The Department of Physiology and Pharmacology
Neuropharmacology 4380B
Course outline for Winter 2022

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

1. Technical Requirements:

   - Stable internet connection
   - Laptop or computer
   - Working microphone
   - Working webcam (suggested)

2. Important Dates:

<table>
<thead>
<tr>
<th>Classes Start</th>
<th>Reading Week</th>
<th>Classes End</th>
<th>Study day(s)</th>
<th>Exam Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 10</td>
<td>February 19 - 27</td>
<td>April 8</td>
<td>April 9</td>
<td>April 10 - 30</td>
</tr>
</tbody>
</table>

*March 14, 2022: Last day to drop a second-term half course or a second-term full course without penalty

3. Contact Information

<table>
<thead>
<tr>
<th>Course Coordinator</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vania Prado</td>
<td><a href="mailto:vprado@uwo.ca">vprado@uwo.ca</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vania Prado</td>
<td><a href="mailto:vprado@uwo.ca">vprado@uwo.ca</a></td>
</tr>
<tr>
<td>Taylor Schmitz</td>
<td><a href="mailto:tschmitz@uwo.ca">tschmitz@uwo.ca</a></td>
</tr>
</tbody>
</table>
4. Course Description and Design
This course will cover the cellular and molecular mechanisms underlying the actions of drugs on the central and peripheral nervous systems. Lectures will focus on recent developments in the field of neuroscience and their impact on our understanding of the actions, and development of, new drugs.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Dates</th>
<th>Time</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blended</td>
<td>Tuesday/MSB 384</td>
<td>12:30-2:30</td>
<td>weekly</td>
</tr>
</tbody>
</table>

☑️ Attendance at in person/synchronous sessions is required
☑️ Missed work should be completed within 24 hours
☑️ A recording will be provided for synchronous sessions

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. Please 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:
- Identify critical aspects from research articles through in-class (or virtual) presentation and discussion as well as through independent written report.
- Identify and describe different types of genetically modified mouse models (transgenics, knock-outs, knock-ins) as well as different methodologies available to modulate neurotransmission (optogenetics, chemogenetics, etc) and their use on better understanding neurological diseases.
- Describe cellular and molecular mechanisms underlying diseases of the nervous system such as depression, Schizophrenia, Alzheimer disease, Parkinson disease, and mechanism of action of drugs used in the treatment.
6. Course Content and Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Topic</th>
<th>Mode</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 11</td>
<td>Introduction to the course-Neurotransmission</td>
<td>In person</td>
<td>V. Prado</td>
</tr>
<tr>
<td>2</td>
<td>Jan 18</td>
<td>Cholinergic transmission – Alzheimer's Disease</td>
<td>In person</td>
<td>V. Prado</td>
</tr>
<tr>
<td>3</td>
<td>Jan 25</td>
<td>Clinical trial presentations</td>
<td>In person</td>
<td>V. Prado</td>
</tr>
<tr>
<td>4</td>
<td>Feb 01</td>
<td>Paper #1 neurotransmission</td>
<td>In person</td>
<td>V. Prado</td>
</tr>
<tr>
<td>5</td>
<td>Feb 08</td>
<td>Paper #2 Alzheimer's</td>
<td>In person</td>
<td>V. Prado</td>
</tr>
<tr>
<td>6</td>
<td>Feb 15</td>
<td>Dopaminergic transmission Parkinson's Disease</td>
<td>In person</td>
<td>V. Prado</td>
</tr>
<tr>
<td>7</td>
<td>Feb 21 – 27</td>
<td>Reading Week</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>8</td>
<td>Mar 01</td>
<td>Midterm exam</td>
<td>In person</td>
<td>V. Prado</td>
</tr>
<tr>
<td>9</td>
<td>Mar 08</td>
<td>Paper#3 Parkinson's</td>
<td>In person</td>
<td>V. Prado</td>
</tr>
<tr>
<td>10</td>
<td>Mar 15</td>
<td>Depression and its pharmacological management</td>
<td>Virtual Asynchronous</td>
<td>Schmitz</td>
</tr>
<tr>
<td>11</td>
<td>Mar 22</td>
<td>Paper #4 Depression</td>
<td>In person</td>
<td>Schmitz</td>
</tr>
<tr>
<td>12</td>
<td>Mar 29</td>
<td>Schizophrenia and its pharmacological management</td>
<td>In person</td>
<td>Schmitz</td>
</tr>
<tr>
<td>13</td>
<td>Apr 05</td>
<td>Paper#5 –Schizophrenia</td>
<td>In person</td>
<td>Schmitz</td>
</tr>
<tr>
<td>14</td>
<td>Apr 10-30</td>
<td>Final exam</td>
<td>In person</td>
<td>V. Prado</td>
</tr>
<tr>
<td>(T.B.D.)</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Although the intent is for this course to be delivered as in-person, the changing COVID-19 landscape may necessitate some or all of the course to be delivered online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The grading scheme will not change. Any assessments affected will be conducted online as determined by the course instructor.

7. Online 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.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Format</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper presentation &amp; discussions</td>
<td>In person/virtual</td>
<td>25%</td>
</tr>
<tr>
<td>Clinical trial presentation</td>
<td>In person/virtual</td>
<td>15%</td>
</tr>
<tr>
<td>Midterm test</td>
<td>online</td>
<td>25%</td>
</tr>
<tr>
<td>Final exam</td>
<td>online</td>
<td>35%</td>
</tr>
</tbody>
</table>

- Written assignments will be submitted to Turnitin (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

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.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>90-100</td>
<td>One could scarcely expect better from a student at this level</td>
</tr>
<tr>
<td>A</td>
<td>80-89</td>
<td>Superior work which is clearly above average</td>
</tr>
<tr>
<td>B</td>
<td>70-79</td>
<td>Good work, meeting all requirements, and eminently satisfactory</td>
</tr>
<tr>
<td>C</td>
<td>60-69</td>
<td>Competent work, meeting requirements</td>
</tr>
<tr>
<td>D</td>
<td>50-59</td>
<td>Fair work, minimally acceptable</td>
</tr>
<tr>
<td>F</td>
<td>below 50</td>
<td>Fail</td>
</tr>
</tbody>
</table>

Information about late or missed evaluations:
- Late assessments without a self-reported absence and submitted documentation 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
- The weight of a missed test will be transferred to the final exam.
- 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
- Students should email their instructor(s).
- This course will use Zoom for discussions if moved online.
- 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 every 24-72 hours by instructors
10. Office Hours:
- Office hours will be held on Wednesdays from 3-4pm remotely using Zoom
- Students will be able to sign up for an appointment using OWL (Sign Up on OWL)
- Group office hours will be held, recorded, and posted for everyone to view

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
- 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. 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.
4. Connect with others. Try forming an online study group and try meeting on a weekly basis for study and peer support.
5. 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).
6. Reward yourself for successes. It seems easier to motivate ourselves knowing that there is something waiting for us at the end of the task.

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

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.

[Academic Counselling (Science and Basic Medical Sciences)]

[Appeal Procedures]

[Registrarial Services]

[Student Development Services]

[Student Health Services]