



Course Outline

UNIVERSITY STUDIES

**BIOL 208A
Principles of Ecology
Fall, 2014**

**3 CREDITS
3 HOURS LECTURE AND 3 HOURS LABORATORY PER WEEK**

INSTRUCTOR: Dr. David Smith

INSTRUCTOR: Dr. David Smith
PHONE NUMBER: (780) 791-4997
E-MAIL: david.smith@keyano.ca
OFFICE NUMBER: S209B

OFFICE HOURS:

Monday	12:00 – 12:50 PM
Tuesday	12:00 – 12:50 PM
Wednesday	11:00 – 11:50 PM
Thursday	11:00 – 11:50 PM
Friday	11:00 – 11:50 AM

HOURS OF INSTRUCTION:

Monday	9:00 – 11:50 AM (Lab)	Room 234
Wednesday	8:00 – 9:50 AM	Room S210
Friday	12:00 – 12:50 PM	Room S110

COURSE DESCRIPTION:

Biology 208 deals with the principles of ecology including the interactions between organisms and their environment resulting in the formation of communities, ecosystems and biomes. Biology 208 is a core course in the department of biology and is required for animal biology, bioinformatics, cell biotechnology, environmental biology, evolutionary biology, microbiology, molecular genetics, physiology, and plant biology.

PRE-REQUISITE(S):

BIOL 108 – An Introduction to Biodiversity

COURSE OUTCOMES:

The student will be able to:

- Demonstrate familiarity with the fundamental principles of how ecological systems are structured and how they function at the levels of organisms, populations and communities
- identify the major selective forces, both living and nonliving, that contribute to differential survivorship, and to assess how organisms respond to these challenges on a short term and long term basis, and how these responses contribute to the structure and function of ecological systems
- Explain the mechanisms of organic evolution in an ecological context
- Successfully participate in the range of activities used by ecologists, including the collection of data from laboratory and field studies, the use and interpretation of relevant scientific literature, and the understanding and analysis of qualitative and quantitative information
- Demonstrate the development of ecological literacy in topical local, regional, and global issues

REQUIRED RESOURCES:

Ecology: Concepts and Applications; Molles, M.C. and J.C. Cahill. McGraw Hill Reyerseon, Toronto, 2008 (Canadian edition).

TOPICS TO BE COVERED:**Please Note:**

This course outline may be modified to facilitate unforeseen time constraints. Date and time allotted to each topic is subject to change. Lecture topics and corresponding labs for each week are noted.

Week of: Fall 2014 semester, Lecture and Laboratory Topics

September 1	Introduction – no lab
September 8	Sampling methods – Field Lab 1 (Sampling a plant community)
September 15	Population ecology – Chapter 10, 11, Field Lab 2 (Competition for light with spruce and aspen forests)
September 22	Community ecology – Chapter 12, Field Lab 3 (Terrestrial plant community assessment)
September 29	Ecosystems – Chapter 16, 17, 18, Field Lab 4 (Microcommunities)
October 6	Case study: terrestrial boreal and subarctic ecosystems – Lab 5, Microcommunities (continued)
October 13	Anthropogenic effects – Chapter 23, No Lab, Holiday/Review
October 20	Temperature and water relations – Chapter 5, 6, 15, (Field Lab 6, Soil analysis)
October 27	Herbivory and mutualism – Chapter 14, Chapter 22, Field Lab (Lab 7, Species diversity within a black spruce bog)
November 3	Productivity and Succession – Chapters 18 and 19, Lab 8 (Species Diversity)
November 10	Biodiversity and conservation – Chapter 23, Lab 9 (Nature of data and process of science)
November 17	Aquatic ecosystems – Chapter 21, Lab 10 (Age distribution and survivorship)
November 24	Allocation and life history patterns – Chapter 7, 9, Lab 11 (Population growth)
December 1	Mineral cycles – Chapter 20, Lab 12 (Natural selection)
December 8	Term project oral presentation and written report due
December 15	Exam week

MOODLE

Go to <http://ilearn.keyano.ca>

This course is supported through Moodle. Assignments, readings and handouts will be posted on Moodle. Login information will be provided by your instructor. For further instructions please see the Moodle handout.

