Schulich MEDICINE & DENTISTRY

Western Science

Bachelor of Medical Sciences (BMSc) Program

# Department of Physiology and Pharmacology

## Human Toxicology; PHARM 4660A and DSP 9660

Course Syllabus for Fall 2024

THRIVE together

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 |
|---|---|---|---|---|
| September 5 | October 12–20 | December 6 | December 7–8 | December 9–22 |

September 30, 2024, is National Day for Truth and Reconciliation and is a non-instructional day
December 2, 2024: Last day to withdraw from a first-term half course without academic penalty

## 3. Contact Information

| Course Coordinator | Contact Information |
|---|---|
| **Dr. Ute Schwarz** | uschwarz@uwo.ca |

| Instructors | Contact Information |
|---|---|
| Dr. Constance Mackenzie | Constance.Mackenzie@sjhc.london.on.ca |
| Dr. Facundo Garcia-Bournissen | Facundo.Garcia-Bournissen@lhsc.on.ca |
| Dr. Shelby Oke | soke2@uwo.ca |
| | |
| **Teaching Assistant(s)** | |
| Yina Tian | ytian332@uwo.ca |
| Maria Alexandra Nica | mnica2@uwo.ca |
| Kuralay Zhaksylyk | kzhaksyl@uwo.ca |

## 4. Course Description and Design

### **Delivery Mode:** in-person

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):** PHARM 3620

Unless you have either the pre-requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

### Timetabled Sessions

| Component | Date(s) | Time |
|---|---|---|
| Lectures | Monday | 2:30-4:20PM |

- ☑ Asynchronous Case study material review must be completed prior to lectures
- ☑ Attendance at sessions is required
- ☑ Missed work should be completed within 24 hours
- ☑ A recording will be provided of the sessions

All course material will be posted to OWL: https://westernu.brightspace.com/d2l/login. 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 Brightspace Help. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

Current versions of all popular browsers (e.g., Safari, Chrome, Edge, Firefox) are supported with OWL Brightspace; what is most important is that you update your browser frequently to ensure it is current. All JavaScript and cookies should be enabled.

## 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 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 an assigned toxic compound.
- Write a succinct, clear and grammatically correct report on an assigned toxicant
- Analyze and interpret data from literature publications in toxicology and explain the methods used to generate the data.

## 6. Course Content and Schedule

| Week | Dates | Lectures | Topic | Instructor |
|---|---|---|---|---|
| 1 | N/A | - | **N/A** | - |
| 2 | Sept 9 | **Lecture 1** | Course introduction and overview; Principles of Toxicology, Toxicokinetics, and Risk Assessment | Schwarz/ Oke |
| 3 | Sept 16 | **Lecture 2** | Toxic Responses of the Liver: Hepatotoxicology | Oke |
| 4 | Sept 23 | **Lecture 3** | Toxic Responses of the Kidney: Renal Toxicology | Oke |
| 5 | Sept 30 | - | **No Class - National Day for Truth and Reconciliation** | - |
| 6 | Oct 7 | **Lecture 4** | Toxic Responses of the Heart: Cardiovascular Toxicology | Oke |
| 7 | Oct 14 | - | **No Class - Thanksgiving/ Reading Week** | - |
| 8 | Oct 21 | **Lecture 5** | Endocrine Toxicology | Schwarz |
| 9 | Oct 28 | - | **MIDTERM EXAM** | - |
| 10 | Nov 4 | **Lecture 6** | Pharmacogenetics and Toxicology | Schwarz |
| 11 | Nov 11 | **Lecture 7** | Adverse Drug Reactions: Mechanisms and Examples | Schwarz |
| 12 | Nov 18 | **Lecture 8** | Maternal-Fetal Toxicology | Garcia-Bournissen |
| 13 | Nov 25 | **Lecture 9** | The Toxicology of Poisoning | Mackenzie |
| 14 | Dec 2 | **Lecture 10** | Forensic Toxicology | Garcia-Bournissen |

## 7. Participation and Engagement

- ☑ Students are expected to participate and engage with content as much as possible
- ☑ Students can participate in discussions during lectures
- ☑ Students can also participate by interacting in the discussion forums with their peers and instructors

