

**BIOD60: Spatial Ecology  
Winter 2013**

**Course information**

*Lecture times:*

Mondays 9-12am

*Location:*

Arts & Administration (AA) 209

*Textbook:*

None, readings will be provided.

*Exams:*

*Final: TBA*

*Project:*

Presentation and paper

*Professor:*

Marc Cadotte

*Office:* Science Wing 542

*Office hours:* TBA

*Email:* [mcadotte@utsc.utoronto.ca](mailto:mcadotte@utsc.utoronto.ca) (please put BIOD60 in the subject line)

*Phone:* 416-208-5105

*Teaching Assistants:*

Caroline Tucker, [caroline.tucker@utoronto.ca](mailto:caroline.tucker@utoronto.ca)

**Course description**

An introduction to the main principles and concepts of spatial ecology, the science of the spatial interactions, dynamics and patterns of organisms, communities and ecosystems. The course covers community and population spatial ecology, and explicitly theoretical underpinnings of patterns as well as analysis tools to understand the role of space. This course will link conceptual understanding to contemporary human and environmental issues.

**Course Resources**

*Course Website and Online Lectures:* Lecture notes (PDF copies of the powerpoint slides) will be posted on intranet by noon the day before the lecture. You should familiarize yourself with intranet and its contents, as check it regularly.

How to Get Help with the Course. First, check this syllabus; you will find the answer to almost all procedural questions here. If you have a question that cannot be answered by this syllabus, check the course website, which will be consistently updated with answers to many conceptual and procedural questions. If this does not answer your question, then decide if the question is conceptual or procedural. Conceptual questions are best answered by the TA or the professor's office hours.

If you have other questions, feel free to email either TA or the professor. The professor will return your email in a reasonably timely fashion Monday through Friday.

### **Course Requirements/Marking**

*Participation* (10): All students are expected to participate in discussions and ask questions.

*Small presentation* (15): All students will present on a recent paper (see lecture 1 for details).

*Big presentation* (20): All students will present (15 min) their final paper (see lecture 1 for details).

*Paper* (25): All students will complete a paper assignment (see lecture 1 for details).

*Final exam* (30): The short-answer exam will cover all material from the course.

### **Accessibility**

Everyone is a welcomed member of this class, and we strive to provide an equal playing field for students with diverse learning styles and needs. Please contact the AccessAbility office as soon as possible if you need any form of accommodation. They will provide confidential services that include flexible, personalized solutions for test-taking, note-taking, and the like. The AccessAbility office is located in SW302 and can be emailed at: [ability@utsc.utoronto.ca](mailto:ability@utsc.utoronto.ca)

### **Academic Integrity**

The learning environment is built on mutual trust, and we will assume that all students operate with honesty and integrity. However, in the rare cases of substantial evidence that the University of Toronto's Code of Behaviour on Academic Matters (Section B; <http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>) has been compromised, then I will enact the procedures outlined in the Code of Behaviour on Academic Matters. First, I will invite you to discuss the possible offence through an email invitation. If our discussion leads me to believe that you have not compromised the code, then the matter will be dropped. If either you fail to respond to two requests for this discussion or new evidence comes to light, then a formal investigation will be initiated.

## Lecture Schedule

Date	Topic	Readings
10-Jan	Introduction, why space matters	
17-Jan	Metapopulations and dispersal	gotelli
24-Jan	Diffusion models & landscapes	gilbert & Liebhold
		Mouquet, Hoopes, Leibold
31-Jan	Metacommunities	
07-Feb	local to regional to global patterns	Cornell, Srivastava
14-Feb	Species-area relationships & range sizes	IBG, Tilman, Holt
21-Feb	Reading week	
28-Feb	Spatial autocorrelation, niche modeling	
07-Mar	spatial mantel tests, adding space to analyzing communities	Urban, Cottenie
14-Mar	Network theory	Urban & Keitt
21-Mar	Reserves and connectivity, Invasions as a spatial process	Several readings
28-Mar	Paper presentations	
04-Apr	Paper presentations	