This syllabus is a general representation of the course as previously offered and is subject to change.

BIOL 427 – Ornithology

General Course Syllabus (as of July 2019)

About the Course:

Course Description: A course on the ecology, evolution, physiology, behavior, and conservation of birds, amphibians, and reptiles. Laboratories and field projects will focus on identification, systematics, and natural history, with particular attention to species from British Columbia. Note that birds are now the primary focus of this course, with amphibians and reptiles referred to only briefly.

Course Format: Lecture and Laboratory, including field research.
Credits: 3
Prerequisites: BIOL 121

Course Learning Objectives:

By the end of this course, students will be able to:

- Identify species in the field and in the laboratory using prepared specimens.
- Conduct field inventories of birds and present scientific surveys.
- Describe the general knowledge regarding the evolutionary history, taxonomy, ecology, behavior, and conservation of birds.

The practical skills taught in this course will be useful for working as a naturalist, field ecologist, conservation biologist, or environmental consultant. The hope is that this course enriches the lives of students by generating enthusiasm and interest in biodiversity and natural history.

Textbooks and Additional Resources:

Course web site: http://www.zoology.ubc.ca/~irwin/BIOL427/

Course books (Available at the UBC bookstore):

1. **required:** National Geographic Field Guide to the Birds of North America, Seventh Edition, by Jon L. Dunn and Jonathan Alderfer
    a. another good and somewhat recent field guide to all of the birds of western North America is also acceptable, but page numbers for readings refer to the 7th edition
    b. In lab, students will be provided a list of species that they are responsible for learning
2. **optional:** The Handbook of Bird Biology, a textbook produced by the Cornell Lab of Ornithology, edited by Irby Lovette and John Fitzpatrick, 2016. (there is an e-book)

Note: This course requires much fieldwork outside of class time. Students who are uncomfortable outdoors in challenging weather or who do not have a strong interest in field observation might not find the course suitable. Motivated students who have unusual needs are welcome (please speak to the instructor).

Grading Scheme:

Assessment	Weight
Lecture midterm	15%
Lab quiz	10%
Lab exam	20%
Group presentations	15%
Group report	20%
Lecture final exam	20%

COURSE ACTIVITIES:

Laboratory sessions will be devoted to learning to identify birds of B.C., using museum specimens, photographs, and sound recordings. Some lab sessions will be spent outside, learning how to identify live individuals in their environment, as well as how to conduct surveys of birds in the wild. Knowledge will be tested by a lab quiz and a final lab exam. Some lab sessions may be focused on learning specimen preparation and analysis of vocalizations and plumage colours.

Lectures will discuss selected aspects of evolution, ecology, behavior, physiology, and conservation of birds (and a small portion on amphibians and reptiles). Some lecture periods will be devoted to field techniques. A midterm and final exam will focus on lecture material.

Field Project. Small groups of students will conduct field surveys of birds in two or more locations chosen by each group. Students will (1) survey bird species in each area, and (2) compare species richness, composition, and similarity between locations. Evaluation will be based on a presentation to the class and a written report in the format of a scientific paper.

Introductory field trips will teach field methods and bird identification. Identifying birds by their calls is the most difficult skill taught in the course, and requires much practice. Students are strongly recommended to attend these field trips.

Topics Covered:

Example Lecture Schedule from past 2018W1 term:
(Note: the order of topics will vary each term)

Week	Topic
1	- Introduction to course - Tetrapod biodiversity and its importance
2	- Introduction to bird identification - Taxonomic methods - Evolution of tetrapods
3	- Field project: Survey methods - Origin of tetrapods, amphibians, and amniotes
4	- Early evolution of reptiles and birds - Avian diversity and adaptations
5	- Analytical methods for the field project - Anatomy, feathers and molt
6	- **Lecture midterm exam**
7	- Vocal communication in birds - Visual communication in birds
8	- Mating systems and sexual selection - Species, speciation, and biogeography of BC
9	- Migration and orientation - Hybrid zones, migratory divides, and speciation
10	- Guest lectures from graduate students (TBC) - In-class group project work session
11	- The sixth great mass extinction?
12	- Conservation challenges and successes - **Group presentations**
13	- **Group presentations**

Example Lab Schedule from past 2018W1 term:
(Note: this schedule is subject to change, based on weather and other factors.)

Week	Lab session	Topics
1	NO LAB	
2	Field trip 1	- Intro to field observations
3	Lab intro & Identification 1	- Specimen handling, basic morphology - Orders Anseriformes, Galliformes, Podicipediformes
	Special field trip	- Iona Island Bird Observatory
4	Identification 2	- orders Columbiformes, Caprimulgiformes, Apodiformes, Gruiformes, Charadriiformes
5	Identification 3	- orders Gaviiformes, Procellariiformes, Suliformes, Pelecaniformes, Cathartiformes, Accipitriformes, Strigiformes, Coraciiformes, Piciformes, Falconiformes
6	Introduction to specimen preparation	
7	**LAB QUIZ &** Introduction to song and call analysis	- Quiz on Identification labs 1-3
8	Identification 4	- order Passeriformes, families Tyrannidae to Turdidae
9	Identification 5	- order Passeriformes, families Mimidae to Icteridae
10	ID review session	
11	**LAB EXAM**	
12 & 13	NO LAB	- Time to work on field reports

University Policies:

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence.

UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom.

UBC provides appropriate accommodation for students with disabilities and for religious, spiritual and cultural observances.

UBC values academic honesty and students ae expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions.

Details of the policies and how to access support are available on the UBC Senate website.