



ZOO*4940 Lab Studies in Herpetology

Winter 2023

Section(s): C01

Department of Integrative Biology

Credit Weight: 0.25

Version 1.00 - January 06, 2023

1 Course Details

1.1 Calendar Description

This course provides a practical experience in the study of Herpetology. Using University collections of prepared and preserved specimens and field observations where possible, students will develop and apply skills in identification and sampling, explore relations between species diversity and habitat, and investigate through guided study, the extent of anatomical, skeletal, reproductive and morphological variation and its functional and evolutionary causes.

Pre-Requisites:

15.00 credits including ZOO*2090

Restrictions:

This is a Priority Access Course. Enrolment may be restricted to particular programs, specializations or semester levels during certain periods. Please see the departmental website for more information.

1.2 Course Description

This course will provide an introduction to the biology of Ontario's amphibians and reptiles, including the unique aspects of their form, function, acoustics and taxonomy through weekly in-person labs.

1.3 Timetable

Labs: Monday OR Tuesday 2:30 - 5:20 PM in SSC2304

Labs will be held in person this semester and attendance is required to complete the assessments.

Please note that labs will commence the first week of class (Jan 9/10).

Students will be required to sanitize their hands upon entering the lab. Mask wearing (with nose, mouth and chin covered) is encouraged for all in-person activities.

Please note that the above plan is based on current public health directives, and this is subject to change according to public health conditions at the time that the course is offered. Specifically, in-person lab activities may be converted to synchronous, remote sessions if needed.

1.4 Final Exam

There is no final exam for this course. Please refer to assessments for course mark breakdown.

2 Instructional Support

2.1 Instructional Support Team

Instructor:	Shaylah Tuttle-Raycraft
Email:	stuttle@uoguelph.ca
Telephone:	+1-519-824-4120 x58096
Office:	SSC 2502
Office Hours:	Virtually, by appointment

3 Learning Resources

3.1 Required Resources

Course Manual (Other)

ZOO*4940 - Lab Studies in Herpetology Manual (Digital Copy provided to all students on Courselink)

CourseLink (Website)

<https://courselink.uoguelph.ca>

This course will make use of the University of Guelph's course website on D2L (via CourseLink). Consequently, you are responsible for all information posted on the CourseLink page for ZOO*4940. Please check it regularly. Course notes, announcements, and ancillary material will also be posted here.

Zoom (Software)

<https://zoom.us>

Students registered in this course should register for a free basic Zoom account in order to attend any virtual lab sessions as well as office hours/ one-on-one meetings with the instructor.

- Please visit <https://zoom.us> to register for a free basic Zoom account using your University of Guelph email address (Gryphmail)

Spreadsheet and Word Processing Software (Microsoft Office) (Software)

Students are required to have access to spreadsheet and word processing software that are compatible with Microsoft Word and Excel. It is highly recommended that students have access to Microsoft Office software suite in order to easily complete course assignments.

- These programs are available to download for free from the Computing and Communication Services (CCS) website
- If students use other similar software, please ensure that you save your files in the required file format according to the assignment instructions

3.2 Recommended Resources**Peterson Field Guide to Reptiles and Amphibians of Eastern and Central North America (Textbook)**

Powell, R., Conant, R., and Collins, J.T. 2016. Peterson Field Guide to Reptiles and Amphibians of Eastern and Central North America. 4th Edition. Houghton Mifflin Harcourt.

Herpetology: An Introductory Biology of Amphibians and Reptiles (Textbook)

Vitt, L. and Caldwell, J.P. 2013. Herpetology: An Introductory Biology of Amphibians and Reptiles. 4th Edition. Academic Press.

4 Learning Outcomes**4.1 Course Learning Outcomes**

By the end of this course, you should be able to:

1. Be able to identify Ontario's reptiles and amphibians through a variety of means (e.g. morphology, calls, etc.).
2. Infer how the features (anatomy, physiology) that make amphibians and reptiles unique allow them to access different ecological niches.
3. Appreciate the handling of amphibians and reptiles for scientific education and research purposes
4. Critically discuss relevant conservation issues surrounding groups of amphibians and reptiles in Ontario.
5. Appreciate modern techniques used in the creation of phylogenies of cryptic species (e.g. bioinformatics, PCR).
6. Effectively analyse, present and interpret data through a variety of means (e.g. formal reports, poster presentations, information pamphlets)
7. Develop interesting research questions and conduct research to test predictions of a hypothesis

