

## **ANSC\*3180 Wildlife Nutrition W (3-0) [0.5]**

### **Course Outline**

**Winter 2020**

#### **General Information**

**Course Code: ANSC\*3180**

**Course Title: Wildlife Nutrition (3-0)**

**Course Description:** A study of the nutrition of avian and mammalian wildlife with emphasis on North American species. The role of nutrition in survival and population growth of wildlife in their natural habitat.

**Credit weight:** 0.5

**Academic Department (or campus):** Department of Animal Biosciences

**Campus:** Guelph

**Semester Offering:** W

**Class Schedule and Location:** Lectures: Monday/Wednesday/Friday 12:30-1:20pm MACN 105

**Specific Description:** A course in which students will learn about nutrient requirements and nutritional idiosyncrasies of mammalian and avian wildlife from all over the world, but largely focused on North American species. Students will be introduced to the role that nutrition plays in the survival of individual animals, species survival and reproduction, and population dynamics of wildlife species in their natural habitats.

Students should have an established understanding of the fundamental principles of nutrition. The material in the course will build on this background to enhance the understanding of nutrient requirements and utilization in avian and mammalian wildlife species.

## Instructor Information

Instructor Name: James Templeman  
Instructor Email: [jtemplem@uoguelph.ca](mailto:jtemplem@uoguelph.ca)  
Office location: ANNU 229.  
Office hours: Tuesdays 9:00-11:00 am, ANNU 229.

## GTA Information

GTA Name: **Kortney Acton** → student section Adair to Coelho (inclusive)  
*\*discussion board monitoring*  
GTA Email: [acton@mail.uoguelph.ca](mailto:acton@mail.uoguelph.ca)  
Office location: 043 (ANNU)  
Office hours: Appointment by e-mail

GTA Name: **Laura Buss** → student section Coish to Hogg (inclusive)  
GTA Email: [lbuss@uoguelph.ca](mailto:lbuss@uoguelph.ca)  
Office location: 016B (ANNU)  
Office hours: Appointment by e-mail

GTA Name: **Lien Woon Sam** → student section Hong to Lyongs (inclusive)  
*\*discussion board monitoring*  
GTA Email: [lwoonsam@uoguelph.ca](mailto:lwoonsam@uoguelph.ca)  
Office location: N/A  
Office hours: Appointment by e-mail

GTA Name: **Melanie Denomme** → student section Lytwyn to Pallandi (inclusive)  
GTA Email: [denommem@uoguelph.ca](mailto:denommem@uoguelph.ca)  
Office location: N/A  
Office hours: Appointment by e-mail

GTA Name: **Pauline Kosmal** → student section Pallarca to Taylor (inclusive)  
GTA Email: [pkosmal@mail.uoguelph.ca](mailto:pkosmal@mail.uoguelph.ca)  
Office location: N/A  
Office hours: Appointment by e-mail

GTA Name: **Renee Hilker** → student section Templeton to Ziezold (inclusive)  
GTA Email: [hilkerr@uoguelph.ca](mailto:hilkerr@uoguelph.ca)  
Office location: 032 (ANNU)  
Office hours: Appointment by e-mail

All students will be assigned to a specific GTA who will be available to help answer questions throughout the course. **Please contact your specific assigned GTA via email with initial questions and then, if necessary, contact the instructor.**

## **Course Content**

### **Specific Learning Outcomes:**

The students will:

1. Identify, describe and differentiate the digestive systems of carnivorous, omnivorous and herbivorous mammals and birds. (Evaluation methods: Quiz, Project, Final Exam)
2. Develop a comparative assessment of nutrient and energy requirements for one or more wild living homeothermic species (mammals, birds) throughout the year. (Evaluation method: Project)
3. Develop or enhance the ability to find, review, and assess the value and relevance of peer-reviewed journal articles relating to the nutrition of mammalian and/or avian wildlife species. (Evaluation methods: Project Reference List, Project)
4. Understand, develop and use one method (such as YouTube video, magazine article, website, or scrapbook) of presenting scientifically based information to either a scientific or general public audience. (Evaluation method: Project)
5. Develop an ability to integrate current scientific knowledge on food habits, food composition and digestion in mammalian and avian wild-living species, with the constraints of migration, hibernation, available food energy and potentially toxic components in food. (Evaluation methods: Project, Final Exam)

### **Course Objectives**

For students to study and understand the following topics in the wildlife context:

- 1) Availability and requirements of nutrients by species in their natural habitats.
- 2) How species acquire and utilize nutrients in response to seasonal fluctuations in both quality and quantity of food sources.
- 3) The food habits, natural diet nutritional composition, and comparative aspects of digestion and digestive anatomy in ruminant and non-ruminant herbivores, omnivores, and carnivores.
- 4) Protein metabolism and requirements, energy requirements, and metabolism of and requirements for other potentially limiting nutrients.
- 5) How to calculate energy requirements and determine how physiology, reproduction, maintenance, growth, activity, and environment may cause requirements to differ.

