1. Course Information

Physiology 2130: Introduction to Human Physiology
Fall/Winter 2019

A survey course outlining the principles of human/mammalian physiology; general properties of
the living cell and internal environment; neural, muscular, cardiovascular, respiratory,
gastrointestinal, renal and endocrine system; metabolism, reproduction and homeostasis.
Physiology 2130 is designed to help you learn the basic facts, concepts and principles that are
essential to your understanding of the function of the human body, so that you will be able to use that
knowledge to solve physiological problems. Because most of you who are enrolled in this course
intend to pursue careers related to health, the course will place some emphasis on clinical correlations
with pathophysiology. 2 lecture hours, 1 tutorial hour, 1.0 course

Lectures:
Natural Sciences room 145, Tuesdays and Thursdays, 8:30 AM – 9:30 AM

Tutorials:

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<thead>
<tr>
<th>Section</th>
<th>Location</th>
<th>Day &amp; Time</th>
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<tbody>
<tr>
<td>003</td>
<td>B&amp;GS 0153</td>
<td>Tuesday 9:30-10:30</td>
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<td>004</td>
<td>B&amp;GS 0153</td>
<td>Tuesday 10:30-11:30</td>
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<td>005</td>
<td>B&amp;GS 0153</td>
<td>Thursday 9:30-10:30</td>
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<td>006</td>
<td>B&amp;GS 0153</td>
<td>Thursday 10:30-11:30</td>
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<td>007</td>
<td>WSC 240</td>
<td>Thursday 2:30-3:30</td>
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<td>008</td>
<td>WSC 240</td>
<td>Thursday 3:30-4:30</td>
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<td>009</td>
<td>VAC-100</td>
<td>Tuesday 9:30-10:30</td>
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<td>010</td>
<td>VAC-100</td>
<td>Tuesday 10:30-11:30</td>
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<td>011</td>
<td>NS 7</td>
<td>Tuesday 9:30-10:30</td>
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<td>012</td>
<td>NS 7</td>
<td>Tuesday 10:30-11:30</td>
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<td>013</td>
<td>B&amp;GS 0156</td>
<td>Thursday 9:30-10:30</td>
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<td>014</td>
<td>B&amp;GS 0156</td>
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<td>015</td>
<td>PAB 34</td>
<td>Thursday 9:30-10:30</td>
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<td>016</td>
<td>PAB 34</td>
<td>Thursday 10:30-11:30</td>
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Requisites:
Prerequisite(s): None. First year courses in biology and chemistry are recommended
Antirequisite(s): Physiology 1020, 1021, 3120

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

<table>
<thead>
<tr>
<th>Instructors</th>
<th>Email</th>
<th>Office</th>
<th>Phone</th>
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<tbody>
<tr>
<td>Prof. Anita Woods</td>
<td><a href="mailto:Anita.woods@uwo.ca">Anita.woods@uwo.ca</a></td>
<td>MSB 208</td>
<td>519-661-4007</td>
</tr>
<tr>
<td>(Course Coordinator)</td>
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<tr>
<td>Prof. Stephen Everling</td>
<td><a href="mailto:severlin@uwo.ca">severlin@uwo.ca</a></td>
<td></td>
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<tr>
<td>Prof. Angela Beye</td>
<td><a href="mailto:abeye2@uwo.ca">abeye2@uwo.ca</a></td>
<td></td>
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<tr>
<td>Prof. Tom Stavraky</td>
<td><a href="mailto:Tom.Stavraky@schulich.uwo.ca">Tom.Stavraky@schulich.uwo.ca</a></td>
<td>MSB 206</td>
<td>519-661-3474</td>
</tr>
<tr>
<td>Prof. John Ciriello</td>
<td><a href="mailto:John.ciriello@schulich.uwo.ca">John.ciriello@schulich.uwo.ca</a></td>
<td>MSB 260</td>
<td>519-661-3484</td>
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**OWL:**
Students have the best opportunity to ask questions regarding course material during tutorials. However, there is also a tutorial specific discussion board where you may also post questions for your teaching assistant to answer. If you have remaining questions, email the professor who taught that portion of the course to the addresses listed above.

