

## BIOLOGY 3436F Course Outline

### 1. Course Information

#### List of Requisites

- **Pre-requisite:** Statistics course (half or full course)
  - Biology 2244A/B
  - Statistical Sciences 2035, 2141A/B, 2244A/B
  - Psychology 2810
- **Pre/Co-requisite:** Biology 2483A
- **Anti-requisite:** Psychology 3221F/G

Unless you have either the requisites for this course or written special permission from your Dean's Designate (Department/Program Counsellors and Science Academic Advisors) 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.

### 2. Instructor Information

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#### Instructor

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Dr. Emma Churchman (she/her)

Students must use their Western ([@uwo.ca](mailto:uwo.ca)) email addresses when contacting their instructor. Please include "BIO3436" in the subject line. Other email address or forms of online contact will not be responded to. If you have an urgent question that requires my attention and is not answered in the syllabus, please direct it to my email. My office hours are by appointment only and will be held via Zoom.

I will answer questions about course content up until 24 hours prior to exams. Your TAs will not have office hours and are available for questions during lab hours. They are available for questions pertaining to statistics DURING your computer labs and will not answer statistics questions via email. You may email them for questions pertaining to labs up to 24 hours before assignments are due. Any questions pertaining to grades should be directed to the person who graded the assignment. Please be aware that questions regarding grades should be sent via email, and at least 24 hours after the grades have been released.

### 3. Course Syllabus, Schedule, Delivery Mode

This course provides a solid and insightful introduction to the field of animal behaviour, as conceptualized through an integrative framework and encourages a fundamental understanding of the relationship between genotypes, behavioural phenotypes, and the living environment. From these fundamentals, our goal is to gain competence generating and testing evolutionary-minded hypotheses that potentially explain the ultimate function of behaviour variation, while integrating ecological, mechanistic, and developmental approaches to the study of behaviour.

Lectures may blend from one to the next, and it is a good idea to strive to make connections between lecture topics. The lecture content is grounded by a series of labs that require you to assemble and analyse data, generate and test hypotheses using basic statistics, and interpret your results and present them in lab reports.

## Course-Level Learning Outcomes:

As a result of attending lectures, students should be able to:

1. Understand how natural selection works and be able to explain this process.
2. Identify fitness consequences as they apply to focal individuals and their associates.
3. Recognize the potential for evolutionary trade-offs and conflicts, as well as the potential for multi-individual cooperation.
4. Appreciate the broader environmental and social context of behavioural networks.
5. Recognize short and long-term fitness profiles, reproductive costs and benefits, immediate and delayed fitness returns, as well as direct and indirect fitness effects.
6. Conceptualize evolutionary processes above and below the level of the individual.
7. Relate theory-based animal behaviour to human culture.

As a result of participating in hands-on laboratory activities, students should be able to:

1. Recognize and measure natural variation in behavioural traits.
2. Generate and manage community data using spreadsheets.
3. Choose and perform statistical analyses appropriate to the data at hand.
4. Present and interpret results in written form using support from primary literature.

## 4. Course Materials

**Required:** Animal Behaviour – Lab Manual (2024 edition; copies available via BookStores)

**Recommended:** Animal Behavior – Daniel Rubenstein (12<sup>th</sup> edition; available via BookStores)

All lecture material 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. Lecture outlines will be posted twice weekly prior to class. These outlines are meant to serve as a guide-only and should be supplemented in class with your own notes during lecture.

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.

**Intellectual Property and Course Conduct Policy in the use of Lecture, Tutorial and other materials:** All materials that are posted for and/or presented to you are for your individual use only. Course material, assignments, and exams are the intellectual property of your instructor that are shared with the student and the University. To post, share, or sell any of this content is a breach of intellectual property. Visual recording is not allowed, however audio recording is permitted for personal use only.

**Technical Requirements:** Students should have access to a computer equipped with Microsoft Word or Pages, Excel or Numbers, and IBM SPSS or R Studio. R Studio can be downloaded for free, and SPSS can be accessed on campus computers or <https://myvlab.uwo.ca>.

## 5. Methods of Evaluation

### Grading Scheme and Assessment Dates

The overall course grade will be calculated as listed below:

Assignments (3)	27%	(Lab reports, worth 9% each)
Lab performance	6%	(2% per data observation lab)

Midterm Test	27%	(October 8 <sup>th</sup> , 7-9pm, location TBA)
Final Exam	40%	(Cumulative)

### General information about missed coursework

Students must familiarize themselves with the *University Policy on Academic Consideration – Undergraduate Students in First Entry Programs* posted on the Academic Calendar:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/academic\\_consideration\\_Sep24.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration_Sep24.pdf),

This policy does not apply to requests for Academic Consideration submitted for **attempted or completed work**, whether online or in person.

The policy also does not apply to students experiencing longer-term impacts on their academic responsibilities. These students should consult [Accessible Education](#).

For procedures on how to submit Academic Consideration requests, please see the information posted on the Office of the Registrar's webpage: [https://registrar.uwo.ca/academics/academic\\_considerations/](https://registrar.uwo.ca/academics/academic_considerations/)

All requests for Academic Consideration must be made within 48 hours after the assessment date or submission deadline.

