

## **BIOD48: Ornithology (and Herpetology)**

<b>Person</b>	<b>Role</b>	<b>Contact</b>	<b>Office Hours</b>
Professor Weir	Instructor	BIOD48_instructor@hotmail.com	Monday 1:00 to 2:00pm SW143 (visit me for help on lecture content)
Maya Faccio	TA	BIOD48_TA@gmail.com	TBA (visit Maya for tutorial help)

### **CONTACTING US**

The course e-mail addresses must be used. E-mail will be checked once a week on Tuesdays at 11:00am.

### **COURSE EVENTS**

Lectures: BV 363 Thursday 9:00 – 10:00am

Tutorials: BV 498 Tuesday 9:00 – 12:00am (most tutorials involve outdoor activities, but tutorials will commence in BV 498)

### **COURSE OVERVIEW**

Birds will be the primary focus of this course, with amphibians and reptiles (the Herpetology component) covered only briefly. The course will have two main components: 1) lectures will cover avian ecology, evolution, taxonomy, physiology, behavior, and conservation, and will include guest lectures from several Canadian ornithologists who will discuss their research; 2) tutorials will introduce students to the identification of birds in Ontario; point counts and mist netting; and bird song analysis. Regular field trips during tutorial will involve bird watching and field projects along the trails near UTSC and nearby sites in the Toronto area, participation in a census of migratory raptors along the Scarborough bluffs, observation of mist netting techniques to capture and band birds, and a visit to the ornithology collections at the Royal Ontario Museum. This course aims to impart practical skills that may be useful for obtaining employment as a biologist.

### **COURSE PREREQUISITS**

BIOB50 and BIOB51 & one of the following: BIOC50, BIOC54, or BIOC61. All students are expected to have a basic understanding of ecology and evolutionary processes.

### **FIELD TRIPS AND OUTDOOR EVENTS**

This course has a large outdoor field component. Outdoor activities include bird watching and mist netting activities on campus, as well as several field trips off campus. Proper clothing appropriate to the season should be worn during all outdoor activities. Long pants and a light jacket should be ideal for activities during September and early October. Warmer clothing should be worn during late October and November. Only tennis or hiking style shoes (no sandals or dress shoes) should be worn, while winter boots should be worn during days with snow. To ensure safety, all students will work together in groups of 3 during outdoor activities. If two members of a group do not attend an outdoor activity, then the remaining group member should contact the instructor or TA who will reassign the group member for the duration of the activity. All students will need to sign a legal release form in order to participate in outdoor activities both

on and off campus. Students with special needs or considerations (i.e. bee allergies etc.) should contact the instructor personally.

Transportation to off-campus field trip destinations (all of which occur in Scarborough or the downtown Toronto region) will require using local public transit and/or carpooling with other classmates and the instructor (to be arranged in class), and may require that students leave for the field site as early as 8am in order to arrive by 9 am. Every effort will be made to arrive back on campus by 12:00pm when lectures finish, but given local traffic conditions, this may not always be feasible.

## **EQUIPMENT**

10 pairs of binoculars will be provided to students (at least one per group of three. Students are encouraged to bring a pair of binoculars that they have purchased or borrowed.

## **TEXTS AND READINGS**

Lecture Text: F. Gill. *Ornithology 3<sup>rd</sup> Ed.* Freeman. (Most required readings are from this text)

Suggested Online Readings: For select lectures, I suggest online readings (that include videos) from the website of Gary Ritchison:

<http://people.eku.edu/ritchisong/ornithosyl.htm>

Field Guide: Sibley. *The Sibley Field Guide to Birds of Eastern North America.* 2003. (This text is essential for tutorials and field excursions)

## **STUDY TOOLS**

Course Homepage: The homepage for this site is on the intranet:

<https://intranet.utoronto.ca/>. On the homepage you will find all the information for the course including a copy of this syllabus, an outline of the course content, lecture slides, tutorial handouts, tutorial datasets and announcements.

Lecture slides: Lecture slides will be posted on the course homepage as PDF files the evening before lecture. These may be printed, brought to class and used to augment your note taking. You WILL still need to take notes, but printouts of lecture slides will mean that you do not have to write down everything during lecture.

Attendance at lectures: There is no web option for this course. Looking over the lecture slides in combination with the reading materials listed at the end of each lecture handout should provide you with the information you need to know if a lecture is missed, but this will require more work than simply attending lectures.

Tutorials: Tutorials will comprise 4 elements: 1) learning to identify 145 of the most common species in Toronto area, 2) observing wild birds while bird watching, mist netting, and during field trips to a migratory raptor monitoring site, and a bird banding site, 3) a visit to the collections at the Royal Ontario Museum, and 4) four tutorial assignments. Assignments will cover analyses of bird vocalizations and bird censusing methods. Tutorials will commence in BV 498 at 9AM.