Students with OWL issues should see: [https://owlhelp.uwo.ca](https://owlhelp.uwo.ca)

### 3. Course Syllabus

**Course Objectives:** There are a few general objectives that you should always keep in mind as you study. You will be expected to be able to recall or recognize facts, concepts or principles. The ability to recall, however, is of little value unless you can do something with the information that you have learned. Therefore, you should also be able to use your knowledge to explain physiological function. Most important, of course, is your ability to use your knowledge to predict the consequences of alterations to normal physiological function or to predict changes in physiological systems. Not only are these latter objectives the most useful skills you can learn, but also they are the most interesting.
Therefore, the type of effort you put in to learn the course material will affect how well you do at applying what you have learned. We will be teaching you in tutorial about different study methods to achieve the goal of long-term retention and a deep understanding of the course material instead of just trying to memorize for the short-term.

Learning Outcomes
By the end of this course successful students will be able to:

1. Describe the function of the cardiovascular, respiratory, gastrointestinal, neuro, muscular, renal, endocrine and reproductive systems in the human body at the organ and cellular level.
2. Predict how these organs and organ systems will respond to a problem in order to maintain homeostasis.
3. Integrate information from lecture to identify how organs react to pathology and what types of solutions can be utilized to correct the pathology of those systems involved.

Course Format: There are two lectures given a week on Tuesdays and Thursdays from 8:30-9:30 in the Natural Sciences (NS) Centre room 145. You will also be expected to attend a weekly one-hour tutorial in the location indicated on your student course timetable.

Course Topics:
1. Cell Physiology- Prof. Anita Woods
2. Physiology of the Senses- Prof. Stefan Everling
3. Motor Physiology- Prof. Stefan Everling
4. Endocrine Physiology- Prof. Angela Beye
5. Autonomic Nervous System- Prof. Tom Stavraky
6. Muscle Physiology- Prof. Tom Stavraky
7. Cardiovascular Physiology- Prof. Tom Stavraky
8. Renal Physiology- Prof. Anita Woods
9. Respiratory Physiology- Prof. Angela Beye
10. Gastrointestinal Physiology- Prof. Anita Woods
11. Reproductive Physiology- Prof. Angela Beye
12. Hypothalmic/Limbic Physiology- Prof. John Ciriello

4. Course Materials

Copyright 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.

Textbook: Physiology 2130 workbook purchased from UWO bookstore.

5. Evaluation:

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<th>COMPONENT</th>
<th>DATE</th>
<th>% of Final Mark</th>
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| Assignment #1 | 2 MCQs posted by Oct. 16th @ 11:59 PM, 5 MCQs answered by Oct. 18th @ 11:59 PM | 1.5% |
| Assignment #2 | 2 MCQs posted by Nov. 27th @ 11:59 PM, 5 MCQs answered by Nov. 29th @ 11:59 PM | 1.5% |
| Assignment #3 | 2 MCQs posted by Feb. 12th @ 11:59 PM, 5 MCQs answered by Feb. 14th @ 11:59 PM | 1.5% |
| Assignment #4 | 2 MCQs posted by Mar. 25th @ 11:59 PM, 5 MCQs answered by Mar. 27th @ 11:59 PM | 1.5% |
| Quiz #1 | Submitted by October 22nd @ 4 PM | 1% |
| Quiz #2 | Submitted by December 3rd @ 4 PM | 1% |
| Quiz #3 | Submitted by February 25th @ 4 PM | 1% |
| Quiz #4 | Submitted by March 31st @ 4 PM | 1% |
| Tutorial Attendance & Participation | Sign in and out collected weekly, completing weekly tutorial activities | 5% |
| Midterm I | Friday Oct. 25th 6:00 – 7:00 PM | 15% |
| Midterm II | TBA (Dec 8th -19th) | 15% |
| Midterm III | Friday Feb. 28th 6:00-7:00 PM | 15% |
| Final Exam | TBA (April 6th -26th) | 40% |

15% Assessment Rule:
At least three days prior to the deadline for withdrawal from a course without academic penalty, students will receive assessment of work accounting for at least 15% of their final grade. For more details, refer to the link below:
http://www.westerncalendar.uwo.ca/PolicyPages.cfm?PolicyCategoryID=5&Command=showCategory&Keywords=15%&SubHeadingID=73&SelectedCalendar=Live&ArchiveID=#SubHeading_73