The course is designed to meet the following Learning Outcomes of the University of Guelph:

**1) Critical and Creative Thinking:** Inquiry and Analysis, Problem Solving, Creativity, Depth and Breadth of Understanding

Critical and creative thinking is a concept in which one applies logical principles, after much inquiry and analysis, to solve problems in with a high degree of innovation, divergent thinking and risk taking. Those mastering this outcome show evidence of integrating knowledge and applying this knowledge across disciplinary boundaries. Depth and breadth of understanding of disciplines is essential to this outcome.

**2) Literacy:** Information Literacy, Quantitative Literacy, Technological Literacy, Visual Literacy

Literacy is the ability to extract information from a variety of resources, assess the quality and validity of the material, and use it to discover new knowledge. The comfort in using quantitative literacy also exists in this definition, as does using technology effectively and developing visual literacy.

**3) Communicating:** Oral Communication, Written Communication, Reading Comprehension, Integrative Communication

Communicating is the ability to interact effectively with a variety of individuals and groups, and convey information successfully in a variety of formats including oral and written communication. Communicating also comprises attentiveness and listening, as well as reading comprehension. It includes the ability to communicate and synthesize information, arguments, and analyses accurately and reliably.

**4) Professional and Ethical Behaviour:** Teamwork, Ethical Reasoning, Leadership, Personal Organization and Time Management

Professional and ethical behaviour requires the ability to accomplish the tasks at hand with proficient skills in teamwork and leadership, while remembering ethical reasoning behind all decisions. The ability for organizational and time management skills is essential in bringing together all aspects of managing self and others. Academic integrity is central to mastery in this outcome.

## Lecture Content:

Week	Date(s)	Topics	Lecturer(s)
1	Jan 6, 8 and 10	Introduction to the course (Section 1) Major project details (Section 1) TA introductions Nutritional fundamentals (Section 2)	Esther Finegan GTA introductions
2	Jan 13, 15* and 17	Nutrition fundamentals (Section 2) <b>*Jan 15: Project type and species selection (start of class)</b>	Esther Finegan
3	Jan 20, 22 and 24	Nutrition fundamentals (Section 2)	Esther Finegan
4	Jan 27, 29 and 31*	Nutrition fundamentals (Section 2) <b>*Jan 31: Initial project reference list (10 references) due by 4:00 pm</b>	Esther Finegan
5	Feb 3, 5 and 7	Nutrition fundamentals (Section 2) Energy (Section 3)	Esther Finegan
6	Feb 10, 12 and 14*	Energy (Section 3) <b>*Feb 14: Fundamentals of nutrition quiz (in class)</b>	James Templeman
7	Feb 17, 19 and 21	<b>Reading week – NO CLASSES</b>	N/A
8	Feb 24, 26 and 28	Energy (Section 3)	James Templeman
9	Mar 2, 4 and 6*	Energy (Section 3) Food habits (Section 4) <b>*Mar 6: Major project due by 4:00 pm</b>	James Templeman
10	Mar 9*, 11 and 13	Food habits (Section 4) Food composition (Section 5)	James Templeman

11	Mar 16, 18 and 20	Food composition (Section 5)	James Templeman
12	Mar 23, 25 and 27	Food composition (Section 5) Catch up/review	James Templeman
13	Mar 30, Apr, 1 and 3	Catch up/review Potential guest lecture series	James Templeman Guest lecturers (TBD)

**Labs:** Not applicable

**Seminars:** Not applicable

**Course Assignments and Tests:**

Assignment or Test	Due Date	Contribution to Final Mark (%)	Learning Outcomes Assessed
Quiz	Feb 14 (in class)	<b>15%</b>	1
Major project		<b>45% (total)</b>	
A) Initial reference list	A) Jan 31 (4 pm)	A) 5%	A) 1
B) Final project	B) March 6 (4 pm)	B) 40%	B) 1,2,3,4,5
Final exam	April 15 (7-9 pm)	<b>40%</b>	1,5

**\*5% per day will be assigned for late assignments. It is the student's responsibility to request consideration for a late projects/assignments or anticipated quiz absence a minimum of 5 days prior to the deadline.**

**Quiz:**

February 14<sup>th</sup>, in class (12:30-1:20 pm)

Will cover all material from 'Fundamentals of Nutrition' (Section 2)

Closed book, invigilated, in-class

**Final exam:**

April 15<sup>th</sup>, 7:00-9:00 pm

Closed book, invigilated

Will cover all material after 'Fundamentals of Nutrition' (Sections 3, 4, and 5)

**Major project:**

(a) Initial Reference List

Due Friday January 31<sup>st</sup>, by 4:00 pm.

Submitted either via Dropbox in CourseLink or handed in as hardcopy

(b) Final Project

Due Friday March 6<sup>th</sup>, by 4:00 pm

Submitted either via Dropbox in CourseLink or handed in as hardcopy (office 229, ANNU)

Project Selection will take place Wednesday January 15<sup>th</sup> at the start of class.

