DIVISION OF APPLIED SCIENCE & MANAGEMENT
School of Science
Fall, 2016

COURSE OUTLINE

BIOL 220

ECOLOGY

45 **HOURS**
3 **CREDITS**

PREPARED BY: _____ DATE: _____
Scott Gilbert, Instructor

APPROVED BY: _____ DATE: _____
Margaret Dumkee, Dean

APPROVED BY ACADEMIC COUNCIL: (date)

RENEWED BY ACADEMIC COUNCIL: (date)

DIVISION OF APPLIED SCIENCE & MANAGEMENT
Biology 220
3 Credits
Fall, 2016

ECOLOGY

INSTRUCTOR: Scott Gilbert, B.Sc., Ph. D.	**OFFICE HOURS:** Wed & Fri 11:00- noon or by appointment
OFFICE LOCATION: A2515	**CLASSROOM:** A2103
E-MAIL: sgilbert@yukoncollege.yk.ca	**TIME: Lecture:** Tues & Thurs, 9:00-10:30 **Lab:** Wednesdays, 1-4 pm (A2103)
TELEPHONE: (867) 668-8776	**DATES:** Sept 7 - Dec 15, 2016

COURSE DESCRIPTION

Biology 220 introduces the science of ecology by focusing on the interrelations between individual organisms, their populations and communities. The course begins by reviewing the factors that limit distributions and then considers population demography, life tables, regulation of natural populations and managing harvested populations. We briefly review some of the mathematical models to explain interspecific competition and predation. The course continues with an overview of community ecology and considers selected topics: succession, species diversity gradients, energy flow, biogeochemistry, and the role of predation, competition and disturbance in structuring communities. Finally we conclude by considering the prospects for global change and the ecological processes that may shape these changes.

PREREQUISITES

BIOL 101 and 102 or equivalent

EQUIVALENCY/TRANSFERABILITY:

UBC	BIOL 230 (3)	**TRU**	BIOL 2170 (3)
UBCO	BIOL 201 (3)	**UVIC**	BIOL 215 (1.5)
SFU	BISC 204 (3)		

See the website http://bctransferguide.ca/ for a more complete list of transfers within BC.

LEARNING OUTCOMES:

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

- describe the ecological factors that affect the distribution and abundance of organisms;
- understand the interplay between evolution and ecology;
- construct simple life tables and interpret simple models of population growth, interspecific competition and predator-prey interactions;
- propose testable hypotheses along with experimental tests to resolve ecological questions.

DELIVERY METHODS/FORMAT
Lectures will be supplemented by practical exercises during a weekly lab to illustrate ecological principles and by seminars in which students will discuss ecological problems and ideas.

COURSE FORMAT
Lectures: Three hours per week (2 classes of 1.5 hours)
Labs: Three hours per week - a total of 13 activities will include 3 tutorials focused on numerical problem sets, 4 data collection exercises (2 field based and 2 classroom based) that may include formal lab reports and 5 seminars that will focus on critiquing papers in ecology.

COURSE REQUIREMENTS

ASSESSMENTS

Attendance
This is a fast-paced course that covers a wide variety of topics and students encouraged to attend lectures. Most of the labs and all of the seminars require attendance and participation if students wish to receive a grade for that exercise. There is a strong correlation between regular attendance and academic performance in this course.

ASSIGNMENTS & TESTS
Most lectures will start with a 3-minute quiz at the beginning of class to assess understanding of the previous lecture. This will reward students who show up to class on time and review their lecture notes and readings. Instead of one major mid-term there will be two 60 minute quizzes during the term; the first quiz will be scheduled after a month of classes to give students early feedback on their progress. Students must pass the field/lab portion of the course if they wish to receive a passing grade for the overall course. The final exam will be scheduled by the Registrar's office for a date in December and will be comprehensive and cover all topics taken up during the term.

Class participation quizzes	5
Mid-term tests (2 @ 15%)	30
Field/lab activities	35
Final examination	30
Total	**100**

REQUIRED TEXTBOOKS/MATERIALS:

Molles, M..C. and Cahill, J.F. 2014. *Ecology: Concepts and Applications* – 3rd Canadian Edition McGraw-Hill Ryerson 704 pp.

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 & Regulations 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.

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.

TOPIC OUTLINE / SYLLABUS

To be distributed at the start of the first class.