Policy on the Rounding and Bumping of Marks:
Across the Basic Medical Sciences Undergraduate Education programs and within the department of Physiology and Pharmacology 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.
Assignments
Peerwise is a website (https://peerwise.cs.auckland.ac.nz) that you will log into to submit two and answer five other multiple-choice questions for each assignment at the specified due dates. For completing both authoring and answering on time, you will receive 1.5%. Not completing a component of the assignment on time will result in a 0%. There are no part marks for partially completed assignments.

Quizzes
You will be completing 4 online quizzes worth up to 1% each. There will be a 24-hour window to log in to take your quiz, the last time to submit the quiz is posted in the above table. You will be given 20 minutes to answer 10 multiple choice questions. Students who have accommodations will be given the additional necessary time, based on documentation that is provided to Accommodated services (SSD) with Western. Access to the quizzes will be given to each student through OWL and students will have 1 attempt to complete it. Students are expected to complete these quizzes on an individual basis and not to share the questions with their colleagues.

Tutorials
Tutorial attendance is mandatory. You will be working in small groups of weekly activities and you will work with your teaching assistants to work on areas within the course that you may be struggling with. We believe that this time of active learning is valuable. If you attend all tutorials and participate in your tutorials in your small group activities, you will earn up to 5% of your final grade. To earn attendance, you must sign your name on the class roster and stay for the duration of the tutorial, as indicated by answering the exit Learning Catalytics question. The other half of your tutorial mark is participation. If you complete your weekly tutorial assignment and submit evidence of completion to OWL, under your groups tutorial page, you will receive the rest of your tutorial mark. Failure to sign in, answer the Learning Catalytics question or not submitting your weekly activity will result in a 0 for that weeks tutorial.

Tests & Examinations
The midterm tests and the final exam will consist of multiple-choice questions. The questions will be a combination of single best answer and multiple-multiple choice. The midterm tests will be 1 hour in length. The final exam will be cumulative, with emphasis on the last quarter of the course, 3 hours in length.

Missing Evaluations
There may be situations such as illness, or scheduled class conflicts that may prevent you from writing the exams on their scheduled date. You may be eligible to write a make-up test or make-up final exam. Please note that there will only be one make-up date that will be scheduled. You must contact the course manager immediately to obtain the information of the make-up. If you miss both the scheduled exam and the scheduled make-up exam, and have no valid reasons for doing so or have done so without obtaining permission from your academic counselling office,
you will obtain a 0% for that missed test or exam performance.

If you have documented reason for missing a midterm and the make-up, the weighting for the missed test will be reweighed to the final exam, making it worth 55%. You must write 2 midterms in order to be permitted to write a final exam. To demonstrate that you have read the syllabus, please follow these instructions. Go to OWL, click on Course FAQs, then Missing Evaluations. On the bottom of the page is a button called syllabus, click and answer the question.

There are no make-ups for assignments or quizzes. Therefore, if you do not complete these within the set time frame, you will receive a mark of 0 unless you have submitted documentation to your academic counselling office that supports your missed work. If you have appropriate documentation for missing a quiz, then your quiz mark will be reweighed (ie. each quiz will then be worth 1.33% instead of 1% each). There will be no reweighing of missed assignments due to the long time period students have to complete each assignment.

6. Additional Information/Statements

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:
http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

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

Statement on the use of Cell Phone and Electronic Devices

The Schulich School of Medicine and 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 and the Department of Physiology and Pharmacology that any electronic devices (e.g. cell phone, tablet, camera, watch, smart watch, ipod, ear buds, headphones) 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 individuals 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.
Statement on Discussion of Grades

The Department of Physiology and Pharmacology is committed to fair assessment of student work and encourages students to discuss course content and graded work with their peers in an effort to improve learning.

