1. Course Information

Physiology 4600A

Diseases of Ion Channels

updated August 14, 2018

This course will be offered in Fall term 2018. There will be an enrolment limit of 36 students.

This is a 4th year course on ion channel related diseases, including epilepsy, immunodeficiency, and cardiac arrhythmias. We will cover physiology and pathophysiology of relevant ion channels. By the end of the course, successful students will be able to: 1) understand/explain the mechanisms of channel physiology and how diseases are related to ion channel function; 2) effectively present research papers.

Anti-requisite: None

Prerequisites: Physiology3120 and Physiology3140A.

2 lecture hours (lecture vs seminar approximately 3:2). 0.5 course

The course will be taught by two professors, and involves student participation through presentation and discussion of research papers. Evaluation of student performance will include a midterm test (35%), participation (5%), seminar presentation (20%), a written summary of the presentation (5%), and a final examination (35%). The midterm and final examination will consist of essay and short-answer style questions. Lecture materials will be posted on the web site https://owl.uwo.ca.

Papers to be used for student presentations will be distributed one week prior to presentation. The dates of presentations will be assigned on a random basis. There will be 9-18 papers presented in class. Two students will be paired up to present each paper. The talk will last for 20 minutes, during which the objectives and background of the
research, relevant experimental methodology and results, as well as summary of observations and conclusions are to be described. Two students should contribute equally to the presentation especially on results and discussion. Attention should focus on the physiological mechanisms studied. A question period of 5-10 minutes will follow each talk. After the talk, the students are required to submit a written summary of their talk, to be posted on the web site. The summary should be less than 2 pages, containing hypothesis, objectives, brief methods and main results of the paper. Students who did not submit a summary within 4 days of the presentation will lose marks (maximum 5%). Power point or equivalent should be used for presentation.

Course Manager: Dr. L. Stan Leung MSB 236 sleung@uwo.ca

Instructors: Dr. L. Stan Leung
        Dr. Wei-Yang Lu RRI 7240 wlu53@uwo.ca

Senate regulation regarding the student’s responsibility regarding requisites:

Unless you have either the 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.

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 Services for Students with Disabilities (SSD) at 661-2111 x 82147 for any specific question regarding an accommodation.

2. Instructor Information: See page 1 (bottom)
OWL: updated course information will be posted on OWL

Students with OWL issues should see: https://owl.uwo.ca/portal/site/owldocs

3. Course Syllabus: See page 1-2


5. Evaluation:

Evaluation of student performance will include a midterm test (35%), marks for presentation (20%), a summary of the presentation (5%), class participation (5%), and a final examination (35%). The midterm test and final examination will consist of essay and short-answer style questions.

Note: it is the policy of the Department of Physiology and Pharmacology and the BMSc program in the Schulich School of Medicine and Dentistry to report the grade you earned in the course. Grades will not be “bumped”. For example, if your final grade is 78.45%, it will be entered as 79% and will not be “bumped” to 80%.

6. Additional Information/Statements

Statement on Use of Electronic Devices

Electronic devices will not be allowed during examinations.

Statement on Academic Offences

“Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following website:
“All required paper summaries may 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 The University of Western Ontario and Turnitin.com (http://www.turnitin.com).”

Policy on Plagiarism

The Department of Physiology and Pharmacology strongly condemns plagiarism. Plagiarism is the “act or instance of copying or stealing another’s words or ideas and attributing them as ones own.” (Excerpted from Black’s Law Dictionary, West Group, 1999, 7th ed. Pg 1170 and the definition used by Western’s Scholastic Discipline document). Plagiarism can be intentional or unintentional and regardless of intent, is a scholastic offence. It should be noted that self-plagiarism, plagiarizing one's own words for multiple assignments is subjected to the same penalty as plagiarizing another. Courses in Physiology and Pharmacology use turnitin, a similarity checking software embedded within OWL. We encourage all students to run their assignments through turnitin prior to submitting their reports for grading. Any report flagged as yellow (25-49% matching text), orange (50-74% matching text) or red (75-100% matching text) will be considered plagiarism (pending investigation by the instructor). It should be noted that a document could be plagiarized yet still pass the similarity check on turnitin.

