

Bio3601A: Animal Physiology Course Outline

1. Course Information

Course Information

3601A: Animal Physiology, Fall 2024,
Class: Mon-Wed-Fri, 10:30-11:30 AM;
Tutorials: One of Tues 9.30-11.30 AM; Tues 1.30-

temperatures, sense and respond to their environment, and coordinate physiological processes throughout the body.

- 2) Explain how physiological measurements can inform biological conclusions at proximate and ultimate levels of explanation.
- 3) Analyze a basic dataset in a physiological context and write a succinct and accurate conclusion based upon those data.
- 4) Apply basic physiological principles to critically evaluate an existing dataset.
- 5) Read a scientific paper in the general field of comparative animal physiology and critically evaluate the experimental design, methods, and data.
- 6) Design an experiment or experiments to address a physiological question that students have not previously encountered, and clearly articulate that experiment in writing.

Please note that the focus of this course is on comparative animal physiology, and we will not cover biomedical or disease-model physiology. Courses on those topics are available through the basic medical sciences.

Course requirements

Please see the Western University Academic Calendar for pre- and anti-requisites. Students are responsible for ensuring they are qualified to be enrolled in this course. You are required to attend all lectures and your assigned tutorials, and to manage your time to allow you to read textbook chapters and complete quizzes by the deadlines.

In this course, I assume that you have passed Biology 2601a with a clear understanding (and memory!) of the material therein. You may have to revisit your notes (or additional textbook chapters) to keep up with the material in this course.

Course delivery- in person

- This course will be primarily in-person.
- There will be two in-person in-class tests and two writing exercises which are mandatory.
- In the event we need to move online, we will use Zoom for previously in person components and Gradescope for in class tests and exercises.

Lectures in person

- Lectures will be held in class, in person.
- Do not attend class if you are unwell. *Where possible* recorded lectures from previous years or updated versions will be made available on OWL.

Tutorials: in person

- Tutorials are similar to the lectures and prepare you for the rest of the course.
- The tutorials assessments are mandatory. See below for absence policies.
- Do not attend these tutorials if you are unwell, recorded introductions from previous years or updated versions will be made available upon request. For access, contact the TA.
- Each tutorial is worth 3%, and the assessments for it can all be completed online.
- The assessment deadlines still hold if you miss a tutorial.

Contingency plan

Although the intent is for this course to be delivered in person, should any university-declared emergency require some or all of the course to be delivered online, either synchronously or

asynchronously, the course will adapt accordingly. The grading scheme will **not** change. Any assessments affected will be conducted online as determined by the course instructor.

Classes begin: September 5, 2024;
 Fall Reading Week: October 12 – 20, 2024;
 Classes end: December 6, 2024;
 Exam period: December 9 – 22, 2024;

Methods of evaluation:

Item	Value	Due dates
4 Reading based quizzes (Asynchronous OWL Quiz, Timed: 120 mins)	36% (9% each)	30 th September 2024, 11:59 PM 11 th October 2024, 11:59 PM 1 st November 2024, 11:59 PM 18 th November 2024, 11:59 PM
2 Lecture based tests (Each section; In person, Timed: 40 mins)	18% (9%, 9%)	11 th October 2024 20 th November 2024
5 Tutorials (In person tutorials. Asynchronous, untimed assignments)	15% (3% each)	16 th September 2024, 11:59 PM 30 th September 2024, 11:59 PM 21 st October 2024, 11:59 PM 28 th October 2024, 11:59 PM 11 th November 2024, 11:59 PM
2 Writing exercises (In person, timed: 20 mins)	5% (2.5% each)	23 rd September 2024 4 th November 2024
Final exam (In person, timed, 120 mins)	26%	Scheduled by the University

To pass this course, you must get at least 50% (25.5/51) for the quizzes + tutorials, and at least 50 % (24.5/49) in the tests + writing exercises + final exam. If you need accommodations for the exams they will be made available.

Attendance of the tutorials is mandatory, and you will not receive any marks for the in-class portion of the tutorial if you miss the tutorial without appropriate permission from the TA.

I will reopen quizzes for late submissions and leave them open 1 week after the deadline has passed. For late submissions, you will get only 1 attempt and the grade you earn, i.e. if you score >80%, I will not increase your grade to 100%. You are strongly advised to attempt the reading-based quizzes well before the deadlines to guard against computer failures or unexpected mishaps.

