

ONE HEALTH 3600A/B – ONE HEALTH IN ACTION

Regularly Scheduled Class Meeting Time

January 6, 2020 – April 3, 2020
Tuesdays 8:30AM – 9:20AM & Thursdays 8:30AM – 10:20PM
University College Room 1105

Course Co-Lead Instructors

Dr. Stephanie J. Frisbee, PhD, MSc (sfrisbee@uwo.ca)
Dr. Francisco Olea-Popelka, DVM, PhD, MSc (foleapop@uwo.ca)
Department of Pathology and Laboratory Medicine
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Coordinator

Cheryl Campbell (ccampbel@uwo.ca)
Program Coordinator for Undergrad & Postgrad Education
Department of Pathology and Laboratory Medicine
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Course Teaching Assistant

Connor Chato (cchato@uwo.ca)
MSc Candidate
Department of Pathology and Laboratory Medicine
Schulich School of Medicine and Dentistry

Course Description

Key research designs and methodologic approaches fundamental to the multi-sectoral and collaborative One Health approach are presented in both lectures and in-depth case studies. Topics covered include the study design and methods, data surveillance systems, engaging stakeholders, and implementing the One Health approach into action and policy change.

Anti-requisite(s): None

Pre-requisites: One Health 3300A/B with a minimum final grade of 70%

Co-requisites: None

Course Information: 3.0 hours per week; 0.5 FCE course

Course Summary

This course represents a core learning experience for students in One Health. Fundamental research and methodologic approaches in One Health will be emphasized, including: study designs; data systems and surveillance; data analytics; informatics; collaboration and team-work in interdisciplinary teams; engaging stakeholders; advocacy and the role of One Health in informing policy; and integrating One Health into governance systems. Students will synthesize and integrate these fundamental concepts during critical evaluations of contemporary One Health case studies.

This class will meet twice weekly. Class sessions will be dedicated to reviewing topics and concepts, and discussions of One Health research and case studies. Students will have the opportunity to interact with a wide range of faculty actively engaged in One Health research. Students are expected to attend all class sessions.

Course Learning Objectives

Upon completion of this course, students should:

1. Have an understanding of One Health research, and the key features that differentiate a research study using a One Health approach;
2. Be able to identify and discuss key study designs in One Health;
3. Identify and discuss the myriad ethical considerations in One Health research;

4. Identify and discuss strategies to address ethical considerations in One Health research;
5. Identify and discuss key methodologic and analytic approaches in One Health research;
6. For a given health problem, identify and discuss the role of key stakeholders using the One Health approach;
7. Identify and discuss strategies for engaging stakeholders to develop solutions to One Health problems;
8. Identify and discuss strategies for implementing One Health findings into policy and institutional “solutions”;
9. Gain familiarity with the One Health scientific literature;
10. Critically appraise One Health case studies using the scientific literature and the One Health approach.

Course OWL Site

This course has an OWL site, which will be used extensively throughout the term for readings, quizzes, the term project, among others. The course OWL site can be found at: <https://owl.uwo.ca/portal>. If students encounter issues using OWL, please see: <https://owl.uwo.ca/portal/site/owldocs>.

Course Materials

The following text is required for this course and will serve as the basis for lectures and in-class activities. This text is available, free of charge, to all students through the “online resources” at the Western Libraries.

Deem SL, Lane-deGraaf KE, Rayhel EA. *Introduction to One Health: An Interdisciplinary Approach to Planetary Health*. Hoboken, NJ: Wiley Blackwell; 2019. [Available at: <https://www.lib.uwo.ca/cgi-bin/ezpauthn.cgi?url=https://ebookcentral.proquest.com/lib/west/detail.action?docID=5572466>]

The following texts may also serve as supplemental resources for students. When available, links to the reference at the Western Libraries or other source is listed.

Atlas, R. M., & Maloy, S. R. (2014). *One Health: People, Animals, and the Environment*. Washington, DC: ASM Press. [Western Library Resource: Book In Library, WC950.058 2014, Taylor Library Stack 4 (S4) - Regular Loan]

Cork, S. C., Hall, D. C., & Liljebjelke, K. A. (2016). *One Health Case Studies: Addressing Complex Problems in a Changing World*. Sheffield, United Kingdom: 5M Publishing. [Western Library Resource: Online Resource, Record # b7322015]

Jacobsen, K. H. (2016). *Introduction to Health Research Methods*: Jones & Bartlett Learning.

