines will be provided.
One copy of the proposal to be submitted to the supervisor and one copy to the course coordinator.

KEY DATES – WINTER TERM:

January 8 **Classes resume: submission of article critique**

February 14th* **Submit abstracts for Research Day**
Date to be confirmed. *Guidelines will be provided*

February 15 - 23 **Reading Week**

March 18th – March 25th **Research Project Presentations**
Final research project presentation to fellow students and faculty supervisors

April 8th **Final Written Research Project reports due**
Formatting guidelines will be provided.
One copy of the final project to be submitted to the supervisor and one copy to the course coordinator.

Policy on the Rounding and Bumping of Marks:

Across the Basic Medical Sciences Undergraduate Education programs and within the department of Pathology and Laboratory Medicine, we strive to maintain high standards that reflect the effort that both students and faculty put into the teaching and learning experience during this course. All students will be treated equally and evaluated based only on their actual achievement. Final grades on this course, irrespective of the number of decimal places used in marking individual assignments and tests, will be calculated to one decimal place and rounded to the nearest integer, e.g., 74.4 becomes 74, and 74.5 becomes 75. Marks WILL NOT be bumped to the next grade or GPA, e.g. a 79 will NOT be bumped up to an 80, an 84 WILL NOT be bumped up to an 85, etc. The mark attained is the mark you achieved, and the mark assigned; requests for mark “bumping” will be denied.

SYLLABUS STATEMENTS

Students are responsible for reading, understanding, and complying with the following statements and policies, which apply to all students enrolled in this course.

Notice of Senate Regulation Regarding the Student’s Responsibility Regarding Requisites

Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

Copyright Statement

Course material produced by faculty is copyrighted and to reproduce this material for any purposes other than your own educational use contravenes Canadian Copyright Laws.

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Statement on Official Email Addresses

In accordance with policy, <http://www.uwo.ca/its/identity/activatenonstudent.html> 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.

Statement on Academic Offences

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 website: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

As stated above, all parts of the Term Project will 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 documents 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 The University of Western Ontario and Turnitin.com <http://www.turnitin.com>

Additionally, quizzes, mid-term tests, and the final exam may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

Statement on Use of Cell Phone and Electronic Devices

The Schulich School of Medicine & Dentistry is committed to ensuring that testing and evaluation are undertaken fairly across all our departments and programs. For all tests and exams, it is the policy of the School and the Department of Pathology and Laboratory Medicine that any electronic devices, i.e., cell phones, tablets, cameras, or iPod are strictly prohibited. These devices **MUST** be left either at home or with the student's bag/jacket at the front of the room and **MUST NOT** be at the test/exam desk or in the individual's pocket. Any student found with one of these prohibited devices will receive a grade of zero on the test or exam. Non-programmable calculators are only allowed when indicated by the instructor. The Department of xxx is not responsible for stolen/lost or broken devices.

Absence from Course Commitments

Academic Consideration for Student Absences

If you are unable to meet a course requirement due to illness or other serious circumstances, you must seek approval for the absence as soon as possible. Approval can be granted either through a **self-reporting of absence** or via the Academic Counselling Office of the Faculty of Science located in NCB 280, and can be contacted at scibmsac@uwo.ca .

NEW!! For further information, please consult the university's policy on academic consideration for student absences as there are updates to the academic consideration procedures.

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

The policy on Accommodation for Religious Holidays can be found here:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf

A. Absence for Medical and Non-Medical Reasons

Students must familiarize themselves with the Policy on Accommodation for Medical Illness for Undergraduate Students, located at:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf

A Western Student Medical Certificate (SMC) is required when a student is seeking academic accommodation. This documentation should be obtained at the time of the initial consultation with the physician/nurse practitioner or walk-in clinic.

