Prepared: Rob Routledge Approved: Sherri Smith

Course Code: Title	NRT0205: WILDLIFE BIOLOGY & MANAGEMENT IN CICE
Program Number: Name	1120: COMMUNITY INTEGRATN
Department:	C.I.C.E.
Semester/Term:	17F
Course Description:	This course will introduce students to mammal identification, population ecology concepts, and wildlife management principles. Lab components include mammal anatomy and ageing, wildlife tracks and signs, and wildlife parasites and diseases.
Total Credits:	4
Hours/Week:	4
Total Hours:	60
Essential Employability Skills (EES):	#1. Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. #2. Respond to written, spoken, or visual messages in a manner that ensures effective communication. #3. Execute mathematical operations accurately. #4. Apply a systematic approach to solve problems. #5. Use a variety of thinking skills to anticipate and solve problems. #6. Locate, select, organize, and document information using appropriate technology and information systems. #7. Analyze, evaluate, and apply relevant information from a variety of sources. #9. Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals. #10. Manage the use of time and other resources to complete projects. #11. Take responsibility for ones own actions, decisions, and consequences.
General Education Themes:	Science and Technology
Course Evaluation:	Passing Grade: 50%, D
Other Course Evaluation & Assessment Requirements:	Absences during field labs, tests, quizzes, and other assessments will not be excused without documented health or personal reasons Late assignments will only be accepted within 24 hours past the due date and will be penalized

Prepared: Rob Routledge Approved: Sherri Smith

20% except under extenuating circumstances with appropriate documentation.

Changes to the Course Evaluation scheme may be considered during the semester if approved by the majority of the class (majority = approval by 75% of students present at time of vote).

The instructor cannot guarantee responses to questions in the 24-hour period prior to assignment deadlines and tests via phone message or email.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments	43%
Tests and Quizzes	57%

Course Outcomes and Learning Objectives:

Upon successful completion of this course, the CICE student, with the assistance of a Learning Specialist will acquire varying levels of skill development relevant to the following learning outcomes:

Course Outcome 1.

Identify principle wildlife species in Ontario.

Learning Objectives 1.

- Identify and compare the pelts, skulls, and hairs of selected mammals (i.e., fur-bearers, game species, and non-game species) using field guides and dichotomous keys where appropriate.
- Identify wildlife tracks and signs:

- by completing a photo collection of tracks and signs indicating species and key identification features and
- by examining and differentiating the scat of wildlife species native to Ontario.

- Synthesize the following information on an assigned mammal species (or group of similar species) into a 1-page summary and PowerPoint presentation which will accompany an oral presentation:

- biological life history and reproductive potential
- habitat requirements
- limiting factors on growth
- behavioural traits
- current and past management practices

Prepared: Rob Routledge Approved: Sherri Smith

Course Outcome 2.

Demonstrate knowledge of wildlife anatomy, sex and age determination, and determining the health status of wildlife populations.

Learning Objectives 2.

- Dissect, identify, and compare anatomical features among selected mammals.
- Identify and compare the components of the digestive tract and associated organs among selected mammals.
- Demonstrate the ability to apply standard practices to correctly sex and age selected game species.
- Participate in a white-tailed deer hunter check station.
- Describe major parasites/diseases of wildlife with emphasis on causative agent, animal groups affected, mode of transmission, clinical signs, severity, and prevention and control options.

Course Outcome 3.

Demonstrate an understanding of important aspects of population ecology in relation to the management of wildlife populations.

Learning Objectives 3.

- Describe how wildlife populations can be spatially organized (distribution and density).
- Describe how wildlife populations grow and factors that limit their growth:

- primary parameters that control population growth
- biotic potential or intrinsic growth rate (r)
- generalized exponential and logistic models of growth
- concept of carrying capacity (K)
- generalized life history strategies (R- and K-selection)
- limiting factors
- density-independent and density-dependent limiting factors

- Describe reasons (i.e., purpose and goal) for harvesting wildlife populations, how the harvesting can be accomplished, and why the reasons are appropriate.

- Explain the purpose and goals for harvesting (i.e., hunting and trapping) wildlife, e.g., recreation, culture, and as a management tool

Prepared: Rob Routledge Approved: Sherri Smith

	- Describe and compare differences between sustainable harvesting and wildlife control - Describe and compare differences between additive vs. compensatory mortality • Understand the underlying concept of wildlife damage management and describe wildlife damage control techniques - describe the concept of wildlife damage management - describe common wildlife damage control techniques and evaluate their efficacy - examine case studies in Ontario (e.g., black bear capture and translocation) • Explain current opposition to, and advocacy for, harvesting wildlife • Examine case studies in Ontario such as the impact of hunting and trapping on populations • Participate in guest lectures on current aspects of wildlife management.
CICE Modifications:	**<u>Preparation and Participation</u>** 1. A Learning Specialist will attend class with the student(s) to assist with inclusion in the class and to take notes. 2. Students will receive support in and outside of the classroom (i.e. tutoring, assistance with homework and assignments, preparation for exams, tests and quizzes.) 3. Study notes will be geared to test content and style which will match with modified learning outcomes. 4. Although the Learning Specialist may not attend all classes with the student(s), support will always be available. When the Learning Specialist does attend classes he/she will remain as inconspicuous as possible. **A.** Further modifications may be required as needed as the semester progresses based on individual student(s) abilities and must be discussed with and agreed upon by the instructor. **B. Tests may be modified in the following ways:** 1. Tests, which require essay answers, may be modified to short answers. 2. Short answer questions may be changed to multiple choice or the question may be simplified so the answer will reflect a basic understanding. 3. Tests, which use fill in the blank format, may be modified to include a few choices for each question, or a list of choices for all questions. This will allow the student to match or use visual clues. 4. Tests in the T/F or multiple choice format may be modified by rewording or clarifying statements into layman's or simplified terms. Multiple choice questions may have a reduced number of choices. **C. Tests will be written in CICE office with assistance from a Learning Specialist.** ***The Learning Specialist may:***

Prepared: Rob Routledge Approved: Sherri Smith

	1. Read the test question to the student. 2. Paraphrase the test question without revealing any key words or definitions. 3. Transcribe the student's verbal answer. 4. Test length may be reduced and time allowed to complete test may be increased. **D. Assignments may be modified in the following ways:** 1. Assignments may be modified by reducing the amount of information required while maintaining general concepts. 2. Some assignments may be eliminated depending on the number of assignments required in the particular course. ***The Learning Specialist may:*** 1. Use a question/answer format instead of essay/research format 2. Propose a reduction in the number of references required for an assignment 3. Assist with groups to ensure that student comprehends his/her role within the group 4. Require an extension on due dates due to the fact that some students may require additional time to process information 5. Formally summarize articles and assigned readings to isolate main points for the student 6. Use questioning techniques and paraphrasing to assist in student comprehension of an assignment **E. Evaluation:** Is reflective of modified learning outcomes. **NOTE:** Due to the possibility of documented medical issues, CICE students may require alternate methods of evaluation to be able to acquire and demonstrate the modified learning outcomes
Date:	Wednesday, September 6, 2017
	Please refer to the course outline addendum on the Learning Management System for further information.