

# The Biology of Conservation

## EEB 365 H1S - Spring 2015

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### Course Instructor

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Marie-Josée Fortin (Ecology and Evolutionary Biology: Room 410; Ph.: 416-946-7886;  
email: [mariejosee.fortin@utoronto.ca](mailto:mariejosee.fortin@utoronto.ca))

Office Hours:

Wednesdays: 12 pm – 2 pm

By appointment: email to schedule an appointment.

### TAs

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Jackie Awad (EEB/RW508): [jackie.awad@mail.utoronto.ca](mailto:jackie.awad@mail.utoronto.ca)

Alexandre Martensen (EEB/RW410): [martensen@terra.com.br](mailto:martensen@terra.com.br)

### Location and Time

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Lectures: Wednesdays and Fridays: 9-10 am; Room: RW143

Computer Labs: Group 101: Wednesdays: 10 am – 12 pm; Rooms RW107/109; or RW124

Group 201: Fridays: 10 am – 12 pm; Rooms RW107/109; or RW124

Discussions: Group 101: Wednesdays: 10 am – 12 pm; Rooms RW122; RW124; RW015; RW015A

Group 201: Fridays: 10 am – 12 pm; Rooms RW122; RW124; RW015; RW015A

### Course Email Policy

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I will try to answer course-related email queries within 48 hours, but cannot guarantee this. Please start the subject line of your message with EEB365 -.

### Course Overview

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This course focuses on key topics in conservation biology and builds on the material presented in the prerequisite, EEB255.

The first half of the course focuses on conservation at the population and species level and the second on how the management of biological resources (species and landscape) can conserve and maintain biodiversity and ecosystem function.

### Course website

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EEB365 uses Blackboard for its course website. To access the EEB365 website, go to the UofT Portal login page at <http://portal.utoronto.ca> and log in using your UTORid and password. Once you have logged in to the portal, look for the My Courses module, where you'll find the link to the EEB365 course website along with links to your other courses that have their website on the UofT Portal.

### Required Readings

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Textbook: Kareiva, P. & M. Marvier. 2015. Conservation science. Balancing the needs of people and nature. 2<sup>nd</sup> edition. Roberts & Company Publishers.

### Prerequisite

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EEB255H1S – Introduction to Biodiversity and Conservation Biology;  
BIO120H1, BIO220H1/BIO150Y1

**Evaluation**

Midterm - Biodiversity Term Test (25%)

Final Examination (30%)

4 Lab Reports (5% for lab 1 and lab 3; 10% for lab 2 and lab 4; a total of 30%)

3 Discussions (5% each for a total of 15%)

→ Lab Reports (assignments) are due the week after the lab AND should be handed in at the beginning of your lab session to the TA.

You are free to discuss your results with other students, but you must actually complete the lab exercise and the write the report yourself.

Results or reports that are copied will be considered plagiarism.

**→ LATE PENALTIES: Late penalty per written lab assignment (without permission) is a 10% reduction in the grade per day late. Late labs will not be accepted after the marked labs have been returned.**

**Missed Tests or Examinations:**

If you miss the midterm test please must contact Dr. Fortin within 2 days of the test.

Medical certificates must confirm your inability to attend a test and the dates of your illness, and must show that the physician was consulted at the time of the illness.

→ Students who miss the final examination must petition to the Faculty.

**Topics and Timetable**

<b>Date</b>	<b>Day</b>	<b>Lecture</b>	<b>Laboratory</b>
Jan 7	Wed	Course Overview: Species and their distributions in space and time	
Jan 9	Fri	1. Population dynamics and small population size	
Jan 14	Wed	2. Population dynamics in conservation	Lab 1. Population dynamics of Hooded Warbler
Jan 16	Fri	3. Population Viability Analysis (demographic, environmental stochasticity and exploitation)	
Jan 21	Wed	4. Metapopulation in a changing world	Lab 2. Population viability analysis
Jan 23	Fri	5. Genetic diversity/Landscape genetics	
Jan 28	Wed	6. Quantifying landscape spatial heterogeneity	Lab 3. Metapopulation of spotted owl
Jan 30	Fri	6. Quantifying landscape spatial heterogeneity	
Feb 4	Wed	7. Structural, functional, genetic connectivity	Discussion A: Why is population size so important?
Feb 6	Fri	<i>Guest lecture on functional connectivity by Alexander Watts</i>	
Feb 11	Wed	Review Session	
<b>Feb 13</b>	<b>Friday</b>	<b>Midterm Test</b>	
Feb 18/20		<i>Reading Week</i>	
Feb 25	Wed	8. Road/traffic ecology	Discussion B. Land sharing/Land sparing + Agricultural configuration
Feb 27	Fri	<i>Guest lecture on road ecology by Chris Edge</i>	
March 4	Wed	9. Species Distribution Modeling	Lab 4. Species functional response to spatial heterogeneity
March 6	Fri	10. Terrestrial Protected areas	
March 18	Wed	11. Marine Protected areas	
March 20	Fri	12. Restoration, Species reintroduction	
March 25	Wed	13. Ecosystem services not only biodiversity	Discussion C. Should conservation shift its focus from biodiversity to ecosystem services? to restoration?
March 27	Fri	14. Ecosystem management/Adaptive management: dealing with uncertainties and risks	

**April 1 Wed REVIEW**

Final exam: To be scheduled by the Faculty of Arts and Sciences

## Computer Labs

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### How to get a CQUEST account:

Go to this page: <http://www.cquest.utoronto.ca/> and click on 'Request an Account' under CQUEST INFO.

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### Activating your UTORid and Password

If you need information on how to activate your UTORid and set your password for the first time, please go to [www.utorid.utoronto.ca](http://www.utorid.utoronto.ca). Under the “First Time Users” area, click on “activate your UTORid” (if you are new to the university) or “create your UTORid” (if you are a returning student), then follow the instructions. New students who use the link to “activate your UTORid” will find reference to a “Secret Activation Key”. This was originally issued to you when you picked up your Tcard at the library. If you have lost your Secret Activation Key you can call 416-978-HELP or visit the Help Desk at the Information Commons on the ground floor of Robarts Library to be issued a new one. **The course instructor will not be able to help you with this.** 416-978-HELP and the Help Desk at the Information Commons can also answer any other questions you may have about your UTORid and password.

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