

## 1. Course Information

### Course Information

Wildlife Ecology and Management (Biology 3446B) Winter 2022

Lectures: Mondays and Wednesdays 9:30-10:30am (online to begin the year, BGS 0153 once in-person learning resumes)

Lab: Section 002 - Wednesday 2:30-5:00pm (BGS 2077)

Section 003 - Thursday 8:30-11:00am (BGS 2077)

Section 004 - Thursday 11:00am-1:30pm (BGS 2077)

Section 005 - Thursday 2:30-5:00pm (BGS 2077)

Section 006 - Friday 9:00-11:30am (BGS 2077)

### List of Prerequisites

Biology 2483A/B

Unless you have either the requisite 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.

## 2. Instructor Information

Dr. Tim Hain ([thain@uwo.ca](mailto:thain@uwo.ca)). His office in NCB 301F.

Please include "Biology 3446B" in the subject line of any emails addressed to your instructor or to your teaching assistants.

Office hours will be in the hour immediately following lecture (from 10:30-11:30am on Mondays and Wednesdays). Office hours will be in-person in my office once lectures are in-person. Until then, they will be held over Zoom and can be found under the Zoom tab.

## 3. Course Syllabus, Schedule, Delivery Mode

The application of ecological principles to the management of wildlife species. Topics include techniques, harvest, predation, habitat loss and management, stocking and reintroductions, and economics of wildlife. Identification and biology of game, pest and furbearing species in laboratories; films are used frequently.

Further to the goals of the course listed below, outcomes for each lecture will be released with the lecture. By the end of this course, you should be able to:

1. Describe common ideas and challenges to the management and conservation of wildlife populations and offer solutions to those challenges.
2. Explain the methods used to study wildlife.
3. From the labs, be able to identify bird, mammal, amphibian, and reptile species that are native to Canada.

## Mode of delivery

Until January 31: Online, synchronous over Zoom. The synchronous lectures will be recorded and posted to the course website. Labs will be posted as narrated PowerPoint slides in advance of the scheduled lab period, and the lab session is a drop-in question-and-answer period over Zoom.

After January 31: to be determined. If the university allows in-person instruction, lectures will be held in-person in BGS 0153, and labs will move to BGS 2077.

The labs will run during the scheduled lab period. The labs will operate over Zoom when the university is closed to in-person learning, and will be in BGS 2077 once in-person learning is allowed. When the labs are online, the lab quizzes will be scheduled for the beginning of class on Wednesday in the week following the presentation of that lab material, and the quizzes will be conducted online, through OWL. When the labs are in-person, the quizzes will take place at the beginning of the lab period. The quizzes will cover material presented in lab in the previous week.

## Online Participation and Engagement

- Students are expected to participate and engage with content as much as possible
- Students can post on OWL after watching the recording
- Students can also participate by interacting in the forums with their peers and instructors

The lecture topics presented below are *tentative* and may change as the semester develops. I have invited guest speakers who may have to reschedule their talks. There will be periodic readings in support of the lecture material posted periodically throughout the term. For those papers, you should make note of the purpose of the study and the major findings.

Section	Date	Lecture	Readings
Introduction to course	January 10	1	
History and why we care about wildlife	January 12	2	
Field methods I	January 17	3	Reading 1
Field methods II	January 19	4	Reading 2 & 3
Field methods III	January 24	5	
Threats to wildlife I	January 26	6	
Threats to wildlife II	January 31	7	Reading 4 & 5
Population dynamics I	February 2	8	
Population dynamics II	February 7	9	
Predation and predator management I	February 9	10	Readings 6, 7 & 8
Predation and predator management II	February 14	11	
Habitat management I	February 16	12	
No class (Reading week)	February 21		
No class (Reading week)	February 23		
Habitat management II	February 28	13	
Review	March 2	14	
Midterm on March 4 at 7pm (covering to end of Lecture 12)			
Citizen Science	March 7	15	
Exotics, introductions and reintroductions	March 9	16	Reading 9
Guest lecture – James Ludwig (ecologist and author)	March 14	17	

Guest lecture – Lauren Tonelli from OFAH	March 16	18	
Fisheries management	March 21	19	
Species at Risk	March 23	20	Reading 10
Cormorant management	March 28	21	Reading 11
Zoonotic diseases and the wildlife trade	March 30	22	Readings 12 & 13
Final lab exam April 1			
Current topics in wildlife management	April 4	23	
Current topics in wildlife management	April 6	24	

