

Department of Physiology and Pharmacology  
Pharmacology 2060B

Course Syllabus for Winter 2024



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

2. Important Dates:



Classes Begin	Reading Week	Classes End	Study day(s)	Exam Period
January 8	February 17-25	April 8	April 9-10	April 11–30

\*March 7, 2024: Last day to drop a second term half course without academic penalty

3. Contact Information



Course Coordinator	Contact Information
Dr. Zachary Easton (he/him)	OWL messages

Teaching Assistants	Contact Information
Mingyi Li (she/her)	OWL messages
Sarah Enright (she/her)	senrigh6@uwo.ca

## 4. Course Description and Design

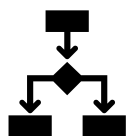
**Delivery Mode:** Online, asynchronous

A course for students in the BSc in Nursing to provide a basic understanding of the fundamentals of drug action and the mechanisms of action and therapeutic use of the important classes of drugs.

**Antirequisites:** Pharmacology 3620, Physiology and Pharmacology 2000.

**Pre-or Corequisite(s):** Registration in the BSc in Nursing.

**Extra Information:** Only offered online (Distance Studies). Restricted to students in the Bachelor of Science in Nursing.



### Timetabled Sessions

Component	Date(s)	Time
Virtual asynchronous lecture	N/A	1-2 hours/week

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:



- Describe the principles that determine how pharmacological agents get into and are handled by the body.
- Describe the principles that determine how pharmacological agents act in the body to produce a pharmacological effect.
- Identify the main therapeutic actions and side effects of pharmacological agents commonly used in clinical practice.

## 6. Course Content and Schedule



Week	Dates	Topic
1	Jan 8–14	Module 1: Chemistry of Pharmacology Module 2: Pharmacokinetics – Absorption
2	Jan 15-21	Module 3: Pharmacokinetics – Distribution Module 4: Pharmacokinetics – Metabolism
3	Jan 22-28	Module 5: Pharmacokinetics – Excretion Module 6: Clinical Pharmacokinetics
4	Jan 29–Feb 4	Module 7: Pharmacodynamics – Dose Response Relationships Module 8: Pharmacodynamics – Drug Receptor Interactions
5	Feb 5-11	Module 9: Pharmacodynamics – Therapeutic Index Module 10: Adverse Drug Reaction and Medication Errors Module 11: Drug Interactions
6	Feb 12–16	Module 12: Drugs to Lower Cholesterol and Triglycerides
7	Feb 17-25	Reading Week
8	Feb 26-Mar 3	Module 13: Pharmacology of Hypertension
9	Mar 4-10	Module 14A: CNS Pharmacology, Part 1
10	Mar 11–17	Module 14B: CNS Pharmacology, Part 2
11	Mar 18–24	Module 15: Drugs to Treat Diabetes
12	Mar 25–31	Module 16: Antibiotics
13	Apr 1-7	Module 17: Cancer Chemotherapy
14	Apr 8	Exam Review; No New Material

## 7. Participation and Engagement



- Students are expected to participate and engage with content as much as possible
- Students can participate during bi-weekly office hours
- 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
PeerWise Assignment #1***	<p><b>Author</b> 2 original multiple-choice questions (with 4 answer options) on content from Modules 1–6</p> <p><b>Answer</b> 5 multiple choice questions in PeerWise</p>	2.5%	<p>Author: Tuesday, January 23<sup>rd</sup>, 2024 @ 11:55 pm</p> <p>Answer: Thursday, January 25<sup>th</sup>, 2024 @ 11:55 pm</p>
Online Quiz #1	<p>Online in OWL, open book</p> <p>Multiple choice covering content from Modules 1–6.</p> <p>Mix of questions from PeerWise Assignment #1, and others authored by Dr. Easton</p>	2.5%	<p>Opens: Wednesday, January 31<sup>st</sup>, 2024 @ Noon</p> <p>Closes: Friday, February 2<sup>nd</sup>, 2024 @ 11:55 pm</p>
Midterm #1	<p>In-person, closed-book.</p> <p>Mix of multiple choice and short answer questions.</p> <p>Material from Modules 1–6 will be covered.</p>	20%	<p>Saturday, February 10<sup>th</sup> 12-1 pm</p> <p>Make-up: Wednesday, February 14<sup>th</sup> 6-7 pm</p>
PeerWise Assignment #2***	<p><b>Author</b> 2 original multiple-choice questions (with 4 answer options) on content from Modules 7–11</p> <p><b>Answer</b> 5 multiple choice questions in PeerWise</p>	2.5%	<p>Author: Tuesday, February 13<sup>th</sup>, 2024 @ 11:55 pm</p> <p>Answer: Thursday, February 15<sup>th</sup>, 2024 @ 11:55 pm</p>



