Ornithology (Biology 4231)

The biology of birds, including their evolution, systematics, anatomy, ecology, and behaviour. Aspects of avian morphology, such as plumages, internal anatomy, and adaptations for feeding and locomotion, will be examined in the lab. Identification, behaviour, and natural history of Ontario birds will be emphasized.

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Office hours: Wednesdays at 11:30 am on Zoom (Other days/times available by appointment)

Technician: Kristi Valley
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Textbooks: *Ornithology Lab Manual* (Download from D2L free of charge)

Please note: I attend to my email regularly from Monday to Friday during the academic year so I will typically respond to your messages on a same day basis. However, I may not open emails that have been sent from accounts other than your university account. Please use your *lakeheadu.ca* email for all messages.

Learner Outcomes:

Upon satisfactory completion of this course, students will be able to:

- Describe the origins and evolution of birds, and identify their relationships to their closest living and nonliving relatives.
- Articulate current views of avian systematics, conservation, and biodiversity.
- Describe how feathers, skeletons, and physiology contribute to the form and function of birds as volant vertebrates.
- Discuss how birds are adapted to fly, migrate, find food, attract mates, and raise their young.
- Understand the means by which birds communicate visual and vocally, and comprehend the purpose of this communication.
- Understand avian demographics, and describe how these measures are important in avian conservation.
- Predict aspects of the natural history of birds from observations of their morphology.

Overview and Marking Scheme: Lectures

Lecture Content: Lectures will be delivered remotely through Zoom; a link to all Zoom lectures is available on the D2L homepage. You are not required to turn your camera on during lectures or exams. Attendance in lectures is highly recommended because recordings will not be available. You are responsible for all content that I provide in class and on my lecture slides.

Exams: There are two lecture exams on October 27 (Midterm) and November 24 (Final); they will be run online during the regular lecture time through the D2L course webpage. Exams are 80 minutes in length and begin promptly at 1:00 pm. You will not be able to begin the exam late, and any questions answered after the exams close will not be marked. Additional instructions are posted on the course webpage. The exams are not cumulative. There is no final exam during the April final exam period.

Assignments: There are three assignments designed to build important academic skills, including referencing and researching. Detailed instructions can be found on D2L under the Content tab. Make sure that you read the instructions carefully, and email me with your questions or ask them in class. Assignments must be converted to PDFs and uploaded to the appropriate assignment dropbox on D2L by the due date. In brief, the assignments are:

(1) Reformat the References: Reformat a list of in-text citations and references to conform to a specific journal style.
(2) Trivia Challenge: Find and format journal article references that support some interesting bits of original research.
(3) Abstract Editing: Write an abstract for a short research paper.

Late assignments will be accepted but a penalty of 10% per day will be imposed. Please let me know if you are handing an assignment in late so that I can reopen the assignment dropbox. Do not email your assignments to me.

Midterm Test (Units 1 to 7)	October 27	25%
Final Exam (Units 8 to 15)	November 24	25%
Reformat the References	September 21	5%
Trivia Challenge	October 19	5%
Rewrite the Abstract	November 9	5%
Class discussion	October 24	2%
Point-of-view Paper	November 26	10%

Class Discussion: There will be a class discussion on a topic in avian conservation during the regularly scheduled lab period (see date above). To facilitate participation, the class will be divided into smaller groups that will meet at different locations and times. I will be sending this information out by email the week before the discussion is scheduled to take place. Attendance at the discussion is important, and the participation grade cannot be made up if it is missed.

The avian conservation class discussion grade comprises an in-class participation grade (2%) and a follow-up point-of-view written paper (10%). More information regarding the discussion will be provided on D2L and in the lectures. The point-of-view paper must be handed into the Dropbox on the D2L course website (PDFs only). You can also find more information about this assignment and a marking rubric on D2L. The minimum penalty for plagiarism or any use of an AI program to write the point-of-view paper will be a mark of zero on the assignment.

Overview and Marking Scheme: Labs

Lab Content: Labs will be delivered in person. The lab manual is available on D2L. You are responsible for all material that is in the lab manual, presented during labs, and posted on D2L under Supplementary Lab Materials (Required).

Lab Quiz 1 (Lab 1)	September 19	7%
Lab Quiz 2 (Lab 2)	October 31	8%
Lab Quiz 3 (Lab 3)	November 28	8%

Lab Quizzes: Lab quizzes are online and occur during the scheduled lab time, they begin promptly at 1:00 pm. You will not be able to begin the quiz late, and any questions answered after the quizzes close will not be marked. It is important that you attend these quizzes at the designated time because you may not have an opportunity to write them at a later date.

Other Important Information:

I am committed to providing a learning environment that will give all students the best possible chance of success in this course. Please drop into my Zoom office hours (or make an appointment) if I can be of assistance.