All Academic Consideration requests must include supporting documentation; however, recognizing that formal documentation may not be available in some extenuating circumstances, the policy allows students to make one Academic Consideration request **without supporting documentation** in this course. However, the following assessments are excluded from this, and therefore always require formal supporting documentation:

- Final examinations scheduled during official examination periods (Defined by policy)
- Midterm examination (Designated by the instructor as the one assessment that always requires documentation when requesting Academic Consideration)

When a student *mistakenly* submits their one allowed Academic Consideration request **without supporting documentation** for the assessments listed above or those in the **Coursework with Assessment Flexibility** section below, the request cannot be recalled and reapplied. This privilege is forfeited.

### Evaluation Scheme for Missed Assessments

**Midterm:** Missing the midterm exam requires formal supporting documentation. If a student misses the midterm, including conflicts with another midterm, then the student will write the make-up midterm on October 10<sup>th</sup> at 7-9pm. If the student is unable to write either midterm test, then the midterm will be reweighted to the final exam.

**Lab performance:** If a student absence from a data collection lab is accommodated via academic consideration, the 2% attributed to that lab will be reweighted to the accompanying lab report. They will be provided with their section's data to complete the lab report analysis and write-up. If a student misses a data observation lab without accommodation, they forfeit the 2% attributed to that lab. Students may only attend data collection labs for their section – they may not attend another lab in lieu of missing their own.

**Lab reports:** If a student fails to submit a lab report, they will be assigned a zero for that report. Each lab report is granted a 48-hour period after the deadline with no late penalty. If the student is unable to submit the lab within this period, they require academic consideration to accommodate a late submission. Students who submit academic consideration without documentation must submit their report within 72 hours of the original deadline. Academic consideration requests without documentation will be denied for extensions beyond 72 hours beyond the original deadline. In this case, students must request academic consideration with documentation to the Academic Advising portal. If an extended deadline is supported, the student must submit their lab report within 24 hours of the end of their extension period. Late lab reports cannot be submitted after grades/feedback have been returned to any lab section in any case. If academic consideration is granted and the lab reported cannot be completed at all, the weight of the lab report will be distributed to the other two reports.

**Final Exam:** Accommodation for the final exam as scheduled by the OOR always requires formal supporting documentation. Students who miss the final exam and are granted academic consideration will write the department scheduled makeup final exam. When a student misses both the Final Exam and make-up Final, 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.

- a minimum number of two submitted lab reports

In such cases that a student fails to complete and submit at least two of three lab reports and has been granted formal academic consideration, they may complete the remaining lab(s) in the next offering of the course. In this case, they will receive a grade of Incomplete (INC) and their maximum course load may be reduced during the term in which they complete their course requirements.

### **Coursework with Assessment Flexibility**

By policy, instructors may deny Academic Consideration requests for the following assessments with built-in flexibility:

**Deadline with a No-Late-Penalty Period Assignments.** Students are expected to submit each of the three lab reports by their respective deadlines. Should extenuating circumstances arise, students do not need to request Academic Consideration and they are permitted to submit their lab reports up to 48 hours past the deadline without a late penalty. Should students submit their assessment beyond 48 hours past the deadline without accommodation, a 10% deduction will apply at the end of the 48 hours period, with an additional 10% per day. Academic Consideration requests may be granted only for extenuating circumstances that started before the deadline and lasted longer than the No-Late-Penalty Period (48 hours).

- *For example:* If your lab report is due on Monday, October 7th at 2:30pm, then you have until Wednesday, October 9th at 2:30pm to submit with no-late penalty. If you require accommodation for an extension, you must submit for academic consideration. If you submit without documentation, you have until Thursday, October 10th at 2:30pm to submit your lab. If you submit with documentation and are granted accommodation until Monday, October 14th, you must submit by end of day October 15th. If you do not submit for, or receive, approved academic accommodation and submit your report on Friday October 11th at 4pm, you will receive a 20% deduction (day 1: Thursday after 2:30, day 2: Friday after 2:30).

## **6. Land Acknowledgement**

We acknowledge that Western University is located on the traditional lands of the Anishinaabek, Haudenosaunee, Lūnaapéewak and Chonnonton peoples, on lands connected with the London Township and Sombra Treaties of 1796 and the Dish with One Spoon Covenant Wampum. With this, we respect the longstanding relationships that Indigenous Nations have to this land, as they are the original caretakers.

## **7. 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**

Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/Academic\\_Accommodation\\_disabilities.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf).

### **Academic Policies**

The website for Registrar Services is <https://www.registrar.uwo.ca/>.

In accordance with policy, [https://www.uwo.ca/univsec/pdf/policies\\_procedures/section1/mapp113.pdf](https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf), 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.

Electronic devices are not permitted on tests or exams with the exception of non-programmable electronic calculators. Programmable calculators that allow users to write/store programs or information are not permitted.

**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](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf).

All required papers 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>).

### **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/>) for a complete list of options about how to obtain help.

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](https://www.uwo.ca/health/student_support/survivor_support/get-help.html).

To connect with a case manager or set up an appointment, please contact [support@uwo.ca](mailto:support@uwo.ca).

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Accessible Education at

[http://academicsupport.uwo.ca/accessible\\_education/index.html](http://academicsupport.uwo.ca/accessible_education/index.html)

if you have any questions regarding accommodations.

Learning-skills counsellors at Learning Development and Success (<https://learning.uwo.ca>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Western University is committed to a thriving campus as we deliver our courses in the mixed model of both virtual and face-to-face formats. We encourage you to check out the Digital Student Experience website to manage your academics and well-being: <https://www.uwo.ca/se/digital/>.

Additional student-run support services are offered by the USC, <https://westernusc.ca/services/>.