All assignments are expected to be unique work.

**Course Resources**

**Required Texts:** Not applicable

**Recommended Texts:**

*A good general introductory text:*

- Robbins, C. T. (1993). Wildlife Feeding and Nutrition. 2nd Edition. 1 copy on reserve.
- Robbins, C. T. (1983). Wildlife Feeding and Nutrition. 1st Edition. 1 copy on reserve.  
(\*only 1983 version has a species index\*)

*A more recent general introductory text:*

- Barboza, P. S., Parker, K. L., and Hume, I. D. (2009). Integrative Wildlife Nutrition.  
Available online via the University of Guelph library website.

*A text dealing specifically with marsupial nutrition:*

- Hume, I. D. (1999). Marsupial Nutrition. 1 copy on reserve.

*A text dealing specifically with avian nutrition:*

- Klasing, K. C. (1998). Comparative Avian Nutrition. 1 copy on reserve.

*A text and a journal article dealing with digestive physiology*

- Stevens, C. E., and Hume, I. D. (1995) Comparative Physiology of the Vertebrate Digestive System. 2nd Edition. 1 copy on reserve.

- Stevens, C. E., and Hume, I. D. (1998) Contributions of microbes in vertebrate gastrointestinal tract production and conservation of nutrients. *Physiological Reviews*. 78: 393-427. Will be available on Courselink.

**Lab Manual:** Not applicable

**Other Resources:** Electronic versions of the course notes (PDF copies of the PPT slides) will be posted to Courselink the evening prior to each lecture, all with white backgrounds. Copies of course notes are not intended to be the sole source of information but guide an academic discussion on course material. Additional course materials (for the quiz, project and final exam) will also be posted to Courselink periodically throughout the semester.

**Field Trips:** Not applicable

**Additional Costs:** Not applicable

### Course Policies

#### **E-mail Communication:**

As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

#### **When You Cannot Meet a Course Requirement:**

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. [See the undergraduate calendar for information on regulations and procedures for Academic Consideration.](#)

#### **Grading Policies:**

The initial reference list is to be submitted as a word document file to the 'Reference List' Dropbox in Courselink by 4:00 pm, Friday January 29<sup>th</sup>.

The final project is to be submitted either to the 'Major Project' Dropbox in CourseLink, or as a hardcopy to office 229 (ANNU) by 4:00 pm, Friday March 6<sup>th</sup>.

**\*Please note that these policies are binding unless academic consideration is given to an individual student.**

Quizzes, assignments and projects will be graded in a timely fashion (quiz and reference list within 14 days, project within 21 days) and will be returned to the students (with the exception of the final exam).



**Course Policy regarding use of electronic devices and recording of lectures:**

***Electronic recording of classes is expressly forbidden without consent of the instructor. When recordings are permitted, they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.***

**Course Policy on Group Work:**

No group work.

**University Policies**

In this course, your instructor will be using Turnitin, integrated with the CourseLink Dropbox tool, to detect possible plagiarism, unauthorized collaboration or copying as part of the ongoing efforts to maintain academic integrity at the University of Guelph. All submitted projects will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site. A major benefit of using Turnitin is that students will be able to educate and empower themselves in preventing academic misconduct. In this course, you may screen your own projects through Turnitin as many times as you wish before the due date. You will be able to see and print reports that show you exactly where you have properly and improperly referenced the outside sources and materials in your assignment.

**Academic Consideration:**

The University of Guelph is committed to supporting students in their learning experiences and responding to their individual needs and is aware that a variety of situations or events beyond the student's control may affect academic performance. Support is provided to accommodate academic needs in the face of personal difficulties or unforeseen events in the form of Academic Consideration.

Information on regulations and procedures for Academic Consideration, Appeals and Petitions, including categories, grounds, timelines and appeals can be found in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).

**Academic Misconduct:**

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of

detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Detailed information regarding the Academic Misconduct policy is available in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).

### **Accessibility:**

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Student Accessibility Services (SAS), formerly Centre for Students with Disabilities (CSD), as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email [sas@uoguelph.ca](mailto:sas@uoguelph.ca) or visit the [Student Accessibility Services website \(http://www.uoguelph.ca/csd/\)](http://www.uoguelph.ca/csd/).

### **Course Evaluation Information:**

End of semester course and instructor evaluations provide students the opportunity to have their comments and opinions used as an important component in the Faculty Tenure and Promotion process, and as valuable feedback to help instructors enhance the quality of their teaching effectiveness and course delivery.

While many course evaluations are conducted in class others are now conducted online. Please refer to the [Course and Instructor Evaluation Website](#) for more information.

### **Drop period:**

Last day to drop W20 one semester courses and F19/W20 two semester courses (without academic penalty) is Friday, April 3<sup>rd</sup>, 2020, which is listed in [Section III \(Schedule of Dates\) of the Undergraduate Calendar](#).

Information about Dropping Courses can be found in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).