## EVALUATION

Test	Covers	Proportion of Final grade
Lecture final	All lectures	35%
Six tutorial identification Quizzes	Last 6 lecture days	10%
Tutorial final	Comprehensive final of tutorial material (including identification)	25%
Tutorial assignments and participation	Four assignments, birding journal	30%

**Lecture final:** The final lecture will cover all material presented during 13 class lectures (including one guest lecture held during tutorial) as well as several chapters of the textbook which will not be covered in class.

**Tutorial identification quizzes:** Students will be responsible for learning to identify 145 of the most common birds of the Toronto area. For each of 6 identification tutorials students will be presented with tips on identifying 20 to 25 species. During the following tutorial (excluding days with off-campus field trips) students will be quizzed on the identification of species covered during previous tutorial sessions. Each quiz will contain 10 species, 8 of which will be from the previous tutorial session and 2 of which will be from earlier tutorials where applicable.

**Tutorial final:** The tutorial final will test student knowledge on the identification of all 145 species learned in tutorial as well as information covered in tutorial assignments, bird watching excursions (i.e. mist netting and blood sampling details) and field trips.

**Missed Exams:** Students unable to attend a tutorial quiz, exam, or field trip for religious reasons must notify the instructor by e-mail as soon as possible in order to make alternate arrangements. Students unable to attend these events due to sickness must contact the instructor by e-mail within 3 working days of the test, must present the instructor with a valid doctor's note and must complete a UTSC medical certificate (available via the registrar's website) which confirms their illness, and medical attention at the time of the exam.

Students who miss the Lecture final exam must petition to the registrar.

## LECTURE TOPICS AND READINGS

Lecture	Date	Lecture title	Gill textbook reading	Ritchison suggested reading
1	13-Sep-12	Adaptive radiation and the diversity of birds	Chapter 1 Pg. 3-20	
2	20-Sep-12	Feathers	Chapter 2 Pg. 39-41	
3	27-Sep-12	Mechanics of flight	Chapter 5	Bird Flight I, Bird Flight II
4	04-Oct-12	Evolution of flight and origin of birds	Chapter 2 Pg. 5-39	Intro to Birds, Bird Flight I
5	11-Oct-12	Migration	Chapter 10	
6	18-Oct-12	Bird vocalizations	Chapter 8	Vocal Communication
7	19-Oct-12	Guest Lecture: Dr. Darren Irwin (UBC)		
8	25-Oct-12	Guest Lecture: Dr. Allen Baker (Royal Ontario Museum)		
9	01-Nov-12	Sexual selection and displays	Chapter 12, 13 (the latter is testable material even though only briefly covered in lecture)	Mating Systems
10	08-Nov-12	Sex, nests, and young	Chapter 15, 16 (the latter is testable material even though only briefly covered in lecture)	Avian Reproduction I, II, III
11	15-Nov-12	Guest Lecture: Ken Welch	Metabolism and Energetics of Hummingbirds	
12	22-Nov-12	?Herpetology Guest Lecture		
13	29-Nov-12	Biogeography	TBA	

## TUTORIAL SCHEDULE

#	Date	Event	Event details	Identification Series	Lab Quiz	Guided Birdwatching	Point Count Surveys	Outdoors event <sup>1</sup>
1	14-Sep-12	Tutorial (BV 498)	Introduction to class	non-passerine landbirds	x	yes (mist netting)	x	yes
2	21-Sep-12	Tutorial (BV 498)	Introduction to Point Count Surveys	Raptors, owls, nighthawk	quiz	yes (mist netting, blood sampling)	yes	yes
3	28-Sep-12	Field Trip 1	Field Trip to Tommy Thompson Park	X	x	x	x	yes
4	05-Oct-12	Field Trip 2	Migratory raptor field trip	X	x	x	x	yes
5	12-Oct-12	Tutorial (BV 498)	x	passerines 1	quiz	yes	yes	yes
6	19-Oct-12	Tutorial (BV 498)	Darren Irwin guest lecture	X	x	yes	yes	yes
7	26-Oct-12	Tutorial (BV 498)	Sound lab 1 (forest filtering)	passerines 2	quiz	x	x	yes
8	02-Nov-12	Tutorial (BV 498)	Sound lab 2 (intraspecific geographic variation)	passerines 3	quiz	x	yes	yes
9	09-Nov-12	Tutorial (BV 498)	Sound lab 3 (song divergence in sympatry)	Shorebirds	quiz	x	yes	yes
10	16-Nov-12	Tutorial (BV 498)	Point Count lab	Waterbirds	quiz	x	x	yes
11	23-Nov-12	Field Trip 3	Royal Ontario Museum (collections)	X	x	x	x	No
12	30-Nov-12	Tutorial (BV 498)	FINAL TUTORIAL EXAM	X	x	x	x	No

<sup>1</sup> Please wear appropriate clothes and footwear for outdoor activities as described above.