## 8. Assessment and Evaluation

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

| Assessment | Format | Weighting | Due Date | Flexibility |
|---|---|---|---|---|
| Toxicology report (Part 1): *ChatGPT critical evaluation* | Self-enrollment into groups | - | Sept 15, 2024 | n.a. |
| Toxicology report (Part 1): *ChatGPT critical evaluation* | Written assignment (Individual) | 5% | Sept 27, 2024 | 72 hour no late penalty |
| Toxicology report (Part 1): *ChatGPT critical evaluation* | Student peer review assignment | - | Oct 4, 2024 | 72 hour no late penalty |
| Toxicology report (Part 2) | Written assignment (Individual) | 15% | Oct 11, 2024 | Submission by Oct 15 without late penalty |

| | | | | |
|---|---|---|---|---|
| Toxicology report (**DSP 9660 only**) | Written assignment (Individual) | 20% | Oct 11, 2024 | Submission by Oct 15 without late penalty |
| Midterm test | Written exam (during class) | 40% | Oct 28, 2024 | Not applicable |
| Final exam | Written exam | 40% | December exam period | Not applicable |

**Designated Assessment:** Instructors are permitted to designate one assessment per course per term as requiring supporting documentation to receive academic consideration. See below for information on academic consideration policy and missed course work. For this course, the following assessment has been designated as requiring supporting documentation: **Midterm test**.

### Information about flexibility in assessment

- ☑ Flexibility in assessment has been applied to this course; therefore, academic consideration requests may be denied on the assessments where flexibility is included
- ☑ This course employs flexible deadlines for assignments. The assignment deadlines can be found above in the course outline. For each assignment, students are expected to submit the assignment by the deadline listed. Should illness or extenuating circumstances arise, students are permitted to submit their assignment up to 72 hours past the deadline without a late penalty. Should students submit their assessment beyond 72 hours past the deadline, a late penalty of **10% per day** will be subtracted from the assessed grade. Requests for academic consideration supported by documentation must be submitted within 48 hours of the original deadline. The instructor reserves the right to deny such academic considerations, given the deadline flexibility provided. If you have a long- term academic consideration or an accessibility accommodation that allows greater flexibility than provided here, please reach out to your instructor at least one week prior to the posted deadline.

### General information about assessments

- ☑ All assignments are due at 11:59 pm EST 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 (Part 2 of the Toxicology report only; statement in policies below)
- ☑ Students will have unlimited submissions to Turnitin
- ☑ Rubrics will be used to evaluate assessments and will be posted with the instructions
- ☑ 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 assignments or midterms must be received within 3 weeks of the grade being posted.

### Written Exams

The examination format for exams will consist of fill-in-the-blank, short and long answer questions. Questions will be derived from the lecture slides, information provided for the case studies and related discussions during lectures as well as assigned reading of scientific publications. The final examination will be minimally cumulative.

**Toxicology Report (Pharm 4660A students only)**

**Part 1: ChatGPT critical evaluation (5% of final grade)**
**Part 2: Final written report (15% of final grade)**

Each student will be required to write a toxicology report that will involve the critical evaluation of a ChatGPT academic answer.

1. ***Sign up - self-enrollment into groups of 4 students each***: Starting **Tuesday, September 10**, students will be able to sign-up for a molecule to write this report on. At the course site in OWL Brightspace, please go to the *Content* tool, select *Toxicology report* on the left side menu, and then *Part 1: ChatGPT Critical Evaluation*. Click *Self-enrollment* and follow the link *ChatGPT Assignment* to join a group for a ChatGPT assignment group. Alternatively, you can go the *Communications* tool on the top menu of the OWL page. Under *Groups*, join **one group representing one molecule**. Join a group before or by **Sunday, September 15**. After that you will be automatically enrolled in one of the groups. One of four report components or categories (refer to 2.) in each group will be assigned to you according to the time of joining the group. For example, the student who joined a group first will work on category 1, the student who joined second will work on category 2, etc.