Online Quiz #2	<p>Online in OWL, open book</p> <p>Multiple choice covering content from Modules 7-11.</p> <p>Mix of questions from PeerWise Assignment #2, and others authored by Dr. Easton</p>	2.5%	<p>Opens: Wednesday, February 28<sup>th</sup>, 2024 @ Noon</p> <p>Closes: Friday, March 1<sup>st</sup>, 2024 @ 11:55 pm</p>
Midterm #2	<p>In-person, closed-book.</p> <p>Mix of multiple choice and short answer questions.</p> <p>Material covering Modules 1–12 will be covered</p>	27.5%	<p>Saturday, March 9<sup>th</sup> 12-1:30 pm</p> <p>Make-up: Wednesday, March 13<sup>th</sup> 6-7:30 pm</p>
PeerWise Assignment #3	<p><b>Author</b> 2 original multiple-choice questions (4 answer options) on content from Modules 12–17</p> <p><b>Answer</b> 5 multiple choice questions in PeerWise</p>	2.5%	<p>Author: Tuesday, March 26<sup>th</sup>, 2024 @ 11:55 pm</p> <p>Answer: Thursday, March 28<sup>th</sup>, 2024 @ 11:55 pm</p>
Online Quiz #3	<p>Online in OWL, open book</p> <p>Multiple choice covering content from Modules 12–16.</p> <p>Mix of questions from PeerWise Assignment #3, and others authored by Dr. Easton</p>	2.5%	<p>Opens: Wednesday April 3<sup>rd</sup>, 2024 @ Noon</p> <p>Closes: Friday April 5<sup>th</sup>, 2024 @ 11:55 pm</p>
Final Exam	<p>In-person, closed-book.</p> <p>Mix of multiple choice and short answer questions.</p> <p>Material covering Modules 1–17 will be covered</p>	37.5%	Date of Exam and Make-up Exam TBD

- All assignments are due at 11:55 pm EST unless otherwise specified
- \*\*\*For PeerWise assignments, please see the PeerWise tab on OWL for detailed instructions. There are no part marks for only completing part of this assignment. You must author 2 original questions (with 4 answer options) and answer 5 student-authored questions to receive full marks.
- PeerWise assignments will be completed on: <https://peerwise/cs/auckland/ac/nz>
- PeerWise assignments will be reviewed for originality to ensure questions were authored by each student and were not shared or taken from internet resources or previous exams. If it was found that a student did not author original questions, a grade of zero will be given on that assignment. Please see additional instructions for PeerWise assignments on the PeerWise tab on OWL
- Students will have TWO attempts to complete each online quiz. The highest obtained score will be recorded and applied to the final course grade. Quiz questions may differ between attempts.
- After an assessment is returned, students must wait 24 hours to digest feedback before contacting the course coordinator; to ensure a timely response, reach out within 7 days
- Any grade appeals on assignments, quizzes, or midterms must be received within 3 weeks of the grade being posted.
- 15% of your course grade will be evaluated and returned 3 days prior to the drop deadline (statement in policies below).

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:

\*\*\*Documentation is not to be submitted to academic counselling if you miss any assignment worth less than 10%. This includes both PeerWise assignments, and Online Quizzes. Instead, these will be handled as follows:

- There will be **NO makeup for missed PeerWise assignments**. Students are given several weeks of time to complete the PeerWise submissions. If the assignment is not complete (both authoring and answering questions is required for a complete submission), a grade of zero will be given. Please do these assignments early in case unexpected circumstances (i.e. illness) arise.
- There are **NO makeup quizzes**. If a student misses a quiz, the weighting of that quiz will be shifted to the next exam in the course.

Since exams are worth more than 10%, documentation must be submitted to academic counselling if a student is unable to write (Please see syllabus section 14)

- Only ONE makeup exam will be offered for each exam. If a student's documentation covers an absence for both the regular exam and the make-up exam, the weight of that exam will be added to the final exam in the course. Please see syllabus section 8 for tentative make-up exam dates and times.
- Any exam or makeup exam that is missed without documentation approved by academic counselling will receive a grade of zero.
- At least ONE midterm must be written to be permitted to write the final exam in the course

- At the end of the course, the lowest exam grade will be automatically reweighed by reducing that exam by 2.5%, and applying it to the highest exam grade. For example, if the lowest grade was on Midterm #2, and the highest grade was on the final exam, Midterm #2 will be worth 25%, and the final exam will be worth 40%.

**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 email their instructor(s) and teaching assistant(s) using [email, OWL, MS Teams, etc.]
- Emails will be monitored daily; students will receive a response in 24–48 hours
- This course will use [e.g., forum, MS Teams, etc.] 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 using Zoom. Details on Office Hours, and the
- Office hours will be drop-in format, no appointment is needed
- Office hours will be group based
- Office hour details will be posted on OWL

## 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., Must Knows Facebook group, Course Hero, Chegg, 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 before online quizzes. The quizzes are open-book, but collaboration is NOT permitted

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 day 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.
8. **Keep a weekly routine**. Consistent wake-up times, regular exercise, healthy eating habits, and a regular bedtime will help you to balance your academics, and your own personal health and well-being.



### 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 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](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](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, e.g., cell phones, tablets, cameras, smart glasses, smart watch 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., 74.45 becomes 74, and 74.50 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 the use of ChatGPT and other Artificial Intelligence (AI) Platforms**

Within this course, students are permitted to use AI tools exclusively for information gathering purposes. These tools are intended to enhance the learning experience by providing access to diverse information sources. However, it is essential that students critically evaluate the obtained information, exercise independent thinking, and engage in original research to synthesize and develop their own ideas, arguments, and perspectives. The use of AI tools can serve as a starting point for exploration, with students expected to uphold academic integrity by appropriately attributing all sources and avoiding plagiarism. Submitted assignments should reflect the students' own thoughts and independent written work. By adhering to these guidelines, students contribute to a responsible and ethical learning

environment that promotes critical thinking, independent inquiry and allows them to produce original written contributions.

## 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](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](mailto:support@uwo.ca).

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

[Appeal Procedures](#)

[Registrarial Services](#)

[Student Development Services](#)

[Student Health Services](#)