**This text is a free resource through the Western Libraries and is linked into the course OWL site*

Veterinarians without Borders Canada. (2010). *One Health for One World: A Compendium of Case Studies*. Prepared by Veterinarians with-out Borders / Vétérinaires sans Frontières - Canada with support from the Public Health Agency of Canada. [Available at: <https://www.vetswithoutborders.ca/images/pdfs/OHOW%20Compendium%20Case%20Studies.pdf>]

Walton, M. (Ed.). (2019). *One Planet, One Health*. AUSTRALIA: Sydney University Press. doi:10.2307/j.ctvggx2kn [Open Access Resource: <http://www.oapen.org/download/?type=document&docid=1004812>]

Zinsstag J., Schelling E., Waltner-Toews D., Whittaker M., Tanner M., (Eds.). (2015). *One Health: The Theory and Practice of Integrated Health Approaches*. Oxford, UK and Boston, MA.: CABI International.

Additionally, multiple additional readings, web-based materials, and materials for in class activities may be provided throughout the term. These materials will be available to students, free-of-charge, through the course OWL site.

Assessments & Evaluation

The student’s grade for this course will be determined as follows:

	COMPONENT	% OF FINAL GRADE
One Health Term Project	One Health Term Project: Oral Component	30% (Total)
	Initial Progress Oral Presentation	10%
	Final Oral Presentation	20%
One Health Term Project	One Health Term Project: Written Component	30% (Total)
	Part 1: Team structure, responsibilities, tasks, and timeline.	7.5%
	Part 2: Title and Proposed Summary & Goals	7.5%
	Part 3: Final, Revised Report	15%
Peer Evaluation	Peer Evaluation of Group Work	10% (Total)
Tests & Exams	Final Exam	30%
	TOTAL	100%

One Health Term Project (Written Component, 30%): The Term Project is designed to allow students to work with peers (classmates) in groups of 3-4 students to develop a one health action plan to address a health issue. The written component of the Term Project is divided in to three distinct parts, with due dates for these parts spread throughout the term. Detailed instructions for the Term Project, the three distinct parts, and grading rubrics, are provided separately and available in the course OWL site. All parts of the written component of the Term Project will be submitted through OWL and evaluated by TurnItIn. *Please note:* all parts to the Term Project are due on the date and time listed in this Syllabus. For each 24 hour period, or part thereof, that any part of the Term Project is submitted after the posted date and time, 25% will be deducted from the earned grade. No part of the assignment will be accepted if it is submitted more than 4 days (four 24 hour periods, or part thereof) after the posted due date and time. Please plan accordingly.

One Health Term Project (Oral Component, 30%): The goal of the oral component of the Term Project is to provide student with an opportunity to develop group-based oral presentation skills and the ability respond to questions. The first oral presentation (initial progress report) is and opportunity to introduce your topic, your team, action plan and one health approach to be used, progress to date, and to convey the importance of your work to the audience. Each presentation will be for approximately 8-12 minutes. Do keep in mind that your audience will comprise of 'non-experts' in the field. You should clearly describe the problem/knowledge gap, the project main goal, the methodology you will use, and your preliminary and expected results. You should clearly describe how the use of a one health approach is relevant (useful/beneficial) to the specific health topic (research question) under investigation. For the final oral presentations, (12-15 minutes) students will present their final action plans, evaluation plans, outcomes, as well as discussing the significance and implication of their work. Specific guidelines and grading rubrics will be provided in advance via OWL and discussed in class.

Peer Evaluation of Group Work (10%): Using a standardized assessment tool (to be posted in OWL) on group work skills and competencies, students will complete evaluations of their peers on their peer's group work and contributions to the group. As Term Project groups will contain 3-4 students, each student will receive 2-3 evaluations, the scores from which will be averaged, and that will comprise 10% of the student's final grade. It is mandatory that all students complete all peer evaluations for their fellow students; a student who does not complete and submit all their peer evaluations will have their own grade withheld until their evaluations are complete. Students will receive the evaluations from their peers (anonymized).