5 Teaching and Learning Activities

5.1 Lab

Week 1

Topics: Lab 1: Introduction to Herpetology and Frog Calls

Week 2

Topics: Lab 2: Amphibians (Frogs, Salamander and Caecilians)

Week 3

Topics: Lab 3: Reptiles I (Snakes and Lizards)

Week 4

Topics: Lab 4: Reptiles II (Turtles and Crocodiles)

Week 5

Topics: Lab 5: Conservation of Herps

Week 6

Topics: Conservation Proposal Work Period (No Lab)

Mon, Feb 20 - Fri, Feb 24

Topics: Winter Break (No Labs)

Week 7

Topics: Lab 6: Modern Techniques in Herpetology (Genetics and Bioinformatics)

Week 8

Topics: Final Project Introduction and Bioinformatics Help Session

Week 9

Topics: Open Lab Work Period

Week 10

Topics: Open Lab Work Period

Week 11

Topics: Open Lab Work Period

Week 12

Topics: Open Lab Work Period

Week 13

Topics: Open Lab Work Period

5.2 Schedule Subject to Change

Please note that this schedule is subject to change (weeks may be rearranged if needed).

6 Assessments**6.1 Assessment Details****Module 1 (17.5%)**

Due: Week 3

Learning Outcome: 1, 2, 4

Frog Watch Assignment - Practice your Frog Call ID and analyze community science data

Suggested Due date: January 23 4:30 PM

Final due date: March 17 4:30 PM (late penalties will apply to submissions beyond this date/time)

Module 2 (17.5%)

Due: Week 5

Learning Outcome: 1, 2, 6

Ontario "Page" Project - Identification pamphlet on one of Ontario's amphibian/reptile Families

Suggested Due date: February 6 4:30 PM

Final due date: March 17 4:30 PM (late penalties will apply to submissions beyond this

date/time)

Module 3 (17.5%)

Due: Week 7

Learning Outcome: 2, 3, 4, 6

Herpetology Conservation Program Proposal - Create a proposal for a hypothetical research program to address conservation efforts for a species at risk in Ontario

Suggested Due date: February 27 4:30 PM

Final due date: March 17 4:30 PM (late penalties will apply to submissions beyond this date/time)

Module 4 (17.5%)

Due: Week 9

Learning Outcome: 1, 4, 5, 6

Bioinformatics Assignment - Complete a virtual bioinformatics analysis of Jefferson salamander populations

Suggested Due date: March 13 4:30 PM

Final due date: March 17 4:30 PM (late penalties will apply to submissions beyond this date/time)

Herpetology Group Research Project (30%)

Due: Week 12

Learning Outcome: 1, 2, 3, 4, 5, 6, 7

Create a self-guided research project on a topic of interest in Herpetology.

Poster (25%) - Group Grade

Reflection Essay (5%) - Independent Grade

Final Due date for Poster: April 5th 4:30 PM

Final Due date for Reflection: April 10th 4:30 PM

7 Course Statements

7.1 Due Dates

Due Dates for the Module Assignments will be suggested on the assignment documents and CourseLink Dropboxes. These suggestions are made to allow you to move forward in the course at a pace that has been used in the past. If you need more time to complete these

assignments, take it. Late penalties will only be applied after the final due dates have passed. We are providing you with more flexibility this semester to account for things that come up during the semester, like extra busy weeks or illnesses. Try to manage your own time well, and stick to the suggested deadlines if you need more structure.

Please note that no extensions will be provided to these final due dates. These dates are in place to allow us to grade the course components in a way that will not be overwhelming to us.

You can expect feedback on your projects approximately two weeks after you make the submissions (once the suggested deadline has passed).

7.2 Late Penalty on Assignments

Assignments are due on the date specified in the Course Outline and on assignment documents.

The late penalty is 10% of assignment value per day or part thereof and will be applied after the final due date has passed.

The CourseLink Dropbox time stamp will be the sole determinant for receipt of assignments.

7.3 Regrading Policy

All requests for re-grading must be made by email to the course instructor within one week of the return of the assignment.

In order for a re-grading request to be considered, the student must provide a justification for why the grade should be changed based on the assessment criteria found in the grading rubric.

Be aware that the entire document will be re-graded, which could result in an increase, decrease, or no change to your mark.

7.4 Plagiarism Detection Software

Students should be aware that faculty have the right to use software to aid in the detection of plagiarism or copying and to examine students orally on submitted work. For students found guilty of academic misconduct, serious penalties, up to and including suspension or expulsion from the University can be imposed.