There will be no make-ups for the lecture-based tests or writing exercises, and your mark will be reweighted based on your performance on the other lecture-based test and the final, if you provide appropriate documentation through the accommodations office. Remember, all other rules still apply, i.e. you must score a minimum of 50% in this section to pass.

4. Course Materials

This course will make extensive use of

Hill, R.W., Cavanaugh, D.J. & Anderson, M. (2021) *Animal Physiology*. 5th Edition. Sinauer, Sunderland, MA.

Note that this is new edition of the text you used in Biology 2601, so you may already own a copy. The text is available from the bookstore in hardcover (expensive!) and in pre-punched looseleaf (cheaper) and a digital copy (cheapest) is also available. If you decide you like the text after purchasing the looseleaf version, you could probably get it bound on campus by graphic services. You may also be able to find better deals on the interwebs, or there may be an e-book available, too. The library may also have physical reserve copies available this fall.

You are welcome to use the 4th edition of the text (or another animal physiology textbook), which you may already own or be able to buy second hand ... ***however, if you choose to do so, you are responsible for figuring out what the readings are, and also to appraise yourself of any material that differs between editions. Watch out for changes in chapter numbers in the online edition as well!*** I have a few copies of the 4th edition that I am happy to lend to students who need them. Please return them at the end of the year, for next year's students.

Readings and online quizzes:

Animal physiology is a very broad field. At the 3000-level, you are expected to begin to develop both a breadth and depth of knowledge – much more so than can be covered in lectures (or studied for an exam!). For this reason, the breadth of knowledge in the topics covered in this class will come from self-directed learning (reading the textbook – and probably taking notes as well!). Your broad knowledge of this material will be assessed through online quizzes; although the material itself will not be tested directly in the exams, I will assume that it provides appropriate background for following the lectures and reading the research articles happening in that week. Thus, the material covered in the readings is implicitly required for much of the rest of the course. Doing the readings and the quizzes will help you to keep up with the lectures, and to allow you to make the most of lectures and tutorials. On the other

Attending lectures is **highly recommended**, since the exams will reflect the emphasis of the lectures (not always apparent from the posted Power-point files), and the material in the lectures is not necessarily covered in the textbook. Pre-recorded lectures from a previous year will be made available where they are available, but I may update material or change emphasis so there will not be an exact match. I recommend attending if you are well enough to. I will populate the weekly structure of the course in OWL and lectures will be opened as we go through the semester. In particular, pay attention to the pre-test discussions and the final exam lecture which will focus on the type of questions you can expect in both the lecture based tests and the final exam!

Lecture powerpoints and PDFs will be posted to OWL: <https://westernu.brightspace.com/>

Students are responsible for checking the course OWL site (<https://westernu.brightspace.com/>) regularly for news and updates. This is the primary method by which information will be disseminated to all students in the class.

If students need assistance with the course OWL site, they can seek support on the [OWL Brightspace Help](#) page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

Tutorials:

There are five scheduled tutorial sessions for this course. In each of them, you will work your way through a dataset, practicing analysing and interpreting data, and using your knowledge from lectures and readings to draw biological conclusions. This will achieve two goals:

1. You will gain experience working with a variety of different datasets in a way that integrates your knowledge from other parts of the course.
2. You will get practice describing biological conclusions in a clear, concise manner.

In preparation for the tutorials, please bring a hard copy of the tutorial worksheet that you can fill out and hand in at the end of the tutorial. You may find it helpful to bring your class notes and textbook.

Each tutorial is worth 3% in total. 1% of your mark will come from filling out the worksheet. The other 2% will come from a short (paragraph) answer you will submit via OWL – you can complete this in class, or by on the scheduled day of the deadline. Note that this deadline is closer if you have a tutorial later in the week, but that this should not matter, because you should be able to complete and submit your answer during your tutorial session.

Turnitin.com Note that in this course I will require you to submit your tutorial answers to turnitin.com. In the unlikely event that you haven't come across it yet, turnitin.com is an anti-plagiarism tool that checks the text of your submission against the work of your classmates, the turnitin.com database (previous assignments submitted to turnitin.com) and **the entire internet**. This means that if you copy things from the internet (or from other students), you will be caught. Please be aware that turnitin.com is clever enough to detect plagiarism where a few words are changed in an attempt to make the passage 'different'.

And for the legalese:

Tutorial assignments will be subject to submission to turnitin.com for textual similarity review by the commercial plagiarism software under license to the University. All documents submitted to the turnitin.com system will be included as source documents in the reference database for the purpose of

detecting plagiarism in documents subsequently submitted to the system. Use of this service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

Submitting Tutorials:

Submitting your tutorial text will automatically upload it to turnitin.com.

