

Physiology and Pharmacology Human Toxicology PHARM 4660A

Course outline for Fall 2020



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:



Stable internet connection



Laptop or computer



Working microphone



Working webcam (suggested)

2. Course Overview and Important Dates:



Delivery Mode	Dates	Time
Asynchronous online	weekly	80 min
Synchronous online via Zoom	Monday	4:00PM - 4:30PM

*Details about design and delivery of the course are listed below in Section 4

Classes Start	Reading Week	Classes End	Study day(s)	Exam Period
September 14	November 2 - 8	December 7	December 10	December 11 - 22

* November 12, 2020: Last day to drop a first-term half course or a first-term full course without penalty

3. Contact Information



Course Coordinator	Contact Information
Dr. Ute Schwarz	Use OWL message

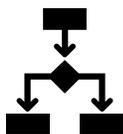
Instructor(s)	Contact Information
Dr. Brad Urquhart	Brad.Urquhart@schulich.uwo.ca
Dr. Constance Mackenzie	Constance.Mackenzie@sjhc.london.on.ca
Dr. Facundo Garcia-Bournissen	Facundo.Garcia-Bournissen@lhsc.on.ca
Teaching Assistant(s)	Contact Information
Alex Peidl	Use OWL message
Stephanie Wojtowicz	Use OWL message

4. Course Description and Design

A course dealing with the pharmacological and toxicological principles underlying the adverse effects of xenobiotics in humans. In addition to reviewing mechanisms of toxicity in humans, the course will include overviews of the principles of management of human poisoning, the principles of chronic toxicity and of drug safety in humans.

Prerequisite(s): Pharmacology 3620 or permission of the Department.

Mode	Dates	Time	Frequency
Virtual synchronous (ZOOM)	Monday	4:00PM-4:30PM	weekly
Virtual asynchronous	N/A	80 min	weekly



- Asynchronous pre-work must be completed prior to synchronous sessions
- Attendance at synchronous sessions is optional but strongly encouraged
- Missed work should be completed within 24 hours in the case of a self-reported absence
- A recording will be provided for synchronous sessions
- Closed captioning will be provided on audio or video recordings, if requested

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 pharmacological and toxicological principles of adverse effects of xenobiotics humans
- Understand the of principles of organ and non-organ directed toxicity
- Discuss principles of management of human poisoning
- Discuss principles of drug safety in humans
- Identify and explain the toxicokinetics, mechanism of toxicity and develop a treatment plan for any assigned toxic compound.
- Analyze and interpret data from literature publications in toxicology and explain the methods used to generate the data.
- Write a succinct, clear and grammatically correct report on an assigned toxicant.

6. Course Content and Schedule

Week	Dates	Topic	Instructor
1	Sept 9 – 13	N/A	N/A
2	Sept 14 – 20	Principles of Toxicology, Toxicokinetics and Risk Assessment	Urquhart
	Sept 14 (Zoom)	Synchronous session* Course introduction and overview	Schwarz, Urquhart
3	Sept 21 – 27	Toxic Responses of the Liver: Hepatotoxicology	Urquhart
	Sept 21 (Zoom)	Synchronous session*	Urquhart
4	Sept 28 – Oct 4	Toxic Responses of the Kidney: Renal Toxicology	Urquhart
	Sept 28 (Zoom)	Synchronous session*	Urquhart
5	Oct 5 – 11	Toxic Responses of the Heart: Cardiovascular Toxicology	Urquhart
	Oct 5 (Zoom)	Synchronous session*	Urquhart
6	Oct 12 – 18	<i>Thanksgiving – No Class</i>	N/A
7	Oct 19 – 25	Endocrine Toxicology	Schwarz
	Oct 19 (Zoom)	Synchronous session*	Schwarz
8	Oct 26 – Nov 1	N/A	N/A
	Oct 26	MIDTERM EXAM	Schwarz
9	Nov 2 – 8	<i>Fall Reading Week – No Class</i>	N/A
10	Nov 9 – 15	Pharmacogenetics and Toxicology	Schwarz
	Nov 9 (Zoom)	Synchronous session*	Schwarz
11	Nov 16 – 22	Adverse Drug Reactions: Mechanisms and Examples	Schwarz
	Nov 16 (Zoom)	Synchronous session*	Schwarz
12	Nov 23 – 29	The Toxicology of Poisoning	Mackenzie
	Nov 23 (Zoom)	Synchronous session*	Mackenzie
13	Nov 30 – Dec 6	Maternal-Fetal Toxicology	Garcia-Bournissen
	Nov 30 (Zoom)	Synchronous session*	Garcia-Bournissen
14	Dec 7 – 9	Forensic Toxicology	Urquhart
	Dec 7 (Zoom)	Synchronous session*	Urquhart, Schwarz



