ORNITHOLOGY
BIOL 4163

Instructor:
Dr. Sherman Boates (*He/Him/His*)
Office:
ACER (Acadia Centre for Estuarine Research)
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Phone: (902)385-2219 (text with name)

Lecture:
T/Th 11:00 AM - 12:20 PM (in person)
Beverage Arts Centre 238

Lab: Tuesday 1:00 PM - 3:50 PM Wildlife Museum located in the Basement of the Biology Building.(in person)

Part 1: Course Information

Course Description

In lecture and lab, the course will cover birds in an evolutionary/behavioural ecology framework, looking at avian morphology, development, ecology, behaviour and conservation. (3 h lecture+ 3h lab.) Prerequisites: BIOL 2073 with a minimum grade of C-.

There will be a field component of the course including local birding trips and lab exercises

Birdwatching and identification: Useful references, field equipment, tips.

Evolution: Origins and diversification.

Functional anatomy and morphology: Flight, muscles, bones, feathers, digestion, respiratory and circulatory systems, nervous system, reproduction and endocrine system.

Behaviour: Territoriality, foraging, mating and sexual, selection, nests and eggs, parental care foraging behaviour etc.

Ecology and conservation: Population status, communal breeding and competition, monitoring, intervention, species at risk, population declines, habitat loss, climate change.

Things and dates to note:

First Class – Thursday 10 September
No class or Lab – 12 October and 16 October Study Break)
Participation is based on 10 random taking of attendance. If you email me before class, with a reasonable reason, you are not penalized.
Last day of class – 9 December

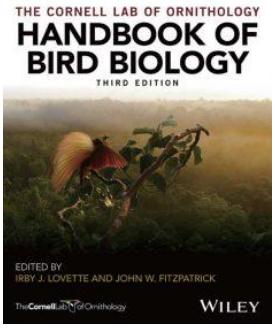
Proposed Field Trip Schedule:

Date	***Location***	***Focus***
15 September	Grande Pre and dyke lands	Shorebird Migration
22 September	Acadia Woodland Trails	Intro to birding, Forest birds
29 October	Miner's Marsh and Lookoff	Wetland birds and waterfowl Raptors

Course Materials & Requirements

Textbook *(Optional – do not purchase this until we discuss this)*





Required
(Hardcopy or App)
Binoculars - optional

Resources and Readings: We will occasionally read current papers from the literature that complement the material in the lab manual and the lecture notes. These articles will accessible via ACORN.

Course Structure

This course will consist of lectures with student presentations at the end of term. Labs will emphasize bird anatomy, adaptation and physiology with a focus on learning birds of the Atlantic region (and elsewhere.

Student Learning Outcomes

How to Meet the Learning Outcome

To succeed in this course, you should come to lecture and lab, read the read the assigned readings posted on MOODLE, participate fully in discussions and be actively engaged in preparing your presentation.

Part 2: Topic Outline

Lab topics: Lab exercises will complement material covered in lecture with hands on activities and exercises. We will enjoy several local birdwatching field trips early in the term.

The instructor reserves the right to amend the above course plan with reasonable notice, and in consultation with the class. The exact number of topics covered may vary depending upon how quickly we cover the material.

Part 3: Assessment and Grading

Evaluation	Percentage	Date
Take home lecture test **or** Exam	25	2 December
Group class presentations	20	6, 8,13 October
Creative Assignment	10	8 December
Participation	10	(see note above)
Lab – Field Notebook	15	8 December
Lab Test	20	1 December
TOTAL	100	

You will be assessed through assignments, lecture and lab test, presentation, attendance and lab. The lecture test will be based on lecture material, any guest lectures required readings and assigned articles covered up to that point.

All assignments, assessments and examinations with grade values and tentative dates.
Attendance or participation expectations and any grading implications
Explanation of how final grades will be calculated.
Note: Tests may not be held during the last 6 hours of instructional activity in a term, with the exception of routine weekly, end-of-chapter, or laboratory tests.

Also, five days before the last day to withdraw from a course without penalty, instructors are to inform their students of their course standing so that students can seek advice from their advisors if they feel it necessary

Part 4: Course Policies

Students are expected to attend all lectures. Students who come to class do better on tests, assignments and the course overall.

You are, of course, permitted to use laptops or tablets to take notes in lecture, please limit their use to classroom material only. Using them for other purposes (i.e. social media) will negatively impact your ability to learn, and it is distracting to myself and others. Please don't do it.

PowerPoint slides for each lecture are posted on MOODLE before class download or print off slides, take supplementary notes during lecture research has shown that students who take notes by hand perform significantly better in situations that evaluate their ability to retain information

If you are not feeling well, please send me an email to let me know and stay home!

When using electronic devices during lectures, limit their use to classroom material only using these devices for other purposes (e.g., social media) will negatively impact your ability to learn, and is rude and disrespectful to other students.

Part 5: University Policies

University policies are available in the Acadia University Academic Calendar or through the Registrar's website: https://registrar.acadiau.ca/welcometotheregistrarsoffice.html

Equity, Diversity and Inclusion

In this course, we are committed to fostering an inclusive and equitable learning environment where the principles of human rights and social justice are paramount. We recognize and respect the diverse backgrounds, identities, and experiences of all students. Our collective goal is to create a space where every individual feels valued, heard, and supported.
All students are encouraged to contribute to and uphold an atmosphere of mutual respect and empathy. Discrimination, harassment, or any form of intolerance will not be tolerated. If you have any concerns or require accommodations to ensure your full participation in this course, please do not hesitate to reach out. Together, let's work towards understanding and advancing human rights and equity, both within and beyond the classroom.

