WILD 8930

Quantitative Conservation Biology

Credit Hours: 3

Instructor: Dr. Barry Grand

Course Objective:

Conservation biology relies not only on the general concepts, but on the specific methods, of population ecology to both understand and predict the viability of rare and endangered species and to determine how best to manage these populations. The need to conduct quantitative analyses of viability and management has spawned the field of “population viability analysis,” or PVA, which, in turn, has driven much of the recent development of useful and realistic population analysis and modeling in ecology in general. Understanding the underlying theory and its applications are important to being able to apply quantitative methods to conservation biology.

Course Procedures:

Student will conduct an extensive library search to address the following:

1) Address the three areas of population viability analysis: count-based, demographic, and multi-site or metapopulation models.
2) Understand the flow of research from data collection and analysis to model construction, analysis and interpretation, progressing from simple to complex approaches to answering PVA questions.

The student will meet weekly with instructor to discuss progress and findings that culminate in a synthetic manuscript of the reviewed material.

Grading Procedures:

Bibliography and review paper, suitable for publication in an appropriate peer-reviewed outlet, that describes and discusses the recent published literature on PVA analysis. The paper will be assigned a letter grade to be assessed on style and grammar (25%) and content (75%).

Justification for Graduate Credit:

This course will draw heavily on the knowledge gained through numerous undergraduate and previous graduate level courses in wildlife ecology and conservation biology. Search and review of the current
literature on PVA analysis will challenge the student at a graduate level, as well as, the production of a report suitable for publication in a peer-reviewed outlet.

**Course Schedule**

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<tr>
<th>Week of</th>
<th>Objectives</th>
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<tr>
<td>26 May</td>
<td>Initial literature review</td>
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<tr>
<td>2 June</td>
<td>Initial selection of pertinent literature</td>
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<tr>
<td>9 June-14 July</td>
<td>Weekly discussion of reviewed literature</td>
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<td>21 July</td>
<td>Rough draft of review paper due</td>
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<tr>
<td>4 August</td>
<td>Final draft of review paper due</td>
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**Special Accommodations:**

Students who need special accommodations should make an appointment to discuss the Accommodation Memo as soon as possible. If you do not have an Accommodation Memo, but need special accommodations, contact The Program for Students with Disabilities in 1244 Haley Center (844-2096).

**Academic Honesty:**

Auburn University expects students to pursue their academic work with honesty and integrity. Violations of the Student Academic Honesty Code and potential sanctions are detailed under Title XII of the SGA Code of Laws, which can be found in the Tiger Cub. If needed, the student should seek advice about plagiarism during the writing of the report.