## Laboratory schedule

At the beginning of the year, labs will be conducted online. Recordings of lab presentations, with voices put to the slides, will be uploaded so that you can watch the presentation in advance. Once we are permitted to transition to in-person learning, those labs will be conducted in BGS 2077. For six of the labs (noted with a \*), there will be a brief quiz on identifying the animals scheduled in the following week. If the classes are online, then the quiz will be online at the beginning of class on the following Wednesday, at 9:30am. If the classes are in-person, the labs will be conducted at the beginning of your scheduled lab period. If a student misses more than one quiz, any additional quizzes will be assigned a grade of zero. Because it is an important skill to be able to identify species quickly, no accommodations for time can be offered.

Date (week of)	Description
January 17	Lab 1: Small mammals
January 24*	Lab 2: Large mammals (quiz on January 26 in class time)
January 31*	Lab 3: Amphibians and reptiles (quiz either on February 2 in class time or in scheduled lab period)
February 7	Review, <b>lab midterm on February 11</b>
February 14	Lab 4: Hawks, owls, and gamebirds
February 21	No lab (Reading week)
February 28*	Lab 5: Waterfowl (quiz either on March 2 in class time or in scheduled lab period)
March 7*	Lab 6: Shorebirds and near-passerines (quiz either on March 9 in class time or in scheduled lab period)
March 14*	Lab 7: Passerines part 1 (quiz either on March 16 in class time or in scheduled lab period)
March 21*	Lab 8: Passerines part 2 (quiz either on March 23 in class time or in scheduled lab period)
March 28	Review, <b>lab final on April 1</b> There will be a practice quiz available

## 4. Course Materials

No textbook for the course is required, but a field guide is recommended. I personally like to have a physical copy of a field guide because a well-organized field guide will put similar species close together, making it easier to perform an identification. The website [allaboutbirds.org](http://allaboutbirds.org) is an excellent resource for birds, available for free. [iNaturalist.org](http://iNaturalist.org) is another good resource, and it covers a wide variety of species.

Required readings are available for download from the course website.

Students should check OWL (<http://owl.uwo.ca>) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class. Students are responsible for checking OWL on a regular basis.

### **Contingency plan for an in-person class pivoting to 100% online learning**

In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction beyond January 31, the remaining course content will be delivered entirely online and synchronously (i.e., at the times indicated in the timetable). The grading scheme will **not** change. Any remaining assessments will also be conducted online as determined by the course instructor.

If the lab exams are conducted online, remote proctoring software (i.e. Proctortrack) will be used. Please see Section 9 for more details.

### **Technical Requirements**

A stable internet connection and a computer with a working webcam is required.

## **5. Methods of Evaluation**

Lab quizzes	Quizzes (6 in total; top 5 count for marks) on Wednesday in class time through OWL (when class is online) or in lab time (when class is in person)	10% total
Lab midterm	February 11, 7:00pm	20%
Lab final	April 1, 7:00pm	20%
Midterm	March 4, 7:00pm	25%
Final exam	Scheduled by the Registrar's Office	25%

Makeup tests will be scheduled for the following Monday at 7pm. There is no makeup for the lab quizzes. As stated above, if a student misses more than one quiz, any additional quizzes will be assigned a grade of zero. The lowest mark (or one absence) will not be counted towards the final grade.

Lab tests may include bonus questions. The content of the bonus questions is meant to be a surprise, so there will not be any bonus questions on makeup tests.

Unless a question on the midterm or final exam specifically says to include additional sources, answers will be marked based on information presented by the instructor (Dr. Hain), guest lectures, any videos presented in class, and from assigned readings.

Answers to all questions must be in your own words. That is, you may not copy-and-paste a lecture transcript and expect to receive full marks for a question.

## **6. Student Absences**

### **Academic Consideration for Student Absences**

Students who experience an extenuating circumstance (illness, injury or other extenuating circumstance) sufficiently significant to temporarily render them unable to meet academic requirements may submit a

request for academic consideration through the following routes (**NOT through their course instructors**):

- (i) Submitting a Self-Reported Absence (SRA) form provided that the conditions for submission are met. To be eligible for a Self-Reported Absence:
  - an absence must be no more than 48 hours
  - the assessments must be worth no more than 30% of the student's final grade
  - no more than two SRAs may be submitted during the Fall/Winter term
- (ii) For medical absences, submitting a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner to the Academic Counselling office of their Faculty of Registration.
- (iii) Submitting appropriate documentation for non-medical absences to the Academic Counselling office in their Faculty of Registration.