*Synchronous lecture time will be used to further deepen asynchronously provided lecture content, discuss cases and answer related questions from students.

7. Online Participation and Engagement



- Students are expected to participate and engage with content as much as possible
- Students are encouraged to participate during synchronous sessions.
- 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 (% of final grade)	Due Date
Toxicology report	Written assignment	15%	October 5, 2020 at 2:30PM
Midterm exam	Timed-release exam	40%	October 26, 2020
Final exam	Timed-release exam	45%	TBA (Dec 2020)

- All assignments are due at 2:30 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 draft checker under the assignments tab
- 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

The examination format for exams will consist of short and long answer questions. Questions will be derived from the lecture slides and content described including synchronous sessions as well as the assigned reading of scientific publications. The final examination will be minimally cumulative.

Toxicology Report (15% of final grade)



Each student will be required to write a toxicology report. Students will be able to sign up for the topic of this report on OWL by going to the *Site Info* tool on the left side of the OWL page. Note, the *Site Info tool sign-up* will be released Tuesday September 15 at 12 PM. The report should be no longer than two typewritten, single spaced pages with 12-point font and one-inch margins (normal). One additional page should be added for figure(s) (generated by the student or from the literature) that are relevant to the report. You should have at least one figure that summarizes your toxicology report. An unlimited number of pages may be added to the end for references. The report should contain information on: mechanism of toxicity, toxicokinetics, stages/signs/symptoms of toxicity, treatment plan and/or antidote (if appropriate). The report will be evaluated based on succinct, clear, concise and grammatically correct English in addition content presented. Turnitin service will be used to confirm the originality of all reports against literature sources and peer reports. It is your responsibility to check your turnitin report. The *similarity index* should be around 24% or less, and will be evaluated on a case by case basis. Further detail will be provided during the course.

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 without approved submitted documentation or a self-reported absence will be subject to a late penalty 10%/day

- Late assessments with a self-reported absence should be submitted within 24 hours of submission of the self-report
- An assessment cannot be submitted after it has been returned to the class
- A make-up test will be offered
- If a make-up assessment is missed, the student will receive an INC and complete the task the next time the course is offered

9. Communication:



- Students should check the OWL site every 24 – 48 hours
- A weekly update will be provided on the OWL announcements
- Students should email their instructor(s) and teaching assistant(s) using OWL “messages”
- Emails will be monitored daily; students will receive a response in 24 – 48 hours
- This course will use the OWL forum for discussions
- Students should post all course-related content on the discussion forum so that everyone can access answers to questions
- The discussion forums will be monitored daily by instructors or teaching assistants

10. Office Hours:



- Office hours will be held remotely using Zoom
- Students will be able to sign up for a remote appointment via Zoom by contacting the Instructor via OWL messages

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:

- Students are expected to follow online etiquette expectations provided on OWL
- 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 or application to keep track of your courses. 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. 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. Treat this course as you would a face-to-face course. 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

[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. Academic Counselling will be operating virtually this year and can be contacted at scibmsac@uwo.ca.

Accommodation for Religious Holidays

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

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](#).

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](#)