EVALUATION:

Assignment	Percentage	Due Date (or week of)
Lab Assignments	12 @ 2% each	One week after each lab
Oral and Written Project	16%	December 8, 2014
Midterm	25%	October 13, 2014
Final Examination	35%	December 15, 2014

GRADING SYSTEM:

Letter Grade	Description	Grade Points
A+		4
A	Excellent	4
A-		3.7
B+		3.3
B	Good	3
B-		2.7
C+		2.3
C	Satisfactory	2
C-		1.7
D+		1.3
D	Minimal Pass	1
F	Failure	0

Students intending to transfer to other institutions should strive for a 'C-' as a minimum. Transfer information on each course is available at the [Alberta Council on Admission and Transfers](#).

NOTES:

Please dress appropriately for the weather on any field trips! Proper footwear is important. If the weather does not co-operate, the lab schedule will shift.

Individual components of the course will be given a numerical mark. The grading system will be applied using a combination of absolute achievement and relative standing in the class.

MISSED TERM EXAM OR LABS:

A student who cannot write a term examination or complete a lab assignment due to incapacitating illness, severe domestic affliction or other compelling reasons can apply to have the weight of the missed midterm transferred to the final. All attempts should be made to make up missed labs. Missed labs with no attempts to complete the work will be assigned a “0”. You must notify the instructor of a missed midterm or lab assignment within 48 hours. Deferral of term work is a privilege and not a right; there is no guarantee that a deferral will be granted. Misrepresentation of Facts to gain a deferral is a serious breach of the Code of Student Behaviour.

CELL PHONES: Cell phones and other electronic devices are to be turned off during class times. If you need to use one, leave the room. If you have to text someone, leave the room.

SKILL CENTRE: Students who require additional help in developing strategies for better time management, study skills or examination skills should contact the Keyano College Skill Centre.

Note: Recording is permitted only with the prior written consent of the instructor or if recording is part of an approved accommodation plan.

Students should consult:

<http://www.keyano.ca/Academics/Examinations>

IMPORTANT DATES:

September 2, 2014	First day of classes
October 10, 2014	Last day to withdraw with a refund (50%).
November 26, 2014	Courses dropped after this date will be designated “W”. (A withdrawal (W) is not reflected in your GPA.
December 5, 2014	Last day of classes
December 8-17, 2014	Final Exams

COLLEGE POLICIES

Equality, Equity and Respect

The Keyano College is committed to providing an environment of equality, equity and respect for all people within the College community. All members of this community are considered partners in developing teaching and learning contexts that are welcoming to all. Faculty, staff, and students are encouraged to use inclusive language to create a classroom atmosphere in which students' experiences and views are treated with equal respect and valued in relation to their gender, ethnic and cultural background, and sexual orientation.

Students should consult:

<http://www.keyano.ca/StudentLife/StudentConduct/IndividualRightsPolicy>

Plagiarism and Cheating

Every student expects to be treated and evaluated fairly in a course. Plagiarism and cheating robs everyone of this right.

- No student may submit words, ideas or data of another student or person as his or her own in any writing, project, assignment, quiz, electronic presentation, exam etc. Any work used that is not the student's own must be clearly cited as belonging to someone else. There are penalties for using other's work and not citing it. The Student's Rights & Responsibilities document clearly outlines these penalties and the appeal process.
- No learner can obtain information from another student during an exam.
- No learner can bring unauthorized information (paper or electronic) into an exam or quiz.
- No student can submit work done in another course for grading in this course without the written prior approval of the course instructor.
- No student can submit copyright protected or commercially produced materials as part or all of an assignment without proper citation & permission.

Student Rights & Responsibilities

Students should consult the Keyano College Credit Calendar or online at:

<http://www.keyano.ca/Academics/CreditCalendar>

Specialized Supports and Duty to Accommodate

Disability Support Services: Learner Assistance Program

If you have a documented disability or you think that you would benefit from some assistance from a Disabilities Counsellor, please call or visit the Disability Supports Office 780-792-5608 to book an appointment (across from the library). Services and accommodations are intended to assist you in your program of study, while maintaining the academic standards of Keyano College. We can be of assistance to you in disclosing your disability to your instructor, providing accommodations, and supporting your overall success at Keyano College.

Specialized Supports and Duty to Accommodate

Specialized Support and Duty to Accommodate are aligned with the office of Disability Support Services: Learner Assistance Program (LAP) guided by federal and provincial human rights legislation, and defined by a number of Keyano College policies. Keyano College is obligated by legislation to provide disability-related accommodations to students with identified disabilities to the point of undue hardship.



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Dr. David Smith, Instructor

Date

Reviewed and approved by:

Louis Dingley, Chair

Date

Guy Harmer, Dean

Date