The minimum penalty for a first time plagiarism offence of any kind is a grade of zero on the assignment. In addition, details of the offence will be forwarded to Dean’s office and stored. A second offence will carry a much stricter penalty in line with Western’s Scholastic Discipline policies http://www.westerncalendar.uwo.ca/2017/pg113.html

Cell Phone and Device Policy

The Department of Physiology and Pharmacology is committed to ensuring that testing and evaluation are undertaken fairly. For all tests and exams, it is the policy of the Department of Physiology and Pharmacology that any devices with a battery (e.g. cell phone, tablet, camera, watch, smart watch, ipod) are strictly prohibited. These devices MUST be left either at home or with the students 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 Department of Physiology and Pharmacology is not responsible for stolen/lost or broken devices.

**Appeals Policy**

The Department of Physiology and Pharmacology follows the Western University student academic appeals policy (http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#SubHeading_181). All appeals to individual graded course components must be submitted to the course instructor within 3 weeks of the grade being released. All final course grade appeals must be received by January 31 (1st term classes) or June 30 (2nd term half classes and full year classes). You must first appeal to the course manager. If this appeal is rejected, then you can appeal to the Undergraduate Chair of the Department of Physiology and Pharmacology (Brad.Urquhart@schulich.uwo.ca). If this appeal is rejected, you may then appeal to the Assistant Dean of the Bachelor of Medical Sciences Undergraduate Education Committee (Candace.Gibson@schulich.uwo.ca).

You must have suitable grounds for appeal which may include: 1) appeal on medical or compassionate grounds; 2) appeal based on extenuating circumstances beyond your control; 3) appeal based on bias, inaccuracy or unfairness. All appeals must be accompanied by a detailed explanation along with supporting documentation. You should submit your appeal as an e-mail with a single attachment. If you have multiple supporting documents, you should merge them into a single document.

**Absence from course commitments**

Documentation is required for either medical or non-medical academic accommodation, such documentation must be submitted by the student directly to the appropriate Faculty Dean`s/Academic Counselling office and not to the instructor. It will be the Dean`s/Academic Counselling office that will determine if accommodation is warranted.

**A. Absence for medical illness:**
Students must familiarize themselves with the Policy on Accommodation for Medical Illness for Undergraduate Students, located at: [http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf)

The policy is also accessible from the Medical Accommodation Policy link at [https://studentservices.uwo.ca/secure/index.cfm](https://studentservices.uwo.ca/secure/index.cfm)

**Statement from the Academic Counselling Office, Faculty of Science (for Science and BMSc students)**

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to the Academic Counselling Office 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 by the Academic Counselling Office and the instructor has been informed. In the event of a missed final exam, a "Recommendation of Special Examination" form must be obtained from the Academic Counselling Office immediately. For further information please see: [http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf)

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:

[https://studentservices.uwo.ca/secure/index.cfm](https://studentservices.uwo.ca/secure/index.cfm)

**B. Absence for non-medical reasons:**

Documentations are required for non-medical absences from midterms or late submission of paper summaries. The documentation must be submitted by the student directly to the appropriate Dean’s/Academic Counselling Office and not to the instructor. It will subsequently be the Dean’s/Academic Counselling Office that will determine if accommodation is warranted.
Students who are in emotional/mental distress should refer to Mental Health@Western http://www.uwo.ca/uwocom/mentalhealth/ for a complete list of options about how to obtain help.

C. Special Examinations

A Special Examination is any examination other than the regular final examination, and it may be offered only with the permission of the Dean/Academic Counselling Office 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.

A Special Examination must be written at the University or an Affiliated University College no later than 30 days after the end of the examination period involved. To accommodate unusual circumstances, a date later than this may be arranged at the time permission is first given by the Dean/Academic Counselling Office of the Faculty. The Dean/Academic Counselling Office will consult with the instructor and Department Chair and, if a later date is arranged, will communicate this to the Office of the Registrar.

If a student fails to write a scheduled Special Examination, permission to write another Special Examination will be granted only with the permission of the Dean/Academic Counselling Office in exceptional circumstances and with appropriate supporting documents. In such a case, the date of this Special Examination normally will be the scheduled date for the final exam the next time the course is offered.

When a grade of Special (SPC) or Incomplete (INC) appears on a student's record, the notations will be removed and replaced by a substantive grade as soon as the grade is available.

Support Services:

Registrar Services: http://www.registrar.uwo.ca

Academic Counselling (Science and Basic Medical Sciences): http://www.uwo.ca/sci/undergrad/academic_counselling/index.html

USC Student Support Services: http://westernusc.ca/services/
Student Development Services: http://www.sdc.uwo.ca

Student Health Services: http://www.shs.uwo.ca/

Students who are in emotional/mental distress should refer to Mental Health@Western http://www.uwo.ca/uwocom/mentallhealth/ for a complete list of options about how to obtain help.