

Interdisciplinary Medical Sciences

Laboratory Skills and Research Experiences in Interdisciplinary Medical Sciences MEDSCIEN 4990E

Course Syllabus for Fall/Winter 2022/2023



Western University is committed to a **thriving campus**; therefore, your health and wellness matter to us! The following link provides information about the resources available on and off campus to support students: <https://www.uwo.ca/health/> Your course coordinator can also **guide you** to resources and/or services should you need them.

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1. Technical Requirements:



Stable internet connection



Laptop or computer

2. Important Dates:



Classes Begin	Reading Week	Classes End	Study day(s)	Exam Period
September 8	October 31– November 6	December 8	December 9	December 10–22

* November 30, 2022: Last day to drop a first-term full course without penalty

Classes Resume	Reading Week	Classes End	Study day(s)	Exam Period
January 9	February 18-26	April 10	April 11-12	April 13–30

3. Contact Information:

Course Coordinator	Contact Information
Dr. Nicole Campbell (she/her)	MS Teams (not uwo email)

Laboratory Coordinator	Contact Information
Yeritza (Yeri) Bohorquez Ruiz	MS Teams (not uwo email)

Your course coordinator **prefers correspondence via MS Teams** so that she can keep track of the messages more efficiently.

Your **course coordinator will check MS Teams daily during the week**; please follow up with a reminder message if it has been more than 2 business days and you have not received a response. MS Teams is the fastest way to get a hold of your course coordinator.

To ensure that an equitable learning environment is created for this course, the **course coordinator will ask that some communication is shared openly**. Students can also directly message the course coordinator so that she can share the question anonymously on behalf of the student. For this course to run effectively, we need to adopt an open communication model.



Graduate Teaching Assistants		Contact Information
Candace Brooks-Da Silva	Mingyi Li	MS Teams (not uwo email)
Nelson Change	Rachel Low	
Shannon Compton	Shehan Perera	
Brandon Dickson	Julia St John	
Caitlin Howard		

There will be opportunities throughout the term to **communicate with your graduate teaching assistants**. Make sure that you cc your coordinator (Dr. Campbell) on MS Teams chat when corresponding with graduate teaching assistants to receive a response.

Please ensure that all **course communication is clear, concise, and respectful**. There is no need to include screenshots or copy and paste text from your assignments because we can look it up. When reaching out about assignments, put emphasis on the expectations versus the grades. Avoid language like ‘why did I lose this mark’ and instead phrase it as ‘why didn’t I meet this expectation’. In this course, grades are earned as opposed to deducted.

4. Course Description and Design:

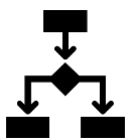
Delivery Mode: In-person; lectures will be recorded and shared with students if needed.

Major laboratory course for the Honours Specialization in Interdisciplinary Medical Sciences. This course focuses on experimental design; research literacy; practical laboratory skills; data analysis and interpretation; and scientific communication. Students will engage both independently and collaboratively in authentic learning experiences and practice critical ongoing reflection.

Antirequisite(s): Medical Sciences 4991F/G

Timetabled Sessions

Component	Date(s)	Time	Location
Lecture	Mondays	1:30 pm to 2:30 pm	SEB 2200
Laboratories	Tuesdays (003)	9:30 am to 1:30 pm	MSB 113/117
	Wednesdays (004)	9:30 am to 1:30 pm	MSB 113/117



- Pre-work (~ 1 hour) must be completed prior to attending the weekly laboratories
- Attendance at lecture and laboratory sessions is required; makeup labs will be required
- Missed work should be completed within 24 hours
- A recording could be shared with students when needed (e.g., approved accommodation)

All course material will be posted to OWL: <http://owl.uwo.ca>. Any changes will be indicated on the OWL site and discussed with the class.

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.

[Google Chrome](#) or [Mozilla Firefox](#) are the preferred browsers to optimally use OWL; update your browsers frequently. Students interested in evaluating their internet speed, please click [here](#).

5. Learning Outcomes:

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

- Skillfully and safely perform a wide range of laboratory skills and techniques.
- Write detailed and logical scientific protocols appropriate for an experimental procedure.
- Clearly and concisely record, summarize, analyze, and interpret results from an experiment.
- Construct and deliver well-organized, and logical information making use of appropriate delivery techniques to communicate scientific knowledge to the target audience.
- Collaborate effectively by demonstrating respect for others, respect for different points of view, beliefs, and values, and taking on leadership, where appropriate.
- Evaluate relevant real-world scenarios and/or problems by integrating perspectives from medical science disciplines to make informed decisions.



6. Course Content and Schedule:

These Monday lectures are the experiential learning skill development sessions for all students enrolled in the HSP IMS capstone courses (MEDSCIEN 4990E and 49995E). The topics were identified to setup students up for success in their program and after graduation. The sessions will be instructed by various educators as indicated in the table below.