2. ***ChatGPT critical evaluation assignment (Part 1):*** As noted above, there will be four students in a group for a chosen molecule. Each student will individually access ChatGPT (https://openai.com/blog/chatgpt) and prepare and submit one or more question(s) to obtain the answer(s) concerning one of four report components or categories assigned to you (refer to 1.): i. mechanism of toxicity (category 1), ii. toxicokinetics (category 2), iii. stages/ signs/ symptoms of toxicity (category 3), or iv. treatment plan and/ or antidote (if appropriate) (category 4). Subsequently, the student will evaluate critically the answer generated by ChatGPT. Accordingly, the *ChatGPT evaluation* written assignment should include the following information: a) the question(s) used for ChatGPT, b) the answer(s) generated by ChatGPT, and c) the critical evaluation of the ChatGPT-generated answer. Please make sure references are generated by ChatGPT (can be part of your question); fact checking of references should be included in the evaluation. This **written assignment** should be no longer than two typewritten, single-spaced pages with 12-point font and one-inch margins (normal). Please save the assignment as a Word file using the following naming convention: ChatGPT_name of the molecule_your last and first name.

3. ***Upload the ChatGPT evaluation assignment by September 27***: Under *Communications*, select *Groups*, and upload your file in your group locker under the appropriate category 1, 2, 3 or 4, and confirm successful file upload afterwards (e-mail confirmation).

4. ***Student peer review assignment:*** The *ChatGPT evaluation* will be reviewed and graded by the four students in each group of a molecule (not anonymous). Each student will grade ChatGPT evaluations from other students in the molecule group (out of 5 points), and the grade will be the average of the mark given by the other students. Rubrics for each category can be downloaded in OWL. Specifically, for peer review, first download the appropriate assignment files from each category that is different from yours as well as the appropriate rubric. Copy and paste the rubric at the end of the Word document, complete the rubric with comments including your mark, and save the document by adding _graded at the end of the file name.

5. ***Upload ChatGPT peer review assignment*** **by October 4:** First, upload the three assignments that you reviewed and graded in the appropriate categories of your group under *Communications* and *Groups*. Second, please download all graded assignments that you received from other group members and reupload by following the link provided in your *Group* under *Communications*. This will allow the TA to see the graded assignments and determine the average grade for you that will be entered in Grades. You will have to complete the peer review of your group members AND re-upload all of the peer-reviews you received in order to get your mark for the ChatGPT evaluation assignment (5%).

6. ***Prepare toxicology report (Part 2):*** Instructions are provided under *Content*, *Toxicology Report*, *Part 2: Final Report* in OWL. The report should be no longer than two typewritten, single-spaced pages with 12-point font and one-inch margins (normal), and should contain information on: i) mechanism of toxicity (**3 marks**), ii) toxicokinetics (**1.5 marks**), iii) stages/ signs/ symptoms of toxicity (**3 marks**), and iv) treatment plan and/ or antidote (if appropriate) (**1.5 marks**). One additional page should be added for figure(s) that are relevant to the report including a legend (also called caption). In the figure legend, please note the reference if the figure was taken from the literature or note if you generated the figure. You should have at least one figure (**1.5 marks**). An unlimited number of pages may be added to the end for references (**1.5 marks**). The report will be evaluated based on succinct, clear, concise, and grammatically correct English in addition to the content presented (**3 marks**). Please save your report as a Word file using the following naming convention: Report_name of the molecule_your last and first name.

7. ***Submit the toxicology report via Turnitin in OWL by October 11.*** Please go to *Content*, *Toxicology Report* and click on *Part 2: Final report* to upload and submit your file. 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.

## Toxicology Report (DSP 9660 students only)

### Written report (20% of final grade)

**Format**: Each student will be assigned a different molecule by e-mail at the beginning of the course (Sept 15). The report should be at least four typewritten, single-spaced pages with 12-point font and one-inch margins (normal), and should contain information on: i) mechanism of toxicity (**4 marks**), ii) toxicokinetics (**2 marks**), iii) stages/ signs/ symptoms of toxicity (**4 marks**), and iv) treatment plan and/ or antidote (if appropriate) (**2 marks**). Additional pages should be added for at least two figure(s) that are relevant to the report including a legend (also called caption). In the figure legend, please cite the reference if the figure was taken from the literature or note if you generated the figure yourself (**2 marks**). An unlimited number of pages may be added to the end for references (**2 marks**). The report will be evaluated based on succinct, clear, concise, and grammatically correct English in addition to the content presented (**4 marks**). Please save your report as a Word file using the following naming convention: Report_name of the molecule_your last and first name_DSP9660. Please **submit** your report by October 11 via e-mail (uschwarz@uwo.ca).

