
BIOL 530

Origins of Biodiversity

Winter Term (2013-14)

CALENDAR DESCRIPTION

This course will explore the mechanisms by which species diversify. Course discussions will include such questions as What is biodiversity? How important is geographic isolation of populations for diversification? What is the importance of hybridization in diversification? Can variation in ecology and behaviour lead to the formation of new species? What is an 'adaptive radiation' and how can it occur? What are biodiversity hotspots and why do they exist? How can understanding the diversification process aid conservation? These topics will be explored through a combination of directed readings and student-lead discussions. Note that genetics will feature prominently in many discussions.

RECOMMENDATION BIOL 201 and BIOL 202 and (BIOL 302 or BIOL 303 or BIOL 439)

SCHEDULE

Seminar: Thursday 8:30-11:30. BIOSC 3110

Instructor	V. Friesen
Instructor Contact	vlf@queensu.ca Phone: 613-533-6156
Office Hours	open door
TA:	none
TA Contact Information	n/a
Office Hours	n/a

Learning Objectives

The general goals of Biol 530 are

- 1) to familiarize students with current theory and research regarding the mechanisms by which biodiversity is generated;
- 2) to hone practical skills in scientific writing and oral presentation;
- 3) to develop critical thinking.

Biol 530 is a seminar or directed learning course. This means that students should expect to do extensive independent reading, and to contribute enthusiastically and intelligently to class discussions.

Learning Hours

<i>Teaching method</i>		<i>Average hours per week</i>	<i>Number of weeks</i>	<i>Total hours</i>
In-class hours	Lecture			
	Seminar			
	Laboratory			
	Tutorial			
	Practicum			
	Group learning	3	12	36
	Individual instruction			
Other	Online activity			
	Off-campus activity			
	Private study	7	12	84
Total hours on task				120

Course Outline

The term will be divided into three parts, corresponding to three main exercises. Exercise 1, GUTS ('getting up to speed'): student-lead reviews of basic principles concerning the origin of biodiversity (evolution and ecology). Exercise 2, Critical reviews: In-class discussions and written critiques of recent scientific papers. Exercise 3, SOTA (state-of-the-art): Exploration of recent controversies in biodiversity research through student seminars and term papers. See course website for specific topics

Textbooks/Readings

There is no text for this course. Weekly readings will be posted on the course website.

Grading Scheme

Component	Weight (%)	Date
GUTS seminar	15%	January (student-specific)
Project proposal	3%	January (TBA)
Critique	7%	February (TBA)
SOTA Paper	40%	March (TBA)
SOTA presentation	15%	March (student-specific)
Participation	20%	throughout term

There are no exams associated with this course.

Grading Method

- In this course, all components will be graded using numerical percentage marks. Your course average will then be converted to a final letter grade according to Queen's Official Grade Conversion Scale:

Queen's Official Grade Conversion Scale

Grade	Numerical Course Average (Range)
A+	90-100
A	85-89
A-	80-84
B+	77-79
B	73-76
B-	70-72
C+	67-69
C	63-66
C-	60-62
D+	57-59
D	53-56
D-	50-52
F	49 and below

Academic Integrity and Queen's Code of Conduct

Students are responsible for familiarizing themselves with the regulations concerning academic integrity and for ensuring that their assignments and conduct conform to the principles of academic integrity. Information is available in the Arts and Science Calendar (see Academic Regulation 1 - <http://www.queensu.ca/artsci/academic-calendars/regulations/academic-regulations>, on the Arts and Science website (see <http://www.queensu.ca/artsci/academics/undergraduate/academic-integrity>), and at Biology's website (<http://www.queensu.ca/biology/undergrad/integrity.html>) and from the instructor of this course. Departures from academic integrity include plagiarism, use of unauthorized materials, facilitation, forgery and falsification, and are antithetical to the development of an academic community at Queen's. Given the seriousness of these matters, actions which contravene the regulations on academic integrity carry sanctions that can range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university.

Accommodation Policy, Exam Conflicts, and Other Conflicts

Students who feel they need accommodations for disabilities or extenuating circumstances, or have a conflict between exams or other commitments should consult the Biology Department's website for details about how to proceed (<http://www.queensu.ca/biology/undergrad/integrity.html>). In general, the earlier a course coordinator is apprised of an extenuating circumstance, the more likely an accommodation can be made. Students are encouraged to be proactive in anticipating difficulties, when it is possible to do so.

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Accommodation of Disabilities

Queen's University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact the Disability Services Office (DSO) and register as early as possible. For more information, including important deadlines, please visit the DSO website at: <http://www.queensu.ca/hcde/ds/>