REN R 401B / BIOL 225

NORTHERN AVIAN ECOLOGY / INTRODUCTION TO ORNITHOLOGY

In Winter 2020, BIOL 225, *Introduction to Ornithology*, is being offered at Yukon College concurrent with the University of Alberta's REN R 401B, *Northern Avian Ecology*, as part of the Northern Environmental and Conservation Sciences, B.Sc. Program. All students registered in BIOL 225 or REN R 401B must adhere to requirements outlined in this course syllabus. University of Alberta students must also be aware of, and adhere to, the University's Code of Student Behaviour, referenced in the outline; Yukon College students must be aware of, and adhere to, Yukon College's Academic Regulations, also referenced in the outline.

INSTRUCTOR:	Dr. Kathryn Aitken Instructor, School of Science, Yukon College Adjunct Professor, Dept. of Renewable Resources, Univ. of Alberta
OFFICE HOURS:	Mon./Weds., 10:30-12:00 (or by appointment)
OFFICE LOCATION:	A2509
E-MAIL:	kaitken@yukoncollege.yk.ca

CLASS DAYS & TIMES:	Tuesdays and Thursdays, 1:00-2:30pm
CLASS LOCATION:	TBD (and some Thursdays in the Biology lab A2805)

COURSE DESCRIPTION:

This course provides a practical introduction to the subject of ornithology, the biology of birds. Students will learn about 1) the evolution of birds and the incredible array of avian morphological, physiological, and behavioural adaptations, 2) current research and issues in avian ecology and conservation, 3) methods used by researchers in the field of avian biology, and 4) identification of birds by sight and sound, with an emphasis on species found in the Yukon.

STUDENT LEARNING OUTCOMES AND COMPETENCIES:

On successful completion of this course, students will be able to:

1) Explain the behavioural, morphological, and physiological characteristics that distinguish the Class Aves from other animal taxa.
2) Identify and understand general themes in avian ecology and the conservation issues affecting Yukon and other northern bird species.
3) Identify 67 Yukon bird species by sight and/or sound and know the distinguishing characteristics of 11 bird orders and 25 bird families.

COURSE FORMAT (3-0-0):

The course consists of two 1.5-hour lectures per week. Class sessions will include a mixture of: 1) lectures covering general theoretical topics in avian biology and practical skills related to avian research, and 2) lab-

based activity sessions in which students will examine study skins and specimens that illustrate points from the lectures. Lab sessions will be held in the Biology lab (A2805).

COURSE PREREQUISITES AND/OR CO-REQUISITES:

For students taking the course as BIOL 225: Successful completion of BIOL 101 and 102, or equivalent, or permission of the instructor.

For students taking the course as REN R 401B: Registration in Yukon College/University of Alberta BSc in Environmental and Conservation Sciences degree program, and successful completion of: U of A BIOL 108, or Yukon College BIOL 101 and 102, or an equivalent first-year biology course, or permission of an ENCS Program Advisor.

REQUIRED TEXTBOOKS/MATERIALS:

1) The only required text for the course is a field guide of your choice containing birds found in western Canada. Local bookstores should have a good selection of bird guides in stock or available to order, or you can order one online (e.g. Chapters.ca, Amazon.ca, Wild Birds Unlimited).

An excellent choice for the Yukon is:
National Geographic Society. 2017. Field Guide to Birds of North America – 7th Edition. National Geographic Society, Washington, D.C. ISBN-13: 978-1426218354

Other good options are:
Sibley, David. A. 2016. The Sibley Field Guide to Birds of Western North America, 2nd ed. Alfred A. Knopf, New York. ISBN-13: 978-0307957924

Peterson, Roger Tory. 2010. Peterson Field Guide to Birds of Western North America, 4th Edition. Houghton Mifflin, New York. ISBN-13: 978-0547152707

2) Not required but good resources if you plan to continue in ornithology/wildlife biology/zoology/ecology:

Cornell Lab of Ornithology. 2016. Handbook of Bird Biology, 3rd edition. Lovette IJ, Fitzpatrick JW, editors. Wiley-Blackwell. ISBN-13: 978-1118291054

Gill, Frank B. 2007. Ornithology 3rd edition. W.H. Freeman and Company, New York. ISBN-13: 978-0716749837. There will be copies of Gill on reserve in the library, and for purchase in the YC bookstore. Note that there is a 4th edition of this textbook due out in spring 2019.

