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 (please put BIOD60 in the subject line)
Phone: 416-208-5105
Teaching Assistants:
  Caroline Tucker, 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

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

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