Note that by submitting the assignment, you are agreeing to the terms and conditions of turnitin.com (as negotiated by Western University), and also confirming that this copy is identical to that uploaded to turnitin.com.

Much of the tutorial material will be posted to OWL: <https://westernu.brightspace.com/>

Students are responsible for checking the course OWL site

If you are a student with a disability and require extra time accommodation, please ensure your accommodations are active on the Accommodated Exams website <https://studentservices.uwo.ca/Accommodatedexamssignup/> for this course 10 days before the assessment.

The marks for the tests will be posted on OWL. The tests themselves will be available for review during office hours.

Lecture based final exam:

The cumulative final exam is worth 26% of the course. The exam will be based on the emphasis of material covered in the lectures (including the scientific papers) and will require you to integrate information and skills from all aspects of the course (however, you should concentrate your focus on the lecture material when studying). The exam will consist of short and paragraph answer questions, and will include quite a lot of choice, so don't be too overwhelmed by the breadth of material in the course. However, the final will be difficult because it will emphasize 'application' type questions. You should be well-prepared for this by the in-class discussion, tests and the integrative exercises in the last couple of weeks of class. The final exam like the tests will differ considerably from the content-focused nature of the online quizzes, so do not assume that because you aced the quizzes with ease that you will find the exam straightforward.

For the final exam also, you are allowed to bring reference material. **However, this will consist of only a single letter-sized piece of paper.** Your notes must be handwritten, and you may use both sides. I reserve the right to inspect these documents. If you bring a document to the test that violates the rules, it will be confiscated and shredded.

Technical Requirements

You will need a computer to be able to access the OWL website and also to do the OWL quizzes.

5. Student absences

Missing a deadline, quiz, test, final exam, or tutorial assignment because of illness or other circumstances:

There are no make-ups for class lecture-based test. Please take appropriate documentation to the accommodations office to be excused from the test, the counselor will contact me directly.

Note that because you should be attempting the reading-based quiz well in advance, and your medical issue should cover the week before the deadline. Note that you are not required to provide any details of the reason for your absences to me (this is assessed confidentially in the Dean's office). If your request is accepted and I hear from the counsellor, I will drop the grade for that quiz and reweigh your grade based on the remaining quizzes.

If you miss a tutorial without permission, you will not receive the marks for the in-

Assessment Flexibility section below, the request cannot be recalled and reapplied. This privilege is forfeited.

When a student misses the Final Exam and their Academic Consideration has been granted, they will be allowed to write the Special Examination (the name given by the University to a makeup Final Exam). See the Academic Calendar for details (under [Special Examinations](#)), especially for those who miss multiple final exams within one examination period.

Essential Learning Requirements

Even when Academic Considerations are granted for missed coursework, the following are deemed essential to earn a passing grade. To pass this course, you must get at least 50% (25.5/51) for the quizzes + tutorials, and at least 50 % (24.5/49) in the tests + writing exercises + final exam. If you need accommodations for the exams they will be made available.

If you have missed an assessment and your request for academic consideration has been granted, since there will be no make-ups (except for the final exam), your grade will be reweighed. However, you still have to earn 50% in the quizzes + tutorials, and 50% in the tests + writing exercises + final exam. As an example, if you miss a lecture based test (worth 9%), your final grade will now be calculated using the formula (marks earned / 91). To get 50% in the tests + writing exercises + final exam, you will have to earn 20 marks out of a 40 attempted (1 test (9%), 2 writing exercises (5%) and the final exam (26%)). The passing scores required for quizzes + tutorials will remain the same (25.5/51)

6. Additional Statements

Religious Accommodation

When conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request an accommodation for their absence in writing to the course instructor and/or the Academic Advising office of their Faculty of Registration. This notice should be made as early as possible but not later than two weeks prior to the writing or the examination (or one week prior to the writing of the test).

Please visit the Diversity Calendars posted on our university's EDID website for the recognized religious holidays:

<https://www.edi.uwo.ca>.

Accommodation Policies

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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 their official university address is attended to in a timely manner.

You can use a calculator in your exams, however, not a computer.

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 Web site:

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

Support Services

Please visit the Science & Basic Medical Sciences Academic Advising webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic-related matters: <https://www.uwo.ca/sci/counselling/>.

Students who are in emotional/mental distress should refer to Mental Health@Western (<https://uwo.ca/health/>)