AMBROSE UNIVERSITY

BIO 213 Fall 2016

Principles of Ecology 3 credits

Prerequisite(s): BIO 131

Class Information		Instructor Information			
Dates	Lectures: Fri Time: 1 - 4 pm Rm: RE 110	**Instructor:**	Matthew Morris, BRE, BSc, MSc, PhD (ABD)	**First day of classes:**	Wed., Sept 7, 2016
	Labs: Mon Time: 2:30 – 5:15 pm Rm: A2145	**Email:**	Matthew.Morris@ambrose.edu	**Last day to add/drop, or change to audit:**	Sun, Sept. 18, 2016
		Phone:	403-410-2000 ext 6932	**Last day to request revised exam:**	Mon, Oct 24, 2016
Final Exam Day		**Office:**	A2158	**Last day to withdraw from course:**	Mon, Nov 14, 2016
Friday, Dec 16, RM A2210, 1 – 4 pm		**Office Hrs:**	Tuesdays 11 – 12 pm, or by appointment	**Last day to apply for time extension for coursework:**	Mon, Nov 21, 2016
				Last day of classes:	Mon, Dec 12, 2016

Textbook: *Ecology: Concepts and Applications, Second Canadian Edition*, J Molles, M Cahill. This text is not required but is recommended as a supplement to the lectures. Lecture order will largely follow this textbook.

Course Description:

Ecology is the interdisciplinary study of the abundance and distribution of organisms in time and space. This course will provide an introduction to the foundational principles guiding the many sub-disciplines of ecology, beginning with physiology and ending with the newest field, urban ecology. Introductory concepts that will be explored include acclimation to temperature and salinity, foraging strategies, intraspecific competition, life histories, the niche, population dynamics, species interactions, succession, nutrient cycling, and ecosystem services.

Expected Learning Outcomes:

1. Students will be able to relate the science of ecology to the practice of their faith.
2. Students will learn to communicate findings in ecology through scientific writing and presentations.
3. Students will demonstrate through tests and labs familiarity with means of quantifying population abundance, distribution, dynamics, and species diversity.
4. Students will be able to apply principles from different ecological disciplines to real-world scenarios.
5. Students will demonstrate an ability to ask ecological questions when encountering local species.

Course Schedule:

Week	Topic	Lab	Due
Sept 9	Ecology Intro		
Sept 12		Field trip (to the field!)	**Sweep net collections at end of lab**
Sept 16	Ecological physiology		
Sept 19		Describing a Population	**Prelab assignment beginning of lab**
Sept 23	Behavioural Ecology I		
Sept 26		Surface: Volume	**Describing a population**
Sept 30	Behavioural Ecology II		
Oct 3		Quadrat sampling	**Surface:Volume Prelab assignment**
Oct 7	Behavioural Ecology III		
Oct 10		**Thanksgiving, no lab**	
Oct 14	Life history and the Niche		
Oct 17		Midterm	
Oct 21	Population ecology I		
Oct 24		Demographics	**Quadrat sampling**
Oct 28	Population ecology II		
Oct 31		How to write a scientific paper	**Demographics**
Nov 4	Community Ecology I		
Nov 7		Biodiversity I	**Journal topic**
Nov 11	**Remembrance Day**		
Nov 14		Biodiversity II	
Nov 18	Community Ecology II		
Nov 21		Flour beetles	**Flour beetles**
Nov 25	Community Ecology III		
Nov 28		Island biogeography	**Biodiversity paper Island biogeography**
Dec 2	Medical Ecology / Molecular Ecology		
Dec 5		Journal presentations	**Journal presentations**
Dec 9	Urban Ecology / Ecosystem Ecology		
Dec 12		Review	

Requirements:

Mark distribution:

Quizzes: 10%

Midterm: 20%

Final exam: 30%

Lab: 40%

Quizzes, midterm, and final exam consist of some combination of true/false, fill in the blank, diagram, multiple choice, and short answer questions. Quizzes will not be cumulative and may occur at the beginning or end of lecture. Quizzes will be based on prior or current lecture. The final will include content from before the midterm. The midterm will occupy a lab session to allow for greater time for completion.

There will be no exam or tests for the laboratory component. However, the theory and problems behind the lab topics may be included in any of the tests and final exam.

The schedule provided above is flexible and may be altered. Consult the Moodle website for the most up-to-date schedule.

Due dates and test dates can be found under Course Schedule. Late submissions are not accepted unless sufficient reason is provided in a written request for extension to the instructor prior to the due date. Please note that students must earn at least 60% of the laboratory component marks in order to have these marks added to the final marks for grading. The final lab component is a presentation of an ecological journal article.

Marks for the laboratory component are distributed as follows. Percentages add up to 40%, which is the contribution of the lab to your total mark.

1. Describing a population – 4%
2. Temperature and body size – 4%
3. Quadrat sampling – 5%
4. Demographics – 4%
5. Flour beetles – 5%
6. Biodiversity paper – 10%
7. Island biogeography - 3%
8. Journal presentations – 5%

Attendance:

Although attendance will not be taken at lectures, pop quizzes will not be announced the week prior and cannot be made up. Attendance is compulsory for all laboratory exercises, tests, and exams.

Grade Summary:

The available letters for course grades are as follows:

Letter Grade	Description
A+	
A	Excellent
A-	
B+	

B	Good
B-	
C+	
C	Satisfactory
C-	
D+	
D	Minimal Pass
F	Failure

Grading scheme for Bio 213:

A+	93.0 – 100%	C+	66.0 – 69.9%
A	86.0 – 92.9%	C	62.0 – 65.9%
A−	82.0 – 85.9%	C−	58.0 – 61.9%
B+	78.0 – 81.9%	D+	54.0 – 57.9%
B	74.0 – 77.9%	D	50.0 – 53.9%
B−	70.0 – 73.9%	F	Below 49.9%

Because of the nature of the Alpha 4.00 system, there can be no uniform College-wide conversion scale. The relationship between raw scores (e.g. percentages) and the resultant letter grade will depend on the nature of the course and the instructor's assessment of the level of each class, compared to similar classes taught previously.
Please note that final grades will be available on student registration system. Printed grade sheets are not mailed out.

