



ZOO*4940 Lab Studies in Herpetology

Winter 2020

Section(s): C01

Department of Integrative Biology

Credit Weight: 0.25

Version 1.00 - November 01, 2019

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 Timetable

Labs: Mondays/Tuesdays (2:30pm – 5:20pm)

SSC 2304

1.3 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: Dr. Sarah Schorno
Email: sschorno@uoguelph.ca
Telephone: +1-519-824-4120 x52949
Office: SSC 3510

3 Learning Resources

3.1 Required Resources

Course Manual (Other)

ZOO*4940 - Lab Studies in Herpetology Manual

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. Identify the features of amphibians and reptiles and use these features to distinguish between various families and species
 2. Be able to identify Ontario's reptiles and amphibians and critically discuss relevant conservation issues
 3. Appreciate and practice handling collection specimens for scientific education and research purposes
 4. Collect and analyse data using some research techniques currently used in studying amphibians and reptiles
 5. Develop interesting research questions and design a study to address the topic
 6. As part of a group, conduct independent research to test predictions of a hypothesis
 7. Communicate research findings in a poster format
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5 Teaching and Learning Activities

5.1 Lab

Week 1

Topics: **Lab 1 (January 6, 2019 & January 7, 2019)**

Introduction to lab and field herpetology

Week 2

Topics: **Lab 2 (January 13, 2019 & January 14, 2019)**

Ontario's Salamanders (+Gymnophiona)

Week 3

Topics: **Lab 3 (January 20, 2019 & January 21, 2019)**

Ontario's Anurans (Frogs)

Week 4

Topics: **Lab 4 (January 27, 2019 & January 28, 2019)**

Ontario's Reptiles (Turtles, Crocodilians, "Lizards" & Snakes)

Week 5

Topics: **Lab 5 (February 3, 2019 & February 4, 2019)**

Anatomy of Reptiles and Amphibians

Week 6

Topics: **Lab 6 (February 10, 2019 & February 11, 2019)**

Introduction to reptile/amphibian behaviour and conservation with Scienesational Snakes

Week 7

Topics: NO LAB (February 17, 2019 & February 18, 2019)

Reading Week - NO LABS

Week 8

Topics: Lab 7 (February 24, 2019 & February 25, 2019)

Genetics and bioinformatics of amphibians/reptiles

Week 9

Topics: Lab 8 (March 2, 2019 & March 3, 2019)

Developmental biology of amphibians/reptiles

Week 10

Topics: Open Lab (March 9, 2019 & March 10, 2019)

Free Work Period for Group Research Project

Week 11

Topics: Open Lab (March 16, 2019 & March 17, 2019)

Free Work Period for Group Research Project

Week 12

Topics: Open Lab (March 23, 2019 & March 24, 2019)

Free Work Period for Group Research Project

Week 13

Topics: **Project Presentation Day (March 30, 2019 & March 31, 2019)**

Poster Presentations In-Lab for Group Research Projects

5.2 Group Project

Groups of students will conduct a research project. Students will collect data from examining real specimens or from literature, and conduct appropriate analyses in order to test a hypothesis.

The group will submit a one-page written proposal to the Dropbox the week of Feb 13/14. Students will receive feedback from the teaching team after reading week prior to the start of data collection.

Three weeks of lab time are allocated for students to conduct their research. A poster will be presented and evaluated during lab the week of March 30/31.

6 Assessments**6.1 Assessment Details****Module 1 (20%)**

Due: Thu, Jan 23 - Fri, Jan 24, Dropbox Submission

Ontario "Page" Project - Information pamphlet on some aspect of Ontario's amphibians/reptiles

Learning Outcomes Addressed:

Module 2 (18%)

Due: Mon, Feb 3 - Tue, Feb 4

Lab Quizzes (6%) - completed individually at the beginning of labs 3, 4 & 5 (3 x 2% each = 6% total)

In-Lab Group Assignments (12%) - completed in groups in labs 2, 3, 4 & 5 (4 x 3% each = 12% total)

Learning Outcomes Addressed:

Module 3 (20%)

Due: Thu, Feb 27 - Fri, Feb 28

Herpetology Conservation Program Proposal - based on activities with Sciencesational Snakes (Lab 6)

Learning Outcomes Addressed:

Module 4 (20%)

Due: Thu, Mar 12 - Fri, Mar 13

Course Activity TBD -

Learning Outcomes Addressed:

Group Research Project (22%)

Due: Mon, Mar 30 - Tue, Mar 31

Project Proposal (2%) - due February 16, 2019 / February 17, 2019

--> One-page proposal outlining the project the group wishes to undertake

Project Poster Presentation (20%) - due March 30, 2019 / March 31, 2019

--> In-lab scientific poster presentations

Learning Outcomes Addressed:

7 Department of Integrative Biology Statements

7.1 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](#)

7.2 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>

7.3 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 University Statements

8.1 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.

8.2 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>

8.3 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>

8.4 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.

8.5 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 book their exams at least 7 days in advance and not later than the 40th Class Day.

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>

8.6 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>

8.7 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.

8.8 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>