3) The most important piece of equipment for studying birds in the wild is a pair of binoculars. Students will need a pair of binoculars for field trips, and for conducting their research project (if applicable). I recommend 7x35 or 8x42 (the first number refers to the magnification, while the second number refers to the width of the outer lens). Avoid binoculars with less than 7x or more than 10x magnification; also avoid auto-focus binoculars. If you're unsure what to buy, you can wait until the first week of class and talk to the instructor.

4) Students will require a field notebook in which to keep notes on field observations, data for their research project, etc. I recommend a 3x5, 4x6, or 5x7 ruled notebook; a particularly good choice is a "Rite-in-the-Rain" brand notebook with waterproof paper.

COURSE WEBSITE

Much of the material for the course will be available on the BIOL 225/REN R 401B class site on YC's Moodle system (yukoncollege.me). Lectures, announcements, additional reading, and other material will be available there for download or viewing. Students must ensure that they have a valid Yukon College student computing account. Information on setting up a YC computing account is available at: http://www.yukoncollege.yk.ca/student_info/pages/computing_services.

UNIVERSITY OF ALBERTA ACADEMIC INTEGRITY AND CODE OF STUDENT BEHAVIOUR

Academic Integrity

The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Code of Student Behaviour (online at www.governance.ualberta.ca) and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

Code of Student Behaviour

All students at the University of Alberta are subject to the Code of Student Behaviour, as outlined at: https://www.ualberta.ca/governance/resources/policies-standards-and-codes-of-conduct/code-of-student-behaviour. Please familiarize yourself with it and ensure that you do not participate in any inappropriate behavior as defined by the Code. Key components of the code include the following statements.

30.3.2(1) No Student shall submit the words, ideas, images or data of another person as the Student's own in any academic writing, essay, thesis, project, assignment, presentation or poster in a course or program of study.

30.3.2(2) c. No Student shall represent another's substantial editorial or compositional assistance on an assignment as the Student's own work.

YUKON COLLEGE ACADEMIC AND STUDENT CONDUCT

Information on academic standing and student rights and responsibilities can be found in the current Academic Regulations that are posted on the Student Services/ Admissions & Registration web page.

Plagiarism

Plagiarism is a serious academic offence. Plagiarism occurs when students present the words of someone else as their own. Plagiarism can be the deliberate use of a whole piece of another person's writing, but more frequently it occurs when students fail to acknowledge and document sources from which they have taken material. Whenever the words, research or ideas of others are directly quoted or paraphrased, they must be

documented according to an accepted manuscript style (e.g., APA, CSE, MLA, etc.). Resubmitting a paper which has previously received credit is also considered plagiarism. Students who plagiarize material for assignments will receive a mark of zero (F) on the assignment and may fail the course. Plagiarism may also result in dismissal from a program of study or the College.

PROFESSIONALISM AND CLASSROOM RULES OF ENGAGEMENT

Students are expected to attend all lectures and labs, be engaged and courteous in all course activities, and to be on time for class. Please do not use cell phones during class. Laptops are permitted for note taking and in-class work; however, please do not use laptops in class for non-class-related activities. While in computer labs, students are expected to refrain from using the computers to engage in non-class-related activities (e.g. Facebook, etc.).

COURSE REQUIREMENTS/EVALUATION:

Attendance and Participation

There will be two Saturday or Sunday field trips to local birding "hot spots", and one bird walk at the Yukon College campus. Attendance is required on AT LEAST one of these. These will occur between late February and early April (exact dates will be determined in consultation with students in class). Weekend bird walks will last 1.5-2 hours and will occur mid-day or early afternoon. The campus bird walk will be during class time on April 7.

Assignments

Assignments will focus on the development of skills used in avian research, including conducting basic data analyses and summaries, and scientific communication. Students will complete a field notebook, and a major research or writing project. The requirements for the major project depend on whether students are enrolled in BIOL 225 or in REN R 401B. See below for details.

Unless otherwise specified, assignments are due by 11:59 pm PST on the date that they are due. Late assignments will lose 5% of their mark per day that they are late.

