



THOMPSON RIVERS UNIVERSITY

Department of Biological Sciences

BIOL 3020 - 3
Community and Ecosystem Ecology (3,1,0)
Winter 2011

Instructor: Dr. Louis A. Gosselin
Office: Research Centre, Room 203
Email: lgosselin@tru.ca
Phone: 828-5423

Course website

The course outline, seminar topics & schedule, and guidelines for poster preparations are posted on the BIOL 3020 website:
<http://www.tru.ca/schs/biol/facpgs/gosselin/biol302.html>

Meeting times

Lectures: Mon, Wed, & Fri, 10:30 - 11:20 AM, room S233
Seminars: Wed, 3:30 - 4:20 PM, or 4:30 - 5:20 PM, every 2nd week, room S275

Course description

This course begins by examining ecosystem-level processes that are important in determining the abundance and distribution of species: climate, energy flow, and biogeochemical cycles. We then explore the question of why organisms live together as communities. In particular, the course focuses on ecological relationships of organisms, examining the relative importance of relationships with the physical environment and relationships with other organisms.

The course includes discussion group (seminar) meetings, in which students debate major issues in community and ecosystem ecology. The class is divided into groups of 6-9 students. Readings are assigned to the students, and these readings serve as the basis for discussion at the following meeting. In addition, each student individually carries out a course project; students select a topic in ecology, investigate the literature pertaining to the topic, create a scientific poster based on these findings and presents the poster in class.

Prerequisites

Any 2 of BIOL 211/215/221/225 or FRST210

Recommended text

Smith RL, Smith TM (2001) Ecology and Field Biology, 6th ed. Harper-Collins, N.Y.

Student evaluation

Poster / presentation:	20 %
Discussions (participation):	20 %
Midterm exam:	25 %
Final exam:	35 %

Course schedule

The following is a list of the topics to be covered during the semester.

Time Period	Week	Lecture topic	Tentative schedule for seminar sessions
Jan 10 - 14	1	Introd. to Community & Ecosystem Ecology	<i>No seminar</i>
Jan 17 - 28	2 - 3	Climate Energy flow in ecosystems	Are "communities" biological entities?
Jan 31 - Feb 11	4 - 5	Biogeochemical cycles	The global carbon cycle and climate change.
Feb 14 - 18	6	Biogeoclimatic zones	Biodiversity
Feb 21 - 25	Mid-semester break		
Feb 28 - Mar 4	7	<i>March 2 (Wed): Mid-term exam</i> Nature of the community	Biodiversity
Mar 7 - 18	8 - 9	Trophic relationships	Species introductions and invasions
Mar 21 - Apr 1	10 - 11	Biodiversity & Island biogeography	Ecological effects of El Niño & La Niña
Apr 4 - 15	12 - 13	Community change: Succession Landscape ecology: Ecotones & habitat fragmentation Last class: <i>14th Annual Ecology Poster Symposium</i>	<i>Poster presentation & evaluation</i>
Apr 18 - 30	14 - 15	<i>Final exam period</i>	