Monday Lectures

Week	Dates	Topic	Instructor
1	Sept 8–11	N/A	N/A
2	Sept 12	Introduction and welcome	Drs. Allan, Campbell, and McLean and Jedd Sardido
3	Sept 19	Professionalism	Dr. McLean
4	Sept 26	Project & Team Charters	Jedd Sardido
5	Oct 3	Critical Reflection	Dr. Campbell
6	Oct 10	Thanksgiving Holiday	N/A
7	Oct 17	Giving & Receiving Feedback	Dr. McLean
8	Oct 24	Time Management	Dr. Allan
9	Oct 31–Nov 6	Reading Week	N/A
10	Nov 7	Project Management	Dr. Campbell
11	Nov 14	ePortfolios	Dr. Campbell
12	Nov 21	Information Literacy	Maren Goodman
13	Nov 28	Quantitative Research Methods	Dr. Allan
14	Dec 5	Qualitative Research Methods	Dr. Lingard

The Tuesday/Wednesday laboratories are specific for the HSP IMS students enrolled in MEDSCIEN 4990E. These labs are designed to promote research literacy.

Tuesday/Wednesday Laboratories

Week	Dates	Topic	Instructor
1	Sept 8–11	Online safety and lab books	N/A
2	Sept 13/14	Pipetting; teamwork activity	Dr. Campbell & GTAs
3	Sept 20/21	Lab refresher I: DNA & gel	Dr. Campbell & GTAs
4	Sept 27/28	Lab refresher II: BCA	Dr. Campbell & GTAs
5	Oct 4/5	Cell culture	Dr. Campbell & GTAs
6	Oct 11/12	Protein isolation & quantification	Dr. Campbell & GTAs
7	Oct 18/19	SDS-PAGE gel	Dr. Campbell & GTAs
8	Oct 25/26	Immunoblotting	Dr. Campbell & GTAs
9	Oct 31–Nov 6	Reading Week	N/A
10	Nov 8/9	Primer design and PCR	Dr. Campbell & GTAs
11	Nov 15/16	RNA isolation	Dr. Campbell & GTAs
12	Nov 22/23	qPCR	Dr. Campbell & GTAs
13	Nov 29/30	Data analysis	Dr. Campbell & GTAs
14	Dec 6/7	Ethics simulation	Dr. Campbell & GTAs

FALL SEMESTER

Monday Lectures

Week	Dates	Topic	Instructor
1	Jan 9	Know Your Why and Interviews	Dr. Campbell and Cam Malthaner
2	Jan 16	Environmental Scan	Dr. McLean
3	Jan 23	EDI-D in Research Teams	Olivia Ghosh-Swaby
4	Jan 30	Science Literacy	Dr. McLean
5	Feb 6	Science Communication for Non-Expert Audiences	Dr. Allan
6	Feb 13	Value of Mentorship	Dr. Allan
7	Feb 18–26	Reading Week	N/A
8	Feb 27	Writing your Resume/CV	Cam Malthaner
9	Mar 6	Informational Interviews	Dr. Allan
10	Mar 13	Academic Social Media	Dr. Campbell
11	Mar 20	Networking	Jedd Sardido and Cam Malthaner
12	Mar 27	Design Your Life	Dr. Campbell
13	Apr 3	Work/Life Balance	Dr. McLean
14	Apr 10	Course Wrap-Up	Drs. Allan, Campbell, and McLean and Jedd Sardido

Tuesday/Wednesday Laboratories

Week	Dates	Topic	Instructor
1	Jan 10/11	Work on lab project with your bench and grant proposal with your partner(s)	Dr. Campbell & GTAs
2	Jan 17/18		Dr. Campbell & GTAs
3	Jan 24/25		Dr. Campbell & GTAs
4	Feb 1/2		Dr. Campbell & GTAs
5	Feb 7/8		Dr. Campbell & GTAs
6	Feb 14/15	Grant panel	Dr. Campbell & GTAs
7	Feb 18–26	Reading Week	N/A
8	Feb 28/Mar 1	Work on lab project with your bench	Dr. Campbell & GTAs
9	Mar 7/8		N/A
10	Mar 14/15		Dr. Campbell & GTAs
11	Mar 21/22		Dr. Campbell & GTAs
12	Mar 28/29		Dr. Campbell & GTAs
13	Apr 4/5	Poster Showcase	Dr. Campbell & GTAs

7. Participation and Engagement:



- Students are expected to participate and engage with content and other materials as much as possible
- Students can participate during sessions in the chat or by raising their hand
- Students can also participate by reflecting on the discussions after watching the recording
- Students should actively interact on MS Teams with their peers and instructors

8. Evaluation:

Below is the evaluation breakdown for the course. Any deviations will be communicated.