***All students (both BIOL 225 and REN R 401B)*:**

FIELD NOTEBOOK. Throughout the term, students will keep a neat, detailed field journal, containing data and observations from class birding trips, from independent birding walks/outdoor trips, and from their research project (if applicable). The notebook should contain entries for every day the student makes bird observations, with at least two per week. Each entry must include: date, location, observer(s) (if anyone else was present), start and finish times, weather, species list with approximate numbers for each species seen, data for your research project (if applicable), and any additional notes (comments on habitat, behaviour, drawings, etc.). You may also include incidental bird sightings (e.g. while driving, or doing other non-birding activities). Organization and legibility count! Details of field notebook organization and content will be discussed in class and on the course website. Field notebooks will be checked three times throughout the term (Feb. 4, Mar. 3, Apr. 9).

***Students enrolled in the course as BIOL 225*:**

Students taking the course as **BIOL 225** will write an original 3-5 page species account detailing the life history of a Yukon bird species. Details of the content for the species accounts will be handed out in class.

Species account papers will be due on APRIL 14.

***Students enrolled in the course as REN R 401B*:**

Students taking the course as **REN R 401B** will work in groups of to design a research project to address a question in ornithology, collect and analyze their data, and present their results as a 12-minute conference-style research presentation. Groups may choose to use existing datasets, rather than conducting field data collection. Students will also individually write an original scientific research paper on the data. While data collection and analysis tasks are shared by the group, you must produce independent papers. The group project will be worth 30% of the total course grade and will include four components: 1) project outline, due Jan. 30, 2) research presentation, in class Apr. 2, 3) final paper due Apr. 14, and 4) peer evaluation, due Apr. 14.

Exams

There will be one midterm exam and one final exam. The midterm will be scheduled during class time on Feb. 18. The final examination will be held at the end of term, during the scheduled College exam period. It will cover material from the entire course, but there will be an emphasis on material covered after the midterm. Exams will cover both lecture and lab material.

Evaluation

The course grade will be determined as follows:

Students enrolled in the course as BIOL 225:

Assignment	**Percent**
Field notebook	5%
Participation in ≥ 1 field trip	5%
Species account paper (due Apr 14)	30%
Midterm exam (in class Feb 18)	30%
Final exam (during exam period)	30%

Students enrolled in the course as REN R 401B:

Assignment	**Percent**
Field notebook	5%
Participation in ≥ 1 field trip	5%
Group research project	30%
Midterm exam (in class Feb 18)	30%
Final exam (during exam period)	30%

Assignment of grades

The total numerical score will be converted to a grade on Yukon College's letter grading system.

YUKON FIRST NATIONS CORE COMPETENCY

Yukon College recognizes that a greater understanding and awareness of Yukon First Nations history, culture and journey towards self-determination will help to build positive relationships among all Yukon citizens. As a

result, to graduate from ANY Yukon College program, you will be required to achieve core competency in knowledge of Yukon First Nations. For details, please see www.yukoncollege.yk.ca/yfnccr.

ACADEMIC ACCOMMODATION

Reasonable accommodations are available for students requiring an academic accommodation to fully participate in this class. These accommodations are available for students with a documented disability, chronic condition or any other grounds specified in section 8.0 of the Yukon College Academic Regulations (available on the Yukon College website). It is the student's responsibility to seek these accommodations. If a student requires an academic accommodation, he/she should contact the Learning Assistance Centre (LAC) at (867) 668-8785 or lassist@yukoncollege.yk.ca.

EQUIVALENCY/TRANSFERABILITY:

For information on transferability of BIOL 225, see http://www.bctransferguide.ca or contact the Yukon College School of Science.

TOPICS:

- Introduction to Class Aves
- Orders and Families of birds
- Introduction to bird identification (sight and sound), and bird survey techniques
- Origin of birds
- Feathers and flight
- Life in the North
- Avian physiology (respiration, circulation, feeding, and digestion)
- Senses, brains, and intelligence
- Vocalization
- Social and foraging behaviour
- Mate choice and breeding systems
- Reproduction (bird sex; nests and incubation; parents and their offspring)
- Populations and Communities
- Avian conservation issues in the North and elsewhere