Accessibility: I am also committed to achieving full accessibility for persons with disabilities and/or medical conditions. This includes arranging academic accommodations for students with disabilities and/or medical conditions to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and/or medical condition and think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS) for more information.

For students already registered with the SAS, I can offer many solutions for your recommended accommodations. Please feel free to make an appointment with me to discuss these options.

Absence due to Illness: If you miss an exam due to illness, you must inform me by email within 24 hours of the scheduled test time. Athletes who will miss an exam due to competitions must provide a letter or email from their coach in advance that shows competition dates. No other excuses (e.g., vacations, sleeping in, or non-university related activities) for missing exams will be accepted.

Academic Dishonesty: Academic dishonesty includes (but is not restricted to) cheating, plagiarism, impersonation, and collaboration. As such, any collaboration on exams and lab quizzes is considered cheating. You must do the online tests alone with no help from friends, family, or classmates! The minimum penalty for collaboration or cheating is a mark of zero on the test. Also, cutting and pasting, copying, or downloading answers from another source (e.g., Wikipedia) is considered plagiarism. The minimum penalty for plagiarism on tests and assignments will be a mark of zero on the work.

If you are caught participating in academic dishonesty in this course, a formal report may be sent to the Dean of Sciences and Environmental Studies and Office of Student Affairs, and documentation of the offence may be added to the Student Conduct Database and your permanent academic record. You can find more information on the D2L course webpage. Not reading these instructions is not an excuse for not knowing them!

A breach of Academic Integrity is a serious offence. The principle of Academic Integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students are strongly advised to familiarize themselves with the Student Code of Conduct (Academic Integrity) and, in particular, sections 26 and 83 through 85. Non-compliance with the Student Code of Conduct will not be tolerated in this course and the Student Code of Conduct will be adhered to in terms of disciplinary action. The Student Code of Conduct provides a full description of academic offences, procedures when Academic Integrity breaches are suspected and sanctions for breaches of Academic Integrity.

You can find the university regulations regarding academic dishonesty here:
https://www.lakeheadu.ca/students/student-life/student-conduct/academic-integrity

Use of AI Programs: The use of any AI programs (such as ChatGPT) on exams, quizzes, and assignments in this course is considered a breach of academic integrity and, as such, the minimum penalty will be a grade of zero on the work (see above).

Generative artificial intelligence (Generative AI or GenAI) is a category of AI systems capable of generating text, images, or other media in response to prompts. These systems include ChatGPT and its variant Bing (built by OpenAI) and Bard (built by Google) among several others. Other Generative AI models include artificial intelligence art systems such as Stable Diffusion, Midjourney, and DALL-E. Any use of GenAI systems to produce assignments or exam answers for this course is not permitted. All work submitted for evaluation in this course must be the student's original work. The submission of any work containing AI generated content will be considered a violation of academic integrity ("Use of Unauthorized Materials").

More information: Please see the *Frequently Asked Questions* posted on the D2L course webpage.

Schedule of Lecture Topics

Week of	Sept 3	Introduction to the Course
Week of	Sept 18	Unit 1: Avian Origins
Week of	Sept 15	Unit 2: Avian Classification Unit 3: Feathers: Structure, growth, molt, and plumages
Week of	Sept 22	Unit 4: Flight Mechanics
Week of	Sept 29	Unit 5: Physiology and Adaptation Unit 6: Migration and Navigation
Week of	Oct 6	Unit 7: Feeding: Apparatus and Strategies Unit 8: Visual Communication
Week of	Oct 13	**Study week**
Week of	Oct 20	Unit 9: Vocal Communication Unit 10: Social Behaviour

Week of	Oct 27	**Midterm Exam** (October 27) - Units 1 to 7 Unit 11: Breeding Systems
Week of	Nov 3	Unit 11: Breeding Systems (continued) Unit 12: Reproductive Anatomy and Physiology
Week of	Nov 10	Unit 13: Nests and Parental Care
Week of	Nov 17	Unit 14: Growth and Development Unit 15: Avian Ecology: populations and Communities
Week of	Nov 24	**Final Exam** (November 24) - Units 8 to 15 No lecture (November 26
Week of	Dec 1	No lectures

Schedule of Lab Topics

September 5	No lab
September 12	**Lab 1: Form and Function: Feathers and Flight**
September 19	**Lab Quiz 1 (Lab 1)**
September 26	No lab
October 3	**Lab 2: Form and Function Feeding**
October 10	No lab
October 17	**Study Week**
October 24	**Class Discussion: Avian Conservation**
October 31	**Lab Quiz 2 (Lab 2)**
November 7	No lab
November 14	**Lab 3: Form and Function: Everything Else**
November 21	No lab
November 28	**Lab Quiz 3 (Lab 3)**