Department of Physiology & Pharmacology
Phys/Pharm 4980E

Course outline for Fall/Winter 2021-2022 **Jan. 4th/2022**

Although this academic year might be different, Western University is committed to a **thriving campus**. We encourage you to check out the Digital Student Experience website to manage your academics and well-being. Additionally, the following link provides available resources to support students on and off campus: https://www.uwo.ca/health/.

1. **Technical Requirements:**

   Laptop or computer

2. **Course Information and Important Dates:**

   This course has 2 components to it: workshops and a research project. Workshops will guide you through important skills that you will need to be successful in your research project including best practices for communication, data analysis, scientific literacy among others. Your course coordinators will be responsible for most course workshops. Your research project will be supervised by a faculty member and/or designated sponsor or trainee in the lab. You will be matched to a lab in September and begin your lab work as soon as you are placed. For lab expectations, please discuss this with your supervisor at your first meeting.

Classes Begin	Reading Week	Classes End	Study day(s)	Exam Period
September 8	November 1–7	December 8	December 9	December 10–21

* November 30, 2021: Last day to drop a first-term full course without penalty

Classes Resume	Reading Week	Classes End	Study day(s)	Exam Period
January 10	February 19–27	April 8	April 9	April 10–30

3. **Contact Information**

Course Coordinators	Contact Information
Dr. Angela Beye	OWL messenger
Dr. Anita Woods	OWL messenger

| Teaching Assistant(s)	Contact Information
Mary Taylor	mtayl84@uwo.ca
Sarah Kearsley	skearsle@uwo.ca

4. Course Description and Design

Delivery Mode: in-person

A major laboratory project in Physiology or Pharmacology, which emphasizes experimental design, instrumentation, collection and analysis of data and communication of experimental results by oral, poster and written presentations. Students will select the physiology or pharmacology project from a list provided by the department and be matched to a supervisor. **Prerequisite(s):** Physiology and Pharmacology 3000E, Physiology 3120 and 3140A; and registration in Year 4 of one of the following Honours Specialization modules: Pharmacology, Physiology or Physiology and Pharmacology.

Timetabled Sessions

Component	Date(s)	Time
Workshops	Section 001: Mon Section 002: Wed	9:30AM-11:20AM 10:30AM-12:20PM
Research Project	N/A	15 hours/week (expected)
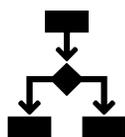
☑ Asynchronous pre-work **must be completed** prior to workshops

☑ Attendance at workshops is required

☑ Missed work should be completed within 24 hours

NOTE: In the event of a COVID-19 resurgence during the course that necessitates moving away from face-to-face interaction, course content will be delivered entirely online, either synchronously (i.e., at 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 at the discretion of the instructor.

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

This course is designed to expose you to scientific research that may be clinical or basic research, depending on your project. Whether you pursue research as a career or not, we would argue that the following learning outcomes are valuable in any profession.

Upon successful completion of this course, students will be able to:
- work independently or collaboratively on a research project in a specific area of physiology and/or pharmacology where the project includes a substantial literaturereview, along with experimental design, collection, analysis, and interpretation of results
- develop skills and strategies to work efficiently with a small team to accomplish a goal
- identify plagiarism and devise approaches to avoid this in their own writing

- summarize a published article effectively for a general audience as a media release
- successfully communicate their own research project in an oral presentation and a poster format to both experts and non-experts in the field
- assess the expenditures for their research project and construct a research budget in order to appreciate the costs of scientific research
- think critically about data to evaluate a hypothesis and construct an appropriate conclusion
- write a comprehensive scientific report in a journal manuscript format as a final thesis to share the important findings of their research project

6. Course Content and Schedule

Week	Dates	Topic
1	Sept 8–12	Interviews (virtual)
2	Sept 13–19	Welcome & Course Q & A
3	Sept 20–26	Professionalism & Avoiding Plagiarism
4	Sept 27–Oct 3	How to Summarize Research: Proposal, Lay Summaries
5	Oct 4–10	How to Search for Literature
6	Oct 11–17	*No classes (Thanksgiving Monday)*
7	Oct 18–24	Giving a Great Presentation: a how to
8	Oct 25–Oct 31	How to Read the Literature
9	Nov 1–7	*Reading Week*
10	Nov 8–14	Writing a Thesis: Where to start
11	Nov 15–21	*Individual Writing Time: no workshop*
12	Nov 22–28	Oral Presentations
13	Nov 29–Dec 5	Oral Presentations
14	Dec 6–8	Thesis Introduction: Q & A

