

# **BIOL 422**

## **Conservation Biology**

Winter Term (2013-14)

### **CALENDAR DESCRIPTION**

**The application of biological research to the conservation of biodiversity and natural resources, as well as the interaction of biology with philosophy, politics and economics in influencing conservation policy.**

NOTE: A course fee to cover guest speakers and field trips of not more than \$40.

PREREQUISITE: BIOL 302/3.0 or BIOL 303/3.0.

### **SCHEDULE**

**Lectures: Monday 13:30-14:30, Wednesday 12:30-13:30, Friday 11:30-12:30. (Room: Jeffrey 126)**

**Tutorial: 1.5 hr. each week (students should select the time slot that they will attend the entire term)**

**Time slots available: (A) Tue. 11:30 am - 1 pm; (B) Tue. 1 -14:30 pm; (C) Fri. 8:30 - 10 am; or (D) Fri. 10 - 11:30 am. (Room: 3110 Biosciences Complex; room will be confirmed on Moodle)**

<b>Instructor</b>	<b>G. Ibarguchi</b>
<b>Instructor Contact</b>	Gabriela.Ibarguchi@queensu.ca (See updated office and phone number on Moodle)
<b>Office Hours</b>	Wednesday 2:30 - 4 pm
<b>TA:</b>	Vanya Rohwer
<b>TA Contact Information</b>	6vgr@queensu.ca
<b>Office Hours</b>	Information will be posted on Moodle

### **Learning Objectives**

The goal of Biology 422 is to provide a comprehensive appreciation of the processes from individuals to landscapes that affect the long-term persistence of species and diversity in time and space. The course provides examples of the interplay between policy and management, socio-economic challenges, environmental variability, and the life histories of organisms that must be considered in conservation. Upon completion of the course, students will be able to:

- A. Explain the major challenges that threaten biodiversity; describe complex issues for conservation from evolutionary, ecological, economic, political, and social perspectives; describe present and predicted future states of biodiversity (diversity loss, future distributions, ecosystem functions, environmental integrity); and demonstrate a basic understanding of tools used in conservation and management.
  
- B. Evaluate and select management solutions that best promote the maintenance of ecological processes and biodiversity; justify or defend a perspective and demonstrate critical thought; apply a systematic and novel approach to solve complex conservation issues; and demonstrate advanced communication skills in presenting scientific information.

### **Course Outline**

Topics that will be covered in the course include measuring and documenting biodiversity, selecting units for management and conservation, conservation planning, reserves, restoration programs, managing risk, threats to biodiversity, life histories and ecology, endemism, overview of genetic processes in conservation, population and landscape processes, conservation biogeography, and examples of tools used in studies of biodiversity and conservation. Topics will include policy, economic, social and ethical perspectives. Tutorials will include material to complement lectures and will provide some practical training in tools and software used in conservation. A detailed Course Schedule can be downloaded from Moodle.

### **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	3	12	36
	Seminar			
	Laboratory			
	Tutorial	1.5	12	18
	Practicum			
	Group learning			
	Individual instruction			
Other	Online activity	2	12	24
	Off-campus activity			
	Private study			
Major Research project				42
Total hours on task				120

### **Textbooks/Readings**

Case studies (articles and other material) will supplement lectures and tutorials and will be posted on Moodle (and Ares). For readings, we will be using the following eBook extensively (the cost of the eBook version is reasonable; you can also purchase the more expensive paperback or hardcopy version from the publisher's website, Springer): **Fred Van Dyke (2008) Conservation Biology: Foundations, Concepts, Applications, 2<sup>nd</sup> Edition**

### **Grading Scheme**

The table below is provided for general information purposes. Please find the most up-to-date version on the Moodle course webpage.

<b>Component</b>	<b>Weight (%)</b>	<b>Date</b>
Article discussion	5	January
Biogeography - mapping exercise	6	Feb 7th
Presentation	12	March (choice of two events - date TBA)
Applied Research Project	30	April 2nd
Quiz	15	Feb. 14 <sup>th</sup>
Final exam	30	April (TBA - date set by Queen's University)
Forum participation	2	(Contribute anytime) Final date by April 4 <sup>th</sup> .

### **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***

<b>Grade</b>	<b>Numerical Course Average (Range)</b>
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 expected to read and understand regulations concerning academic integrity and for ensuring that their assignments and conduct conform to the principles of academic integrity. 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. 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>), on the Biology website (<http://www.queensu.ca/biology/undergrad/integrity.html>) and from the course instructor.

### **Accommodation Policy, Exam Conflicts, and Other Conflicts**

Important - *If students require special arrangements to meet their academic obligations during the term, please make requests for academic accommodation in writing during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.* 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.

Students may apply to write a make-up or deferred exam if they have an exam conflict as defined in the Academic Regulations of the Faculty (See Arts and Science Calendar Regulation 8 - <http://www.queensu.ca/artsci/academic-calendars/regulations/academic-regulations>). In this case, the student should report to the Exams Office first to verify that there is a genuine exam conflict. Biology professors will not consider your situation to be a conflict unless it meets the criteria set out by the Faculty of Arts and Sciences. Students may request a make-up or deferred exam if they have an exam conflict with off-campus travel associated with a field course (e.g. BIOL-307/3.0 or 407/3.0) that is held during the fall or winter terms.

### **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/hcds/ds/>*

### **Copyright**

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