REN R 401B / BIOL 225

NORTHERN AVIAN ECOLOGY / INTRODUCTION TO ORNITHOLOGY

In Winter 2015, 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:	Wednesdays, 10:30-12:00 (or by appointment)
OFFICE LOCATION:	A2509
E-MAIL:	kaitken@yukoncollege.yk.ca

CLASS DAYS & TIMES:	Tuesdays and Thursdays, 2:30-4:00pm
CLASS LOCATION:	A2204

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 50 Yukon bird species by sight and/or sound, and know the distinguishing characteristics of 11 bird orders and 23 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. 2011. Field Guide to Birds of North America – 6th Edition. National Geographic Society, Washington, D.C.

Other good options are:
Sibley, David. A. 2003. The Sibley Field Guide to Birds of Western North America. Alfred A. Knopf, New York.

Peterson, Roger Tory. 2010. Peterson Field Guide to Birds of Western North America, 4th Edition. Houghton Mifflin, New York.

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

Gill, Frank B. 2007. Ornithology 3rd edition. W.H. Freeman and Company, New York.

There will be copies on reserve in the library.

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 when conducting their research project (if applicable) and for field trips. 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.

MyYC, E-CLASS, OR COURSE WEBSITE

Much of the material for the course will be available on the BIOL 225/REN R 401B class site on MyYC. 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 MyYC account is available at: http://www.yukoncollege.yk.ca/student_info/pages/computing_services.

UNIVERSITY OF ALBERTA ACADEMIC INTEGRITY AND CODE OF STUDENT BEHAVIOUR

Plagiarism and Cheating

The University of Alberta is committed to highest standards of academic integrity and honesty. Students must be familiar with standards regarding academic honesty and uphold policies of the University. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students at the University of Alberta are subject to the Code of Student Behaviour, as outlined in the 2014/2015 University Calendar. Students should familiarize themselves with the current version of the code and ensure they do not participate in any inappropriate behaviour as defined by it. Key components of the code specific to this course include the following statements. Plagiarism: 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. Cheating: no student shall represent another's substantial editorial or compositional assistance on an assignment as the student's own work. The most recent version of the Code of Student Behaviour can be found on line on the University of Alberta web site.

Students should speak with the course instructor about any questions or concerns about the code. Students should be particularly aware of the code as it pertains to internet and library research, use of previous class notes, reclamation plans of former students and interviews or discussions with others.

YUKON COLLEGE ACADEMIC STANDARDS AND REGULATIONS

Yukon College students are expected to be familiar with academic standards and regulations as outlined in Yukon College's Academic Regulations, at http://www.yukoncollege.yk.ca/downloads/Academic_Regulations_2004.pdf.

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 cellular 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 in-class bird walk on 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). It is strongly recommended that students attend a weekend bird walk as these will start earlier in the day than the in-class walk and will therefore be more likely to garner a greater number and diversity of birds. Weekend bird walks will last 1.5-2 hours and will occur mid-day or early afternoon.

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. Each entry must include: date, location, participants (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.). 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 twice throughout the term (Feb 17, Apr 7).

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

Students taking the course as **BIOL 225** have two options for their major project in the course. They may either: write a review paper on a topic in ornithology, **OR** conduct an independent research project and present their results as a scientific paper. Guidelines for each option will be distributed in class. Students must submit an outline of their research project or review topic by FEB 5. Final papers will be due on APRIL 9.

OPTION 1 – REVIEW PAPER: Students will write a literature review paper on an ornithology topic of their choosing. Topics must be discussed with and approved by the instructor. Papers must be a minimum of 5 pages (not including tables, figures, and literature cited), and must include a minimum of 5 primary sources. The paper will be due on April 9.

OPTION 2 – SCIENTFIC RESEARCH PROJECT: Students will analyse and summarize a set of bird data, and present their results as a scientific paper formatted in the style of the journal *The Auk*. Papers must include an Abstract, Introduction, Methods, Results (with at least one table and one figure), Discussion, and Literature Cited (including at least 5 primary sources). Students may use existing data (e.g. from the Breeding Bird Survey online database), or collect their own data. We will discuss the logistics of data collection at the start of the term but it could include daily counts of birds at a backyard feeder, weekly counts of ravens at the local dump, or many other possibilities. Papers must be a minimum of 5 pages (not including tables, figures, and literature cited). The paper will be due on April 9.

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

Students taking the course as **REN R 401B** will complete an independent research project, which will include two major components:

1) RESEARCH PROJECT: Students will analyse and summarize a set of bird data, and present their results as a scientific research paper, formatted in the style of the journal *The Auk*. Papers must include an Abstract, Introduction, Methods, Results (with at least one table and two figures), Discussion, and Literature Cited (including at least 7 primary sources). Students may use existing data (e.g. from the Breeding Bird Survey online database), or collect their own data. We will discuss the logistics of data collection at the start of the term but it could include daily counts of birds at a backyard feeder, weekly counts of ravens at the local dump, or many other possibilities. Students must submit an outline of their research project by Feb 5 Final papers must be a minimum of 8 pages (not including tables, figures, and literature cited) and will be due on April 9.

2) RESEARCH PRESENTATION: Students will present the results of their research project as a 12 minute, scientific conference-style oral presentation. Presentations will take place during

class time on April 7.

Exams

There will be one midterm exam and one final exam. The midterm will be scheduled during class time on Feb 26. 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**
Project outline (due Feb 5)	10%
Written report (due April 9)	20%
Field notebook (two checks: Feb 17, Apr 7)	5%
Participation in ≥ 1 field trip	5%
Midterm exam (in class Feb 26)	30%
Final exam (during exam period)	30%

Students enrolled in the course as REN R 401B:

Assignment	**Percent**
Project outline (due Feb 5)	5%
Presentation (in class, Apr 7)	10%
Written report (due April 9)	15%
Field notebook (two checks: Feb 17, Apr 7)	5%
Participation in ≥ 1 field trip	5%
Midterm exam (in class Feb 26)	30%
Final exam (during exam period)	30%

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.

WRITING CENTRE

All students are encouraged to make the Writing Centre a regular part of the writing process for coursework. Located in C2231 (adjacent the College Library), the Writing Centre offers half-hour writing coaching sessions to students of all writing abilities. Coaching sessions are available in person and through distance technologies (e.g., email plus Skype or phone). For further information or to book an appointment, visit the Centre's website: www.yukoncollege.yk.ca/student_info/pages/writing_centre.

EQUIVALENCY/TRANSFERABILITY:

BIOL 225 transfers as a 3-credit 200-level Biology elective to: Camosun College, North Island College, Simon Fraser University, Thompson Rivers University, UBC, UBC-Okanagan, University Canada West, University of the Fraser Valley, University of Northern BC, and Vancouver Island University. Also transfers to Emily Carr as 3-credit SCIE 200-level, to Kwantlen Polytechnic University as 4-credit BIOL 200-level, and to UVIC as 1.5-credit BIOL 200-level. For more information on course 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
- Communities
- Avian conservation issues in the North and elsewhere