Week	Dates	Topic
1	Jan 10-14	Check in Week: Ready for Semester 2?
2	Jan 17-21	Research Grants & Budgets
3	Jan 24-28	*Individual Writing Time: no workshop*
4	Jan 31-Feb 4	Statistics and Data Analysis
5	Feb 7-11	*Individual Data Analysis Time: no workshop*
6	Feb 14-18	*Individual Data Analysis Time: no workshop*
7	Feb 21-25	*Reading Week*
8	Feb 28–Mar 4	How to Prepare a Poster
9	Mar 7–11	*Individual Data Analysis Time: no workshop*
10	Mar 14–18	*Individual Data Analysis Time: no workshop*
11	Mar 21–25	*Individual Poster Authoring: no workshop*
12	Mar 28–Apr 1	Poster Presentations
13	Apr 4 - 8	*Individual Writing Time: no workshop*

7. Participation and Engagement

- ☑ Students are expected to participate and engage with content as much as possible
- ☑ Students are required to participate with their group members during workshops
- ☑ Students should arrange and/or attend regular meetings with the mentor(s) supervising their research project
- ☑ Students can also participate by interacting in the forums 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
Research Proposal	Written	5%	Mon, Oct 25, 2021
Proposal Presentation	Oral presentation	10%	Week of Nov 22 & 29
Lay Summary	Written	10%	Mon, Dec 6, 2021
Thesis Draft #1 (Intro & Methods)	Written	2.5%	Mon, Jan 31, 2022
Research Budget	Written	8%	Mon, Feb 28, 2022
Thesis Draft #2 (Abstract, Results, Figures, Legends)	Written	2.5%	Fri, Mar 18, 2022
Poster Presentation	Oral presentation	10%	Thurs, Mar 31, 2022
Final Thesis	Written	35%	Fri, Apr 8, 2022
Lab Performance	N/A	5% per term	end of each semester
Workshop Assignments	Written (group work)	7%	at end of workshop
Other Deadlines			
Peer Review: Research Proposal (2 papers)	Track changes feedback with grade		Mon, Nov 8, 2021
Peer Review: Draft #1 (2 papers)	Track changes feedback with grade		Fri, Feb 11, 2022
Peer Review: Draft #2 (2 papers)	Track changes feedback with grade		Fri, Mar 25, 2022

- ☑ All assignments are due at 2 pm EST unless otherwise specified
- ☑ Written assignments will be submitted to Turnitin (statement in policies below)
- ☑ Students will have unlimited submissions to Turnitin using a separate "plagiarismchecker" link before the final submission of that assignment
- ☑ Rubrics will be used to evaluate assessments and will be posted with the instructions
- ☑ A student may not receive the same grade as their group members if it is determined thatthe distribution of work was not equal
- ☑ Workshop assignments will be saved and submitted as a group in OWL for feedback by the deadline stated above
- ☑ After an assessment is returned, students should wait 24 hours to digest feedback
- ☑ before contacting the course coordinators; to ensure a timely response, students shouldreach out within 7 days
- ☑ Any appeals on graded assignments must be submitted to the course coordinators within 3 weeks of the grade being published through a clear and professionally

  composed email on the reason(s) for the appeal. Any warranted reassessments will be completed by a course committee member. The new grade may be higher or lower upon reassessment.

IMPORTANT: Following instructions on assignments, tasks, and applications is very important. It could mean the difference between getting a grant or scholarship or interview and being in the pool of unsuccessful applicants. Therefore, we value this trait in 4980 as well. A deduction of 10% from an assignment grade will be applied for not adhering to instructions. If thorough **peer reviews** are not completed on time as per instructions, a grade deduction of 10% will also be applied to your own assignment. Every person in this course deserves to have thoughtful and extensive feedback on their writing with a justification of the mark assigned.

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:

☑ Late assessments <u>without</u> self-reported absences or accommodation will be subject to alate penalty 20%/day

☑ Late assessments <u>with</u> self-reported absences or accommodation should be submitted

☑ within 24 hours of the end of the self-report or accommodation (e.g., due Mon 2 pm; self-report covers Mon/Tues; new deadline is Wed by 2 pm OR 24 hours after the end of the accommodation period)

☑ In the event of a self-report or documented absence from workshop, a reweigh onto the other workshop assignments will be applied

☑ Missing workshops without proper absence reporting will result in a grade of zero onthat group assignment. If you are unable to attend due to failing the daily screening,

☑ please inform the course managers. The workshop assignment may be submitted as an individual effort without penalty.