For Students: While all students have the right to question their grade should they feel it’s inaccurate, this exercise should be undertaken in a respectful manner. Professionalism and respect should be demonstrated in all interactions with instructors and peers. When discussing a grade or exam question with a professor or teaching assistant, the discussion should focus on your individual concern. Students should remember that some forms of assessment or specific questions are designed to be more challenging than others. In this situation, there may be several students that don’t receive the correct answer and this does not necessarily mean that there is a problem with the question or assessment. Concerns from one student that indicate that they are communicating on behalf of a larger group of peers (mob/crowd mentality) will not be considered. Concerns with an assessment should be communicated to the instructor and should reflect your individual concern. Threats of any sort will not be tolerated and will be considered a violation of the student code of conduct. It is a requirement that you treat your instructors with respect and you should expect the same respect returned to you by your instructor.

For Professors and Teaching Assistants: All professors and teaching assistants should keep an open mind when discussing graded work with students. Make an effort to listen to students and try and see their point of view. If there was ambiguity in a question or multiple correct answers that a student brings to your attention, you should revise the grade. If the student concern is not adequately justified, explain your reasoning. Students that have concerns regarding an exam question or graded assignment deserve to be treated with respect. Treat with them with the same respect that you expect from them. That being said, concerns from one student that indicate that they are communicating on behalf of a larger group of peers (mob/crowd mentality) should not be considered.

Statement on Appeals

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. If this appeal is rejected, you may then appeal to the Associate Dean of the Bachelor of Medical Sciences Undergraduate Education Committee.

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**

*Medical/Compassionate Relief Program Policy*

It is current policy that students who are unable to write a test or examination or other form of course evaluation are required to obtain a medical certificate that is taken to the Academic Counseling Office, NCB 280 (for Science and Basic Medical Science students) or to your appropriate Home Faculty Counseling Office. In the case of an unexpected absence on compassionate grounds, documentation is also requested. **Such documentation must be submitted by the student directly to the Academic Counseling office and not to the instructor.** An academic counselor in that office will review and either approve or deny the accommodation request. It will be the Academic Counseling office that will determine if accommodation is warranted. *This policy applies to all forms of assessment, including evaluations that are less than 10%.*

**A. Absence for medical illness:**

Students must familiarize themselves with the Policy on Accommodation for Medical Illness for Undergraduate Students, located at: http://www.westerncalendar.uwo.ca/PolicyPages.cfm?PolicyCategoryID=1&Command=showCategory&Keywords=medical&SubHeadingID=323&SelectedCalendar=Live&ArchiveID=#SubHeading_323

**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.

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

B. Absence for non-medical reasons:
You are permitted to miss up to 2 tutorials without academic penalty for medical or non-medical absences. However, if you will be missing an exam for non-medical absences, please provide valid documentation directly to your Faculty Dean’s Office, just as you would for a medical absence, and not to the course coordinator. It will subsequently be the Dean’s Office that will determine if accommodation is warranted. If possible, please submit this documentation in advance of the exam you might be missing to ensure it is deemed as an appropriate reason for your absence. For more information on the process, please see:

https://www.uwo.ca/sci/counselling/pdf/Accommodation%20Request%20Form%20JUN%20202018%20NCB.pdf

C. Special Examinations
http://www.westerncalendar.uwo.ca/PolicyPages.cfm?PolicyCategoryID=5&Command=showCategory&Keywords=special%20examination&SubHeadingID=70&SelectedCalendar=Live&ArchiveID=#SubHeading_70

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. For this course, only the fall/winter version of the course is acceptable for writing the missed exam and not the summer online version of the physiology 2130 course.

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:**
Registrarial Services: [http://www.registrar.uwo.ca](http://www.registrar.uwo.ca)

Academic Counselling (Science and Basic Medical Sciences): [http://www.uwo.ca/sci/counselling](http://www.uwo.ca/sci/counselling)

USC Student Support Services: [http://westernusc.ca/services/](http://westernusc.ca/services/)

Student Development Services: [http://www.sdc.uwo.ca](http://www.sdc.uwo.ca)

Student Health Services: [http://www.shs.uwo.ca/](http://www.shs.uwo.ca/)

Students who are in emotional/mental distress should refer to Mental Health@Western [https://www.uwo.ca/health/mental_wellbeing/self/student.html](https://www.uwo.ca/health/mental_wellbeing/self/student.html) for a complete list of options about how to obtain help.