Note that in all cases, students are required to contact their instructors within 24 hours of the end of the period covered.

Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. **All documentation required for absences that are not covered by the Self-Reported Absence Policy must be submitted to the Academic Counselling office of a student's Home Faculty.**

For the policy on Academic Consideration for Student Absences – Undergraduate Students in First Entry Programs, see:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/accommodation\\_illness.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_illness.pdf)

and for the Student Medical Certificate (SMC), see:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/medicalform.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf)

### **Religious Accommodation**

When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday to the course instructor and/or the Academic Counselling office of their Faculty of Registration. Please consult University's list of recognized religious holidays (updated annually) at

<https://multiculturalcalendar.com/ecal/index.php?s=c-univwo>

### **Absences from Final Examinations**

If you miss the Final Exam, please contact the Academic Counselling office of your Faculty of Registration as soon as you are able to do so. They will assess your eligibility to write the Special Examination (the name given by the University to a makeup Final Exam).

You may also be eligible to write the Special Exam if you are in a “Multiple Exam Situation” (e.g., more than 2 exams in 23-hour period, more than 3 exams in a 47-hour period).

If a student fails to write a scheduled Special Examination, the date of the next Special Examination (if granted) normally will be the scheduled date for the final exam the next time this course is offered. The

maximum course load for that term will be reduced by the credit of the course(s) for which the final examination has been deferred. See the Academic Calendar for details (under [Special Examinations](#)).

## 7. Land acknowledgment

We acknowledge that Western University is located on the traditional lands of the Anishinaabek, Haudenosaunee, Lūnaapéewak and Attawandaron peoples, on lands connected with the London Township and Sombra Treaties of 1796 and the Dish with One Spoon Covenant Wampum. This land continues to be home to diverse Indigenous peoples (e.g. First Nations, Métis and Inuit) whom we recognize as contemporary stewards of the land and vital contributors of our society.

## 8. Accommodation and Accessibility

### Accommodation Policies

Students with disabilities work with Accessible Education (formerly SSD), 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)

## 9. Academic and Virtual Classroom Policies

The website for Registrarial Services is <http://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 his/her official university address is attended to in a timely manner.

Non-programmable calculators are permitted for the midterm and final exam.

**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:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf)

The work you submit must be your own. Although it is normal to work with a partner on assignments, you must put your submission in your own words. If you have any questions about what constitutes plagiarism, consult the above website or discuss with your instructor before submitting any work to be graded. Remember to cite the ideas of others if you are using their published work in your assignments.

Turnitin ***aids*** in identifying plagiarism. 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>).

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

In the event that the lab tests need to be conducted online, the remote proctoring service Proctortrack will be used.

Proctortrack will require you to provide personal information (including some biometric data). The session will be recorded. By taking this course, you are consenting to the use of this software.

More information about remote proctoring is available in the Online Proctoring Guidelines at the following link:

<https://www.uwo.ca/univsec/pdf/onlineproctorguidelines.pdf>

Completion of this course will require you to have a reliable internet connection and a device that meets the system and technical requirements for Proctortrack. Information about the system and technical requirements are available at the following link:

<https://www.proctortrack.com/tech-requirements/>

The lab component of the course involves identifying wildlife species with images. This is a fairly introductory-level learning objective, where additional aids would be particularly helpful. Although I recognize that the majority of students do not cheat, the only reliable way to ensure the integrity of the course is to use remote proctoring software.

### **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 interact with their instructor and fellow students with courtesy and respect. The instructor will first issue a warning if he observes any behaviour that is or might be considered offensive. Subsequent infractions will result in a grade penalty. The warning will mention the extent of the penalty for a similar infraction.
- All course materials created by the instructor(s) are copyrighted and cannot be sold/shared
- Recordings are not permitted (audio or video) without explicit permission
- Permitted recordings are not to be distributed without explicit permission
- 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

## **10. Support Services**

Please visit the Science & Basic Medical Sciences Academic Counselling 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/>

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 (519) 661-2147 if you have any questions regarding accommodations.

Learning-skills counsellors at the Student Development Centre (<http://www.sdc.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.

Students who are in emotional/mental distress should refer to Mental Health@Western (<http://www.health.uwo.ca/mentalhealth>) for a complete list of options about how to obtain help.

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