☑ For late assessments with approved documentation that are normally evaluated by yourpeers by random assignment two hours after due date (thesis draft #1 and #2), a reweigh will occur onto the final thesis

9. Communication:

☑ Students should check the OWL site every 24 – 48 hours

☑ Students should contact the course coordinators using the OWL messenger

☑ Messenger will be monitored during regular business hours; students will receive a response in 48 – 72 hours

☑ Students should post all course-related content and questions on the discussion forum so that everyone can access answers to questions. Forum posts will remain anonymousto your peers and only course coordinators and our TA's will see the post's author. Students should post all course-related queries on the discussion forum so that everyonecan access the questions and responses

☑ The discussion forums will be monitored Mon-Fri by the course coordinators and our TA's

10. Office Hours:

- ☑ **Individual office hours** will be held remotely using Zoom, a schedule will be posted
- ☑ Students will be able to sign up for an appointment using the Sign Up tool on OWL (10min appointments)
- ☑ Students will be able to attend **group drop-in sessions,** a schedule will be postedbefore an assignment is due via Zoom**;** no sign up required for these sessions
- ☑ Group office hours will be recorded and posted for everyone to view

11. Resources

- ☑ All resources will be posted in OWL
- ☑ A lab book is required for research project (or digital lab records if authorized and accessible by your supervisor)

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
- ☑ Recordings are not permitted (audio or video) without explicit permission
- ☑ Permitted recordings are not to be distributed
- ☑ Students will be expected to take an academic integrity pledge before some assessments
- ☑ All recorded sessions will remain within the course site or unlisted if streamed

13. How to Be Successful in this Class:

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

1. **Invest in a planner** to keep track of your courses and assignment deadlines. Populate all your deadlines at the start of the term and schedule time at the start of each week to get organized and manage your time.
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. **Take notes** as you go through the material. Keeping handwritten notes will help you learn more effectively than just reading or watching any posted videos. *Note: typed notes work too, but literature suggests handwritten notes are a more effective learning strategy.*
4. **Connect with others**. Build relationships among your group members and 4980 peers and try to interact regularly for peer support or help in other 4th year courses.
5. **Do not be afraid to ask questions.** If you are struggling with a topic, check the online discussion forums or contact your course coordinators. If you are struggling in your research project, many members of your lab will be happy to help. Don't be afraid to ask. They were all in your shoes once too.
6. **Reward yourself** for successes. It seems easier to motivate ourselves knowing that there is something waiting for us at the end of the task.
7. **Try to keep a weekly routine**. Consistent wake up times, regular exercise, and building in some enjoyable activities will help break up your week to balance academics and your own personal health and wellbeing.

8. **Show initiative** in your research project. If you don't have enough to do to fulfill your 15 hr/week requirements, ask if you can be helpful somewhere else. Being eager, resourceful, and independent is a good thing, but also be respectful of your lab member's time and boundaries.

14. Western Academic Policies and Statements

Absence from Course Commitments

[Policy on 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-reported absence** or via the **Academic Counselling** unit. Students have two self-reports to use throughout the academic year; absence from course commitments including tests, quizzes, presentations, labs, and assignments that are worth 30% or less can be self-reported. Self-reported absences cover a student for 48 hours (yesterday + today or today + tomorrow). Your instructor will receive notification of your consideration; however, you should contact your instructor immediately regarding your absence. Students are expected to submit missed work within 24 hours of the end of the 48-hour period. Please review details of the [university's policy on academic consideration for student absences](#).

If you have used both their self-reported absences or will miss more than 48 hours of course requirements, a Student Medical Certificate (SMC) should be signed by a licensed medical or mental health practitioner and you should contact academic counselling. Science and BMSc students can contact academic counselling through the Help Portal: https://www.uwo.ca/sci/counselling/

Accommodation for Religious Holidays

The policy on Accommodation for Religious Holidays can be viewed [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](#).

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 and other similarity review software

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.

15. BMSUE Academic Policies and Statements

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
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

Approved by Department: Anita Woods Jan. 4th, 2022
Approved by BMSUE: Brad Urquhart, January 4, 2022