<table>
<thead>
<tr>
<th>Details of Course</th>
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<tbody>
<tr>
<td><strong>Summary of course content</strong></td>
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<tr>
<td>This is an advanced course which aims to get postgraduate students to think critically and apply their knowledge to new and unfamiliar situations. As such, the students will be introduced to a series of 12 cutting edge topics including those currently under debate, and will expected to critically assess them. These very broadly fall into five groups: (1) Biodiversity Change, (2) Multitrophic interactions, (3) Pattern and Process in Nature, (4) Ecosystem Processes and Sustainability, and (5) Synthesis. A large part of the course will also be to write a review or opinion article on a fast moving topic in ecology. It is expected that this course will give the students tools to enable them to think critically about ecological issues and concepts, and to synthesize, discuss and present ecological material.</td>
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<tr>
<td><strong>Rationale for introducing this course</strong></td>
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<td>There is a definite need in the ASE for a postgraduate level course in Ecology that presents key ecological concepts at an advanced level and that encourages them to think critically about these concepts. This course is needed for introducing these students to contemporary thinking in this topic and in particular in giving them exposure to fast-moving fields. This course will provide important training on how to think critically about ecological issues, both for those specializing in ecological topics, as well as those that work on related environmental topics but that would benefit from exposure to contemporary ecological thinking.</td>
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<td>The class will be taught with a combination of short lectures and discussions of publications on fast-moving topics and those that are under debate; they will also be required to write an essay-review on a fast-moving or controversial topic in ecology and give an oral presentation on it.</td>
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<td>Approval from the course coordinator is required for postgrads to take this course.</td>
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<tr>
<td><strong>Aims and objectives</strong></td>
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<td>The aims of this course are to, via lectures, discussion, and assignment work on fast moving and/or debated ecological topics, to provide the students with the tools that they will need to think critically about ecological issues and concepts, and to synthesize, discuss and present ecological material.</td>
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### Syllabus

Week 1: Biodiversity change  
Week 2: Aboveground-belowground linkages  
Week 3: Plant-herbivore interactions  
Week 4: Trophic interactions  
Week 5: Student presentations on chosen topics  
Week 6: The concept of what is a species  
Week 7: The mast seeding phenomenon  
Week 8: Plant reproduction and pollination  
Week 9: Forest carbon cycle  
Week 10: Biodiversity and ecosystem functioning  
Week 11: Environmental sustainability  
Week 12: Invasion biology  
Week 13: Synthesis, presentation, essay quiz

### Assessment

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Class discussion exercises</td>
<td>10%</td>
</tr>
<tr>
<td>Essay review and presentation</td>
<td>50%</td>
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<tr>
<td>Essay quiz</td>
<td>40%</td>
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<tr>
<td>(All assessments will be individually evaluated)</td>
<td></td>
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<tr>
<td><strong>Total:</strong></td>
<td><strong>100%</strong></td>
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### Final Exam Duration

No final exam

### Hours of Contact/Academic Units

39 hours of lectures and tutorials / 3 AU