Acadia's Human Rights and Equity Office is responsible for the management and implementation of Acadia's Policy Against Harassment and Discrimination. This Policy is underpinned by a commitment to deconstructing the problematic structures of systemic racism and discrimination within the University Community. Acadia upholds a commitment to fostering a culture within the University Community that is welcoming and reflective of the diverse individuals that comprise this community and to fostering cultural

safety, anti-oppression and anti-racism within the University Community, making it our goal to achieve a culture where our diversity is our strength.

Last Drop Day

Last day to drop a course and receive a "W". Please check the Acadia University calendar dates, which are available here: https://registrar.acadiau.ca/AcademicCalendars.html

Inform Your Instructor of Accommodations

Acadia University is dedicated to improving access to campus life for all students with disabilities. While we attempt to ensure that all courses are accessible, we recognize that there are barriers that need to be addressed on an individual basis. Students who require accommodations to complete coursework or otherwise fully participate in class should contact Accessible Learning Services directly as soon as possible. https://www2.acadiau.ca/student-life/accessiblelearning.html

Students who require accommodations to complete coursework or otherwise fully participate in class should contact Accessible Learning Services directly at (accessible.learning@acadiau.ca) as soon as possible. More information is also available at Accessible Learning Services website.

The Use of Animals in Teaching and Research

The use of animals in teaching and research at Acadia University is done in accordance with guidelines on the care and use of animals published by the Canadian Council on Animal Care (CCAC). For more information on the CCAC, please visit their website at http://www.ccac.ca

Commitment to Integrity

It is standard practice in Biology to check exams and assignments for cheating and plagiarism. Cheating in the class and/or lab, including plagiarism, will not be tolerated. Please read the appropriate sections of the current Acadia University Academic Calendar: https://registrar.acadiau.ca/AcademicCalendars.html

Information on copy-write and course content from Acadia University is available through the Vaughan Memorial Library: http://libguides.acadiau.ca/c.php?g=433650&p=5027078

The spoken and written course content (including the syllabus, handouts, lectures, presentations, labs, assignments, quizzes, tests, and exams) are the intellectual property of the instructor and may only be copied for personal use. Sharing these materials or uploading them where they may be accessed by others is a violation of copyright. If you wish to make audio, video, or photographic recordings in class, you must first obtain the consent of the instructor and of any other persons (e.g., guest speakers, other students) who may be captured in such recordings. In the case of personal use by students with disabilities, the instructor's consent shall not be unreasonably withheld.

Artificial Intelligence. Use of artificial intelligence tools by students to assist with their learning is allowed only if: prior permission has been given by the course professor/instructor, and the student properly credits/cites how the AI technology was used in their work.

AI must be used in an ethical and responsible manner as a positive learning tool. AI may not be used in ways that violate Acadia's Academic Integrity Policy. Students are reminded that plagiarism, or other forms of cheating, are both types of academic dishonesty.

Students are expected to be present for and participate in all lecture and lab activities, including guest lectures.

Part 6: Program Learning Outcomes

Foundations of knowledge		**Course specific examples**	**Proficiency** 1-Introduction 2-Reinforcement 3-Proficient
Scientific method, inquiry and hypothesis testing	Find, understand and apply information from the literature; understand how to use the scientific method to examine problems from different perspectives	Review and critique methods used to study birds based on the current literature	2
Historical concepts and contributions by important figures	Explain foundational concepts in biology, Two-eyed Seeing, and ethical implications of scientific discoveries	In lecture we will discuss Mi'kmaw birds names, colonial bias in naming birds, race and gender issue in ornithology	2
Biodiversity and ecology	Understand the genetic, taxonomic and ecosystem levels of biodiversity;	Exploration of the diversity of birds including variation in anatomy, physiology, behaviour, and ecology	3
Genetics and evolution	Understand the chemical basis of heredity, genetics and genomics; integrate concepts across disciplines to understand evolution	Review of the current phylogenetic understanding including how modern molecular methods have altered our understanding of avian evolution and classification.	3
Human and environmental health	Understand form and function in health and disease within a One Health framework, integrating human and environmental health	Discuss threats to birds, habitat loss, disease, invasive species, climate change etc.	2
Lab and field skills			
Experimental design	Gain experience in applying the scientific method	Students will learn methods used to study birds	2
Safety	Work safely and productively in lab and field settings	Gloves and eye protection required when handling specimens	1
Lab skills	Gain experience with basic and advanced lab techniques and understand their application in research, health science and industry	In lecture and lab discuss health and safety and modern techniques	2
Field skills	Gain experience in basic and advanced field skills and understand their application in ecology, conservation biology and environmental change	Identifying basic bird calls, bird id, nest eggs etc.	1
Data acquisition, analysis and interpretations	Collect data, present results both qualitatively and quantitatively, and interpret outcomes in light of the literature	Use calipers to measure standard body measurements, gross morphological characters and an electronic scale to measure mass	2
Statistical analysis	Use R and or other programs to analyze biological data	Discussed as part of research reviews	1
Professional skills			
Ethical practices	Demonstrate ethical conduct, apply principles of academic integrity and understand the principles of EDI in science	Discuss role of CCAC in using animals in teaching and research at Acadia and Canadian universities generally	2
Collaboration and group work	Work effectively in groups within and across disciplines	Group presentation and paper	3
Critical thinking	Analyze and evaluate information to make science-based decisions	Critique methods for studying birds	2

Computer proficiency	Use common and discipline- specific software	Give a class presentation	2
Scientific communication	Communicate science effectively to both scientific and general audiences	Assignments	2