Electronically submitted student assignments are automatically compared to other electronic documents (including online and student papers) by Turnitin™ for degree of similarity.

7.5 Online Behaviour (Netiquette)

Inappropriate online behaviour will not be tolerated. Examples of inappropriate online behaviour include:

- Posting inflammatory messages about your instructor or fellow students
- Using obscene or offensive language online
- Copying or presenting someone else's work as your own
- Adapting information from the Internet without using proper citations or references
- Buying or selling term papers or assignments
- Posting or selling course materials to course notes websites
- Having someone else complete your quiz or completing a quiz for/with another student
- Stating false claims about lost quiz answers or other assignment submissions
- Threatening or harassing a student or instructor online
- Discriminating against fellow students, instructors and/or TAs
- Using the course website to promote profit-driven products or services
- Attempting to compromise the security or functionality of the learning management system
- Sharing your user name and password
- Recording lectures without the permission of the instructor

8 Department of Integrative Biology Statements

8.1 Academic Advisors

If you are concerned about any aspect of your academic program:

- Make an appointment with a program counsellor in your degree program. [B.Sc. Academic Advising](#) or [Program Counsellors](#)

8.2 Academic Support

If you are struggling to succeed academically:

- Learning Commons: There are numerous academic resources offered by the Learning Commons including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills. You can also set up individualized appointments with a learning specialist.
<http://www.learningcommons.uoguelph.ca/>
- Science Commons: Located in the library, the Science Commons provides support for physics, mathematic/statistics, and chemistry. Details on their hours of operations can be found at: <http://www.lib.uoguelph.ca/get-assistance/studying/chemistry-physics-help> and <http://www.lib.uoguelph.ca/get-assistance/studying/math-stats-help>

8.3 Wellness

If you are struggling with personal or health issues:

- Counselling services offers individualized appointments to help students work through personal struggles that may be impacting their academic performance.
<https://www.uoguelph.ca/counselling/>
- Student Health Services is located on campus and is available to provide medical attention. <https://www.uoguelph.ca/studenthealthservices/clinic>
- For support related to stress and anxiety, besides Health Services and Counselling Services, Kathy Somers runs training workshops and one-on-one sessions related to stress management and high performance situations.
<http://www.selfregulationskills.ca/>

8.4 Personal information

Personal information is collected under the authority of the University of Guelph Act (1964), and in accordance with Ontario's Freedom of Information and Protection of Privacy Act (FIPPA) <http://www.e-laws.gov.on.ca/index.html>. This information is used by University officials in order to carry out their authorized academic and administrative responsibilities and also to establish a relationship for alumni and development purposes.

For more information regarding the Collection, Use and Disclosure of Personal Information policies please see the Undergraduate Calendar.
(<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/intro/index.shtml>)

8.5 Course Offering Information Disclaimer

Please note that course delivery format (face-to-face vs online) is subject to change up to the first-class day depending on requirements placed on the University and its employees by public health bodies, and local, provincial and federal governments. Any changes to course format prior to the first class will be posted on WebAdvisor/Student Planning as they become available.

9 University Statements

9.1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

9.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

<https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml>

9.3 Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

9.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

9.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to make a booking at least 14 days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a

week ahead of time.

For Guelph students, information can be found on the SAS website
<https://www.uoguelph.ca/sas>

For Ridgetown students, information can be found on the Ridgetown SAS website
<https://www.ridgetownc.com/services/accessibilityservices.cfm>

9.6 Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community-faculty, staff, and students-to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff, and students have the responsibility of supporting an environment that encourages academic integrity. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Undergraduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

9.7 Recording of Materials

Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

9.8 Resources

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars
<https://www.uoguelph.ca/academics/calendars>

9.9 Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via CourseLink and/or class email.

This includes on-campus scheduling during the semester, mid-terms and final examination schedules. All University-wide decisions will be posted on the COVID-19 website (<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

9.10 Illness

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g.. final exam or major assignment).

9.11 Covid-19 Safety Protocols

For information on current safety protocols, follow these links:

- <https://news.uoguelph.ca/return-to-campusess/how-u-of-g-is-preparing-for-your-safe-return/>
- <https://news.uoguelph.ca/return-to-campusess/spaces/#ClassroomSpaces>

Please note, these guidelines may be updated as required in response to evolving University, Public Health or government directives.
