

The Department of Physiology and Pharmacology Neurobiology of Aging – 4750B

Course Syllabus for Winter 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.

1. Technical Requirements:



Stable internet connection



Laptop or computer



Working microphone



Working webcam

2. Important Dates:



Classes Begin	Classes End
Monday, January 9, 2023	Monday, April 10, 2023

* March 7, 2023: Last day to drop a second-term half course without penalty

Reading Week	Study day(s)	Exam Period
February 18–26	April 11-12	April 13-30

3. Contact Information



Course Coordinator	Contact Information
Taylor W. Schmitz	tschmitz@uwo.ca

Instructor(s) or Teaching Assistant(s)	Contact Information
Taylor W. Schmitz (instructor)	tschmitz@uwo.ca

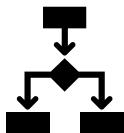
4. Course Description and Design

Delivery Mode: in-person

The neurobiology of aging is a rapidly growing field of research spanning the physiological mechanisms of brain resilience to aging and age-related neurodegenerative diseases, as well as clinical-pharmacological research aimed at slowing or preventing brain aging and neurodegenerative disease. Lectures in this course will examine the systems-level physiological expression of aging in the human central nervous system, along with current state-of-the-art research on identifying and treating these changes.

Timetabled Sessions

Component	Date(s)	Time
Lectures and Seminars	Thursdays (MSB384)	9:30 AM -11:30 AM



- Attendance at sessions is required
- Missed work should be completed within 24 hours

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:



- Understand and explain:
 - Current theories on the neurobiological bases of Alzheimer's and Parkinson's disease
 - Cross-species translational strategies for studying age-related neurological diseases
 - Principles of biomarker development and evaluation
 - Current and next generation treatment options for age-related neurological diseases
- Critically evaluate scientific data from primary research papers
- Give an oral scientific presentation
- Develop, debate and field scientific questions

6. Course Content and Schedule



Week	Dates	Topic	Instructor
1	Jan 12	Neurobiology of aging: Introduction and mechanisms	TW Schmitz
2	Jan 19	Brain resilience and vulnerability to aging	TW Schmitz
3	Jan 26	Seminar (paper presentations, debate)	TW Schmitz
4	Feb 2	Alzheimer's and Parkinson's disease	TW Schmitz
5	Feb 9	Seminar (paper presentations, debate)	TW Schmitz
6	Feb 16	Midterm exam	TW Schmitz
7	Feb 19-26	Reading Week	N/A
8	Mar 2	Models of age-related neurological disease	TW Schmitz
9	Mar 9	Seminar (paper presentations, debate)	TW Schmitz
10	Mar 16	Biomarkers for age-related neurological disease	TW Schmitz
11	Mar 23	Seminar (paper presentations, debate)	TW Schmitz
12	Mar 30	Treatment strategies for age-related neurological disease	TW Schmitz
13	Apr 6	Seminar (paper presentations, debate)	TW Schmitz
14	Apr 10 – 30	Final exam period	Date TBA

7. Participation and Engagement



- Students are expected to participate and engage with content as much as possible
- Students can participate during in-person sessions or post on OWL forums after watching the recording
- 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
Paper presentation	Oral	20%	Group 1: Jan 26 Group 2: Feb 9 Group 3: Mar 9 Group 4: Mar 23 Group 5: Apr 6

Paper debate: Team Limitations	Written and oral	10%	Group 2: Jan 26 Group 3: Feb 9 Group 4: Mar 9 Group 5: Mar 23 Group 1: Apr 6
Paper debate: Team Strengths	Written and oral	10%	Group 3: Jan 26 Group 4: Feb 9 Group 5: Mar 9 Group 1: Mar 23 Group 2: Apr 6
Midterm	Written	30%	Feb 16 In class
Final	Written	30%	Final Exam Period

- All written assignments for paper debates are due at 11:55 PM EST the day before the seminar unless otherwise specified
- Students are responsible for ensuring that the correct file version is uploaded; incorrect submissions including corrupt files could be subject to late penalties (see below) or a 0
- Written assignments will be submitted to Turnitin (statement in policies below)
- Students will have an opportunity for one penalty-free resubmission to Turnitin in the event of plagiarism detection
- Rubrics will be used to evaluate assessments and will be posted with the instructions
- A student might not receive the same grade as their group members if it is determined that the distribution of work was not equal
- After an assessment is returned, students should wait 24 hours to digest feedback before contacting their evaluator; to ensure a timely response, reach out within 7 days
- Any grade appeals on seminar presentations or the exams must be received within 3 weeks of the grade being posted.

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.

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

Information about late or missed evaluations:

- Missed work counting to a maximum 10% of the course grade, i.e., a maximum of one missed seminar in which you are on one of the debate teams, will be reweighted on the remaining seminars. Missed seminars for your group's oral presentation will not be reweighted. In the event of an absence for medical reasons, you may have the opportunity to join another group for the oral presentation component. You must provide valid medical or other supporting documentation to the Academic Counseling as soon as possible and contact your instructor immediately.
- An assessment cannot be submitted after it has been returned to the class; the weight will be transferred to the final grade
- One make-up test will be offered for the midterm. Note that the makeup exams will be pose different questions and problem sets from the original versions.
- The oral presentation, midterm and final must be completed to pass the course. If the oral presentation, midterm or final is missed, the student may receive an INC on their transcript and complete it the next time the course is offered (see next point).

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 instructor(s) using email.
- Emails will be monitored daily; students will receive a response in 24–48 hours
- This course will use forums, for discussions
- Students should post all course-related queries on the discussion forum so that everyone can access the questions and responses

10. Office Hours:



- Office hours will be held remotely for individuals or groups

11. Resources



- All resources will be posted in OWL

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., lecture slides, audio/video recordings of lectures, etc.)
- 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 when requesting a makeup exam

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 Class:

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 a maximum of 10%, i.e., a maximum of one missed seminar in which you are on one of the debate groups**, must contact the instructor. The missed seminar work will be reweighted on the remaining seminars. 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 Counseling 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](#).

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. 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

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

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

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

https://www.uwo.ca/health/student_support/survivor_support/get-help.html.

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

Please find other student resources in the links below:

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

[Appeal Procedures](#)

[Registrarial Services](#)

[Student Development Services](#)

[Student Health Services](#)