Final Exam (30%): The final exam may include definitions, short answer, and essay questions. The Final Exam will be held during the April examination period; the date and time for the Final Exam will be posted in the OWL course site when it is available from the Registrar.

Special Note on Group Work and Course Grading: *The Term Project will be completed in groups. Being able to effectively work in groups is a key skill and competency for one health and many other fields and, thus, it is essential that students develop the communication skills and professionalism to be able to work in groups that can consist of a wide variety of individuals, colleagues, and professionals from different backgrounds, expertise, and perspectives. While groups will be established and topics assigned by the Instructors, the Instructors expect that groups establish their own working arrangements and expectations, and that they manage tasks, timelines, workloads, and resolve conflicts and tensions within their own group (also important skills). In rare cases or uncommon, extenuating circumstances wherein issues cannot be resolved or managed within a group, the Instructors will be available to assist, or intervene when necessary. It is the intent that all members of the group receive the same grade for the oral and written components of the Term Project (a total of 60% of the course final grade). However, the **Instructors reserve the right to adjust and individual student's grade for any or all components of the Term Project based on the circumstances of these rare cases, consultation with the other group members, and / or based on a student's evaluation by their peers.** The amount of adjustment to an individual student's Term Project grade will be at the discretion of the Instructors but, in **extreme cases**, when, for example, a student simply does not contribute at all to the group's work, the Instructors reserve the right to assign that student a grade of 0% for each part to which the student did not contribute, or the entirety of the Term Project if appropriate.*

Instructor Information and Course Faculty

The lead course co-instructors for this course are Drs. Francisco Olea-Popelka and Stephanie Frisbee. Their full contact information is listed below. Please direct all questions regarding course content, assessments (final exam, term project), grades, the OWL site, or other course questions or concerns to Drs. Olea-Popelka or Frisbee.

Dr. Francisco Olea Popelka, DVM, MSc, PhD
Beryl Ivey Endowed Chair in One Health
Associate Professor
Department of Pathology & Laboratory Medicine
University of Western Ontario
Email: foleapop@uwo.ca
Office Hours: By appointment

Dr. Stephanie J. Frisbee, PhD, MSc
Assistant Professor
Department of Pathology & Laboratory Medicine
University of Western Ontario
Email: sfrisbee@uwo.ca
Office Hours: By appointment

In addition to Drs. Olea-Popelka and Frisbee, multiple other members of faculty will contribute their time, knowledge, and expertise and to this course. These faculty and their contact information are listed below, in alphabetic order. Students are most welcome to contact these members of faculty should they have questions directly related to the content (lectures) delivered. Please do not contact these members of faculty with questions about any aspect of course assessment, including due dates, exams, etc.

Dr. Ana Cabrera, PhD, MSc
Clinical Microbiologist & Assistant Professor
Department of Pathology & Laboratory Medicine
University of Western Ontario
Email: ana.cabrera@lhsc.on.ca

Dr. Art Poon
Assistant Professor
Department of Pathology & Laboratory Medicine
University of Western Ontario
Email: apoon42@uwo.ca

Dr. Gerald McKinley, PhD, MA
Assistant Professor
Department of Pathology & Laboratory Medicine
University of Western Ontario
Email: gmckinl@uwo.ca

Dr. Ed Topp, PhD
Research Scientist
Agriculture & Agri-Food Canada
and
Adjunct Professor
Department of Biology
University of Western Ontario
Email: ed.topp@agr.gc.ca

Dr. Lloy Wylie, PhD
Assistant Professor
Department of Pathology & Laboratory Medicine
University of Western Ontario
Email: lwylie2@uwo.ca

[Weekly Course Schedule** begins on next page]

Weekly Course Schedule**

****Please note:** Tentative schedule provided below. The Instructors reserve the right to adjust the weekly course topics, lecturers, readings, exams, assignments, and / or in-class activities as necessary. Any changes will be communicated to students via OWL.