Other

It is the responsibility of the student to keep up with required reading and submit completed assignments by their due dates. Although all lab work is conducted in groups, written assignments will be handed in individually. Students are expected to complete written assignments on their own.

Lab Rules

1. Eating and drinking are strictly prohibited in the lab.
2. Always wash your hands prior to leaving the lab.
3. Report any spills, broken glassware, or equipment failure to the lab instructor.
4. Students are not allowed to work in the lab unless the instructor is present.
5. Always clean your glassware thoroughly after use.
6. Lab coats are strongly recommended for biology classes. Gloves should be worn as directed by your instructor.
7. Long hair should be tied back. It is recommended that contact lenses not be worn. Safety glasses may be worn over normal glasses. Open-toed shoes are NOT recommended.
8. When dealing with body fluids, do not handle anyone's but your own. Clean any spills with bleach. Use gloves as directed. Dispose of blood and urine as directed.
9. Do not begin the lab until the instructor has given special instructions on the equipment and chemicals to be used that day.
10. Do not contaminate chemicals by reusing dirty pipettes or by returning leftover fluids to reagent bottles.
11. Note the locations of fire extinguishers, eyewashes, first aid kits, and emergency exits. The safety shower is for emergencies only.
12. Dispose of chemicals or biohazards as instructed by the lab instructor. If unsure please ask. Biohazards include physiological sharps (e.g. needles, scalpels, syringes) as well as contaminated wastes (e.g. blood on paper towel, guaze, etc.)
13. Animal parts or waste must be disposed of appropriately and as instructed by your lab instructor.

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Policies:

Communication

All students have received an Ambrose e-mail account upon registration. It is the student's responsibility to check this account regularly as the Ambrose email system will be the professor's instrument for notifying students of important matters (cancelled class sessions, extensions, requested appointments, etc.) between class sessions. If students do not wish to use their Ambrose accounts, they will need to forward all messages from the Ambrose account to another personal account.

Registration

During the **Registration Revision Period** students may enter a course without permission, change the designation of any class from credit to audit and /or voluntary withdraw from a course without financial or academic penalty or record. Courses should be added or dropped on the student portal by the deadline date; please consult the List of Important Dates. After that date, the original status remains and the student is responsible for related fees.

Students intending to withdraw from a course after the Registration Revision Period must apply to the Office of the Registrar by submitting a "Request to Withdraw from a Course" form or by sending an email to the Registrar's Office by the **Withdrawal Deadline;** please consult the List of Important Dates on the my.ambrose.edu website. Students will not receive a tuition refund for courses from which they withdraw after the Registration Revision period. A grade of "W" will appear on their transcript.

Students wishing to withdraw from a course, but who fail to do so by the applicable date, will receive the grade earned in accordance with the course syllabus. A student obliged to withdraw from a course after the Withdrawal Deadline because of health or other reasons may apply to the Registrar for special consideration.

Exam Scheduling

Students, who find a conflict in their exam schedule must submit a Revised Examination Request form to the Registrar's Office by the deadline date; please consult the List of Important Dates. Requests will be considered for the following reasons only: 1) the scheduled final examination slot conflicts with another exam; 2) the student has three final exams within three consecutive exam time blocks; 3) the scheduled final exam slot conflicts with an exam at another institution; 4) extenuating circumstances. Travel is not considered a valid excuse for re-scheduling or missing a final exam.

Electronic Etiquette

Students are expected to treat their instructor, guest speakers, and fellow students with respect. It is disruptive to the learning goals of a course or seminar and disrespectful to fellow students and the instructor to use electronics for purposes unrelated to the course during a class session. Turn off all cell phones and other electronic devices during class. Laptops should be used for class-related purposes only. Do not use iPods, MP3 players, or headphones. Do not text, read, or send personal emails, go on Facebook or other social networks, search the internet, or play computer games during class. Some professors will not allow the use of any electronic devises in class. The professor has the right to disallow the student to use a laptop in future lectures and/or to ask a student to withdraw from the session if s/he does not comply with this policy. Repeat offenders will be directed to the Dean. If you are expecting communication due to an emergency, please speak with the professor before the class begins.

Academic Policies

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Academic Calendar. Personal information (information about an individual that may be used to identify that individual) may be required as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at privacy@ambrose.edu.

Extensions

Although extensions to coursework in the semester are at the discretion of the instructor, students may not turn in coursework for evaluation after the last day of the scheduled final examination period unless they have received permission for a course Extension from the Registrar's Office. Requests for course extensions or alternative examination time must be submitted to the Registrar's Office by the deadline date; please consult the List of Important Dates. Course extensions are only granted for serious issues that arise "due to circumstances beyond the student's control."

Appeal of Grade

An appeal for change of grade on any course work must be made to the course instructor within one week of receiving notification of the grade. An appeal for change of final grade must be submitted to the Registrar's Office in writing and providing the basis for appeal within 30 days of receiving notification of the final grade, providing the basis for appeal. A review fee of $50.00 must accompany the appeal. If the appeal is sustained, the fee will be refunded.

Academic Integrity

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else's ideas, words, or work as one's own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to acknowledge to another person's ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university college. Students are expected to be familiar with the policies in the current Academic Calendar that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student's permanent record.

Note: Students are strongly advised to retain this syllabus for their records.