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

Medical/Compassionate Relief Program Policy

It is current policy that students who are unable to write a test or examination or other form of course evaluation are required to obtain a medical certificate that is taken to the Academic Counseling Office, NCB 280 (for Science and Basic Medical Science students) or to your appropriate Home Faculty Counseling Office. In the case of an unexpected absence on compassionate grounds, documentation is also requested. **Such documentation must be submitted by the student directly to the Academic Counseling office and not to the instructor.** An academic counselor in that office will review and either approve or deny the accommodation request. It will be the Academic Counseling office that will determine if accommodation is warranted. This policy applies to all forms of assessment, including evaluations that are less than 10%.

Statement from the Academic Counselling Office, Faculty of Science (for Science and BMSc students)

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to the Academic Counselling Office as soon as possible and contact your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the accommodation has been approved by the Academic Counselling Office and the instructor has been informed.

As previously stated, as students have substantial flexibility regarding the number and timing of quizzes they can take throughout the term, accommodation for missed quizzes will not be considered under any circumstances.

For students with an approved accommodation for the mid-term test, students will be required to arrange with the Instructors to re-take the mid-term test within 48 hours of their return to academic activities. The Instructors reserve the right to use an alternate form of the mid-term test (e.g., different questions, question order etc.). If a student misses the agreed upon time to re-take the mid-term test, the student's grade for the mid-term test will be recorded as "0" ("zero").

For students with an approved accommodation for a missed submission deadline for **any** part of the Term Project, that part is due within 8 hours of the students return to academic activities, after which time the late submission policy, stated above, will be applied.

For students with an approved accommodation for the final exam, students will be required to re-take the final exam during the “exam make-up session”, as scheduled by the Registrar. The Instructors reserve the right to use an alternate form of the final exam (e.g., different questions, question order etc). If a student fails to complete the final exam during the scheduled “make-up session”, the student may chose (a) to have their grade for the final exam be recorded as “O” (“zero”) OR (b) to re-take the final exam during the next scheduled offering of the course.

B. Special Examinations

http://www.uwo.ca/univsec/pdf/academic_policies/exam/definitions.pdf

A Special Examination is any examination other than the regular final examination, and it may be offered only with the permission of the Dean/Academic Counselling Office of the Faculty in which the student is registered, in consultation with the instructor and Department Chair. Permission to write a Special Examination may be given on the basis of compassionate or medical grounds with appropriate supporting documents. You may also be eligible to write the Special Examination if you are in a “Multiple Exam Situation”. See: http://www.registrar.uwo.ca/examinations/exam_schedule.html

A Special Examination must be written at the University or an Affiliated University College no later than 30 days after the end of the examination period involved. To accommodate unusual circumstances, a date later than this may be arranged at the time permission is first given by the Dean/Academic Counselling Office of the Faculty. The Dean/Academic Counselling Office will consult with the instructor and Department Chair and, if a later date is arranged, will communicate this to the Office of the Registrar.

If a student fails to write a scheduled Special Examination, permission to write another Special Examination will be granted only with the permission of the Dean/Academic Counselling Office in exceptional circumstances and with appropriate supporting documents. In such a case, the date of this Special Examination normally will be the scheduled date for the final exam the next time the course is offered.

When a grade of Special (SPC) or Incomplete (INC) appears on a student's record, the notations will be removed and replaced by a substantive grade as soon as the grade is available.

Support Services

Academic Counselling (Science and Basic Medical Sciences): <http://www.uwo.ca/sci/counselling>

Accessibility: Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 x 82147 for any specific question regarding an accommodation. The policy on Accommodation for Students with Disabilities can be found here:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic%20Accommodation_disabilities.pdf

Student Development Centre (SDC): Learning-skills counsellors at SDC 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 throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling. <http://www.sdc.uwo.ca>

Mental Health: Students who are in emotional/mental distress should refer to Mental Health@Western for a complete list of options about how to obtain help. http://www.health.uwo.ca/mental_health

Student Health Services: <https://www.uwo.ca/health/shs/index.html>

Additional student-run support services are offered by the USC, <http://westernusc.ca/services>