Assessment		Format	Weighting	Due Date
Grant	Letter of Intent	Written (pairs)	5%	Nov 18
	Proposal	Written (pairs)	15%	Feb 3
	Panel	Mixed (indiv + team)	5%	Feb 14/15
Research Project	Project Plan	Mixed (team)	5%	Nov 29/30
	Report	Written (team)	10%	Mar 24
	Poster	Oral (team)	5%	Apr 4/5
Laboratory Report		Written (individual)	15%	Dec 8
Theoretical test		Written (individual)	15%	Mar 2 7–9 pm
Laboratory dossier	Ouline	Written (individual)	Feedback	By end of Jan
	Final	Written (individual)	10%	Apr 10
Participation, Preparedness, Professionalism	Fall	Mixed	15%	Throughout the year
	Winter			

- All assignments are due by 11:55 pm EST unless otherwise specified
- Students are responsible for ensuring that the correct file version is uploaded
- Written assignments will be submitted to Turnitin (statement in policies below); students will have unlimited submissions
- Rubrics will be used to evaluate assessments and will be posted with the instructions
- Students must wait 24 hours to digest feedback before contacting their evaluator
- Grade appeals on assessments must be received within 3 weeks of the grade being returned



Click [here](#) for a detailed and comprehensive set of policies and regulations concerning examinations and grading. The table below outlines the University-wide grade descriptors.

A+	90-100	One could scarcely expect better from a student at this level
A	80-89	Superior work which is clearly above average
B	70-79	Good work, meeting all requirements, and eminently satisfactory
C	60-69	Competent work, meeting requirements
D	50-59	Fair work, minimally acceptable
F	below 50	Fail

Information about late or missed evaluations:

- All individual assignments will have a 2-day grace period; no questions asked!
- Late assessments without accommodation will be subject to a penalty of 20%/day
- An assessment cannot be submitted after it has been returned to the class; an alternate assessment will be assigned
- One make-up test will be offered for the theoretical test
- Students must complete the written components of the course to pass the course

INC (Incomplete Standing): If a student has been approved by the Academic Counselling Office (in consultation with the instructor/department) to complete term work at a later date, an INC will be assigned. Students with INC will have their course load in subsequent terms reduced to allow them to complete outstanding course work. Students may request permission from Academic Counselling to carry a full course load for the term the incomplete course work is scheduled.

SPC (Special Examination): If a student has been approved by the Academic Counselling Office to write a Special Examination and the final exam is the only outstanding course component, an SPC will be assigned. If the class has a makeup exam, the student is expected to write the makeup exam. If the class doesn't have a makeup exam or the student misses the makeup exam for reasons approved by the Academic Counselling Office, the student will write the exam the next time the course is offered. Outstanding SPCs will reduce the course load for the term the exam is deferred as outlined in [Types of Examinations](#) policy.

9. Communication:



- Students should check the OWL site every 24–48 hours
- Students should contact their coordinator using MS Teams; guest lecturers may choose alternative means of communication
- Messages will be monitored daily, with the exception of weekends; students will receive a response within 24–48 hours
- Course and assignment related questions should be posted [TBD based on class input]

10. Office Hours:



- Office hours will be held [TBD based on class input]
- Students should contact their course coordinator if they wish to book individual office hours

11. Course Resources:



- All resources will be posted on OWL
- There is not textbook assigned for this course
- There are no additional costs for materials related to this course

12. Professionalism & Privacy:

Western students are expected to follow the [Student Code of Conduct](#). Additionally, the following expectations and professional conduct apply to this course:

- All course materials created by the instructor(s) are copyrighted and cannot be sold/shared (e.g., Must Knows Facebook group, Course Hero, Chegg, etc.)
- Recordings are not permitted (audio or video) without explicit permission
- Shared recordings are not to be distributed



Western is committed to providing a learning and working environment that is free of harassment and discrimination. All **students**, staff, and faculty have a role in this commitment and have a responsibility to ensure and promote a safe and respectful learning and working environment. Relevant policies include Western's [Non-Discrimination/Harassment Policy](#) (M.A.P.P. 1.35) and [Non-Discrimination/Harassment Policy – Administrative Procedures](#) (M.A.P.P. 1.35).

Any **student**, staff, or faculty member who experiences or witnesses' behaviour that may be harassment or discrimination **must report the behaviour** to the Western's [Human Rights Office](#). Harassment and discrimination can be human rights-based, which is also known as EDI-based, (sexism, racism, transphobia, homophobia, islamophobia, xenophobia, antisemitism, and ableism) or non-human rights-based (personal harassment or workplace harassment).

13. How to Be Successful in this Course:

Students enrolled in this class should understand the level of autonomy and self-discipline required to be successful.