WEEK	DATE	TOPIC	FACULTY
Week 1	Tue, Jan 7 th 8:30AM-9:20AM	Course Welcome & Introductions Review of Syllabus Course Goals / Approaches / Expectations	Dr. Olea Popelka Dr. Frisbee
	Thurs., Jan. 9 th 8:30AM-10:20AM	Introduction to Research Methods; Ethical Considerations Planning Research: Literature Reviews, Evaluating Evidence; Developing Research Questions; Primary vs. Secondary Data Collection	Dr. Frisbee
Week 2	Tues., Jan 14 th 8:30AM-9:20AM	Study Designs for Primary and Secondary Data Collection; Mixed Methods and Surveys	Dr. Frisbee
	Thurs., Jan. 16 th 8:30AM-10:20AM	Secondary Data Sources and Surveillance Methods and Systems; Analytic Methods; Economic Evaluation	Dr. Frisbee
Week 3	Tues., Jan. 21 th 8:30AM-9:20AM	Introduction to Policy and Policy Making	Dr. Frisbee
	Thurs., Jan. 23 th 8:30AM-10:20AM	Governance and Policy Systems – Developing Evidence-Informed Policy I-III	Dr. Frisbee
Week 4	Tues., Jan. 28 th 8:30AM-9:20AM	Governance and Policy Systems – Developing Evidence-Informed Policy I-III	Dr. Frisbee
	Thurs., Jan 30 th 8:30AM-10:20AM	Infectious Diseases / Global Health	Dr. Olea Popelka
Week 5	Tues., Feb. 4 th 8:30AM-9:20AM	Infectious Diseases / Global Health	Dr. Olea Popelka
	Thurs., Feb 6 th 8:30AM-10:20AM	Infectious Diseases / Global Health	Dr. Olea Popelka
Week 6	Tues., Feb. 11 th 8:30AM-9:20AM	Infectious Diseases / Global Health	Dr. Olea Popelka
	Thurs., Feb 13 th 8:30AM-10:20AM	Infectious Diseases / Global Health	Dr. Olea Popelka
Week 7	Tues. Feb. 18 th - Thurs., Feb. 20 th SPRING BREAK WEEK – NO CLASSES		
Week 8	Tues., Feb. 25 th 8:30AM-9:20AM	Infectious Diseases / Global Health Oral Presentations TBD	Dr. Olea Popelka
	Thurs., Feb. 27 th 8:30AM-10:20AM	Oral Presentations (Progress Report)	Dr. Olea Popelka
Week 9	Tues., March. 3 rd 8:30AM-9:20AM	Anti-Microbial Resistance – Local and Human Focus	Dr. Cabrera
	Thurs., March. 5 th 8:30AM-10:20AM	Anti-Microbial Resistance – Local and Human Focus	Dr. Cabrera
Week 10	Tues., March 10 th 8:30AM-9:20AM	Anti-Microbial Resistance – Canadian and Global Policy Making	Dr. Topp
	Thurs., March 12 th 8:30AM-10:20AM	Anti-Microbial Resistance – Canadian and Global Policy Making	Dr. Topp
Week 11	Tues., March. 17 th 8:30AM-9:20AM	SHELL Project	Dr. McKinley
	Thurs., March 19 th 8:30AM-10:20AM	SHELL Project	Dr. McKinley
Week 12	Tues., March. 24 th 8:30AM-9:20AM	Bioinformatics	Dr. Art Poon
	Thurs., March 26 st 8:30AM-10:20AM	Final Oral Presentations	Dr. Olea Popelka
Week 13	Tues., March 31 st 8:30AM-9:20AM	Social Systems, Stakeholders, and Policy Solutions in One Health	Dr. Wylie
	Thurs., April 2 nd 8:30AM-10:20AM	Social Systems, Stakeholders, and Policy Solutions in One Health	Dr. Wylie

FINAL EXAM TO BE SCHEDULED BY THE REGISTRAR – DATE, TIME, AND LOCATION WILL POSTED IN OWL WHEN AVAILABLE

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.

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.

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

Communication between Students and Course Instructors

Students **must** follow all Western University guidelines and procedures outlined below. However, in addition, students **must directly** contact the course coordinators **via email and in person (if possible)** to inform them about any deviation or special request regarding deadlines for course commitments (One Health written project and oral presentation, and final exam).

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

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.

For students with an approved accommodation, the student is responsible to their Term Project group members to make arrangements to meet their commitments to the group.

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 choose (a) to have their grade for the final exam be recorded as "0" ("zero") OR (b) to re-take the final exam during the next scheduled offering of the course.

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>