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 assessments:

- ☑ Late assessments without academic consideration will be subject to a late penalty of **10%/ day**
- ☑ One make-up test will be offered for each written exam (Midterm exam, Fri, Nov 1; Final exam TBD)
- ☑ The midterm and final exam must be passed, and the toxicology report must be completed to pass the course. Failure to complete the exams with a passing grade (+50%) and failure to submit a toxicology report will result in a failing grade
- ☑ If a make-up assessment is missed with documentation, the student will receive an INC and complete the task the next time the course is offered.

**INC (Incomplete Standing):** If a student has been approved by the Academic Advising 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 Advising 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 Advising 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 Advising 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 Brightspace site every 24–48 hours
- ☑ Students should email their instructors (Dr. Ute Schwarz, Dr. Shelby Oke) and teaching assistant(s) using their email address
- ☑ Emails will be monitored daily; students will receive a response in 24–48 hours
- ☑ This course will use discussions on Brightspace
- ☑ 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 in-person or remotely using Zoom
- ☑ Office hours will be booked as needed
- ☑ Office hours will be individual

## 11. Resources

- ☑ All resources will be posted in OWL Brightspace

## 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

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 Brightspace to ensure you have seen everything posted to help you succeed in this class.
3. Follow checklists created on OWL Brightspace 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

### A. Absence from Course Commitments

Students must familiarize themselves with the Policy on Academic Consideration – Undergraduate Students in First Entry Programs

Students missing course work for medical, compassionate, or extenuating circumstances can request academic consideration by completing a request at the **central academic consideration portal**. Students are permitted one academic consideration request per course per term **without** supporting documentation. Note that supporting documentation is **always** required for academic consideration requests for examinations scheduled by the office of the registrar (e.g., December and April exams) and for practical laboratory and performance tests (typically scheduled during the last week of the term).

Students should also note that the instructor may **designate** one assessment per course per term that requires supporting documentation. This designated assessment is described elsewhere in this document (Midterm test, refer to 8. Assessment and Evaluation). Academic consideration requests may be denied when flexibility in assessment has already been included. Examples of flexibility in assessment include when there are assessments not required for calculation of the final grade (e.g. 8 out of 10 quizzes) or there is flexibility in the submission timeframe (e.g. 72 hour no late penalty period).

Please note that any academic considerations granted in this course will be determined by the instructor of this course, in consultation with the academic advisors in your Faculty of Registration, in accordance with information presented in this course syllabus. Supporting documentation for academic considerations for absences due to illness should use the Student Medical Certificate or, where that is not possible, equivalent documentation by a health care practitioner.

Accommodation for Religious Holidays

Students should review the policy for Accommodation for Religious Holidays. Where a student will be unable to write examinations and term tests due to a conflicting religious holiday, they should inform their instructors as soon as possible but not later than two weeks prior to writing the examination/term test. In the case of conflict with a midterm test, students should inform their instructor as soon as possible but not later than one week prior to the midterm.

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.

### B. 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.

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

### C. 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

### D. 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.

### E. 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.

### F. 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 (Toxicology report Part 2 only). 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

### 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 Generative Artificial Intelligence (AI) Platforms**

Within this course, students are permitted to use AI tools exclusively for information gathering and preliminary research 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. Specifically, this is the purpose of the assignment ***Toxicology report (Part 1): ChatGPT critical evaluation*** (see above). 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. Assignments and/or lab reports 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

- Students who are in emotional/mental distress should refer to Mental Health @Western Health https://www.uwo.ca/health/ for a complete list of options about how to obtain help.
- To connect with a case manager or set up an appointment, please contact support@uwo.ca.
- Other important links:
    - Academic Advising (Science and Basic Medical Sciences)
    - Appeal Procedures
    - Registrarial Services
    - Student Development Services
    - Student Health Services

**Statement on Gender-Based and Sexual Violence**

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.