1. Invest in a planner or application to keep track of your courses. Populate all your deadlines at the start of the term and schedule your time throughout the course.
2. Make it a daily habit to log onto OWL to ensure you have seen everything posted to help you succeed in this class.
3. Follow weekly checklists created on OWL or create your own to help you stay on track.
4. Take notes as you go through the lesson material. Keeping handwritten notes or even notes on a regular Word document will help you learn more effectively than just reading or watching the videos.
5. Connect with others. Try forming an online study group and try meeting on a weekly basis for study and peer support.
6. Do not be afraid to ask questions. If you are struggling with a topic, check the online discussion boards or contact your instructor(s) and or teaching assistant(s).
7. Reward yourself for successes. It seems easier to motivate ourselves knowing that there is something waiting for us at the end of the task.

14. Western Academic Policies and Statements:

Absence from Course Commitments

A. Absence for medical illness:

Students must familiarize themselves with the [Accommodation for Illness Policy](#).

A student seeking academic accommodation for any **work worth less than 10%** must contact the instructor or follow the appropriate Department or course specific instructions provided on the course outline. Instructors will use good judgment and ensure fair treatment for all students when considering these requests. You are not required to disclose details about your situation to your instructor; documentation is not required in this situation, and you should not send any pictures to your instructor.

If you are unable to meet a course requirement for any **work worth 10% or greater** due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to the Academic Counselling 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 and the instructor has been informed. Please note that the format of a make-up test, exam, or assignment is at the discretion of the course coordinator.

A student requiring academic accommodation due to illness should use the Student Medical Certificate when visiting an off-campus medical facility or request a Record's Release Form (located in the Dean's Office) for visits to Student Health Services. The form can be found at: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf

B. Absence for non-medical reasons:

Student absences might also be approved for non-medical reasons such as religious holidays and compassionate situations. Please review the policy on [Accommodation for Religious Holidays](#). All non-medical requests must be processed by Academic Counselling. Not all absences will be approved; pay attention to the academic calendar and final exam period when booking any trips.

C. Special Examinations

A Special Examination is any examination other than the regular examination, and it may be offered only with the permission of the Dean 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. To provide an opportunity for students to recover from the circumstances resulting in a Special Examination, the University has implemented Special Examinations dates. These dates as well as other important information about examinations and academic standing can be found [here](#).

Academic Offenses

Scholastic offences are taken seriously, and students are directed [here](#) to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence.

Accessibility Statement

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 Accessible Education (AE) at 661-2111 x 82147 for any specific question regarding an accommodation or review [The policy on Accommodation for Students with Disabilities](#)

Correspondence Statement

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. You can read about the privacy and security of the UWO email accounts [here](#).

Discovery Credit Statement

Students are permitted to designate up to 1.0 Discovery Credit course (or equivalent) for pass/fail grading that can be counted toward the overall course credits required for their degree program. The details of this policy and the deadlines can be found [here](#).

Essay Course Guidelines

The guidelines for the minimum written assignments refer to the cumulative amount of written work in a course but excludes written work in examinations. You can read about essay course guidelines [here](#).

An essay course must normally involve total written assignments (essays or other appropriate prose composition, excluding examinations) as follows:

- Full course (1000 to 1999): at least 3000 words
- Half course (1000 to 1999): at least 1500 words
- Full course (2000 and above): at least 5000 words
- Half course (2000 and above): at least 2500 words

The structure of the essay course must be such that in order to pass the course, the student must exhibit some minimal level of competence in essay writing and the appropriate level of knowledge of the content of the course.

Turnitin Software Statement

All assignments 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. Students will be able to view their results before the final submission. 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 Western University and [Turnitin.com](https://www.turnitin.com).

15% Rule

According to the [Evaluation of Academic Performance](#) policy, at least three days prior to the deadline for withdrawal from a 1000- or 2000-level course without academic penalty, students will receive assessment of work accounting for at least 15% of their final grade. Generally, students can expect some form of feedback on their performance in a course before the drop date. In rare instances, at the Dean's discretion, an exemption can be issued, which also must be noted in the course syllabus. Deans should review exemptions on a course-by-course basis each time an exempted course is offered.

15. BMSUE Academic Policies and Statements:

Cell Phone and Electronic Device Policy (for in-person tests and exams)

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 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 program is not responsible for stolen/lost or broken devices.

Copyright and Audio/Video Recording 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. You must always ask permission to record another individual and you should never share or distribute recordings.

Rounding of Marks Statement

Across the Basic Medical Sciences Undergraduate Education programs, 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.

16. Support Services:

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.

The following links provide information about support services at Western University.

[Academic Counselling \(Science and Basic Medical Sciences\)](#)

[Appeal Procedures](#)

[Registrarial Services](#)

[Student Development Services](#)

[Student Health Services](#)