ECO 601 -- RESEARCH CONCEPTS IN ENVIRONMENTAL CONSERVATION
(#73843, 3 credits)
http://people.umass.edu/sdestef

Fall Semester 2012 Course Description

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TEACHING ASSISTANT:  Dave Wattles, Hatch,  dwattles@eco.umass.edu, 617-256-7055

CLASS MEETINGS:  Mondays and Wednesdays, 8:45-9:55, Holdsworth 308

TEXT AND READINGS:  No textbook required; journal articles and other assigned readings.

Optional references:

COURSE DESCRIPTION AND OBJECTIVES:

Introduction to the research process in the natural resources and environmental conservation sciences. Course will focus on research philosophy, concepts, and design, but will progress through the entire research cycle, from development of hypotheses, questions, and proposals, to grants and budgeting, to delivery of research products.

This course also serves as an orientation to your department and your graduate program, and an introduction to your fellow graduate students in the Department of Environmental Conservation.

Goals are:

1. To provide a foundation of basic concepts and approaches for designing research that can be applied universally in environmental conservation, including ecology, fisheries and wildlife biology, forestry, human dimensions, watershed management, and the built environment.

2. To investigate the entire research cycle, from development of hypotheses and proposals, to designing and implementing research, to reporting results.

3. To discuss current and ongoing issues integral to conducting research, such as hypothesis testing, funding, and logistics.

4. To become familiar with some major scientific literature on research approaches, concepts, and design.

5. To prepare a working written draft of your graduate research proposal and to present your proposed research to the department for discussion and critique.
COURSE GRADING:

Scheduled assignments (25%), peer edits (15%), final draft proposal (25%), proposal presentation (25%), participation and attendance (10%).

ACADEMIC HONESTY:

The University requires honesty of all its members in their academic work. Honesty is necessary to the learning process, and is integral to the atmosphere of genuine inquiry and intellectual curiosity that the University seeks to foster. Academic dishonesty not only contradicts the expectations of a community whose central purpose is the pursuit of intellectual endeavor, it violates University rules and regulations, a fact of which all students must be aware. See the web site http://www.umass.edu/dean_students/codeofconduct/acadhonesty/ for further information.

SPECIAL NEEDS:

Please contact us if you have special needs or requirements in order for you to take and participate in this course. The web site http://www.umass.edu/disability/ has additional information.

GRADUATE STUDENT GUIDELINES, FORMS, and OTHER INFORMATION:

UMass Graduate Handbook: http://www.umass.edu/gradschool/policies-forms/graduate-student-handbook
Eco Graduate Handbook: http://eco.umass.edu/degree-programs/graduate-programs/

In addition, you can follow up on links to your specific concentration:
   (1) Wildlife, fish, and conservation biology
   (2) Forest resources and arboriculture
   (3) Water, wetlands, and watersheds
   (4) Environmental policy and human dimensions
   (5) Building systems
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<tr>
<th>Date</th>
<th>Topic</th>
<th>Assignments/Readings/References/Notes</th>
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<tbody>
<tr>
<td>1. Sep. 5 (W)</td>
<td>Introductions and orientation Course structure, objectives, and schedule Proposals or Prospectus?</td>
<td>UMass Graduate School Handbook and Department of Environmental Conservation web site, guides, and handbooks &gt;&gt;&gt; see Eco website</td>
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<td>2. Sep. 10 (M)</td>
<td>History of Science and Scientific Thought; Science and the Scientific Method</td>
<td>(Note: class begins at 8:45 for remainder of semester, Mondays and Wednesdays)</td>
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<td>3. Sep. 12 (W)</td>
<td>Proposal Introduction - purpose, structure, logistics, examples Introduction to the scientific literature, citations</td>
<td>Proposal and prospectus examples Form into proposal review groups (3-4 people)</td>
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<td>4. Sep. 17 (M)</td>
<td>Library Literacy I with Naka Ishii Meet in the Calipari Room, Du Bois library (tower) Directions: Go to the Lower Level of the W.E.B. Du Bois library (i.e., downstairs from the entrance on the coffee stand side). Keep walking in the same direction with the garden courtyard on your right. The entrance to the Calipari classroom is on the left wall just past the Academic Advising station. See map link, top left corner: <a href="http://www.umass.edu/learningcommons/floorplan.html">http://www.umass.edu/learningcommons/floorplan.html</a></td>
<td>(Note: last day to ADD/DROP)</td>
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<td>5. Sep. 19 (W)</td>
<td>Library Literacy II with Naka Ishii Meet in the Calipari Room, Du Bois library (tower) I. WORKING TITLE and BRIEF STATEMENT OF PROPOSED RESEARCH or PROFESSIONAL PAPER</td>
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<td>7. Sep. 26 (W)</td>
<td>Proposal Writing - title, introduction, literature review, objectives</td>
<td>II. ANNOTATED BIBLIOGRAPHY</td>
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<td>8. Oct. 1 (M)</td>
<td>Design Concepts 1</td>
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<td>9. Oct. 3 (W)</td>
<td>Proposal Writing - conceptual models, methods</td>
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<td>Oct. 8 (M)</td>
<td>NO CLASS (Note: Columbus Day Holiday)</td>
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| 10. Oct. 9 (Tu) | The Scientific Reviews Process | III. TITLE, INTRODUCTION, OBJECTIVES, and LITERATURE CITED  
(Note: Follow Monday’s schedule) |
<p>| 12. Oct. 15 (M) | Design Concepts 2 (Note: last day to drop with “DR”) |                                                                                                     |</p>
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<th>Notes</th>
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<tr>
<td>13. Oct. 17 (W)</td>
<td>Basic Statistical Considerations</td>
<td>IV. CONCEPTUAL MODEL</td>
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<td><em>(Note: Thursday, 18 Oct., is Mid-semester)</em></td>
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<td>15. Oct. 24 (W)</td>
<td>Proposal Writing – anticipated results, research &amp; management implications, schedule, abstract</td>
<td>V. METHODS</td>
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<td>18. Nov. 5 (M)</td>
<td>Writing Grant Proposals &amp; Budgets</td>
<td>VI. ABSTRACT</td>
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<td>19. Nov. 7 (W)</td>
<td>Group review of abstracts</td>
<td>Provide written and oral critique of proposals in your group.</td>
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<td>Nov. 12 (M)</td>
<td>NO CLASS</td>
<td><em>(Note: Veteran’s Day Holiday)</em></td>
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<tr>
<td>20. Nov. 14 (W)</td>
<td>Giving Effective Oral Presentations</td>
<td>VII. DRAFT #1 PROPOSAL/PROSPECTUS</td>
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<td>Kroodsma &amp; Byers 2000, Wyatt &amp; Thiffault 2005</td>
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<td><em>(Note: Follow Monday’s schedule)</em></td>
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<td>22. Nov. 21 (W)</td>
<td>Group review of proposals</td>
<td>Complete oral critique of proposals in your group.</td>
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<td><em>(Note: no official class meeting today; 22-25 Nov. is Thanksgiving recess)</em></td>
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<td>23. Nov. 26 (M)</td>
<td>Student presentations: practice and critique</td>
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<td>24. Nov. 28 (W)</td>
<td>Student presentations: practice and critique</td>
<td>FINAL PROPOSAL/PROSPECTUS TO INSTRUCTORS</td>
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<td><em>(Note: class meets this Friday)</em></td>
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<td>25. Nov. 30 (F)</td>
<td>Student presentations: practice and critique</td>
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<td>26. Dec. 3 (M)</td>
<td>Student presentations: practice and critique</td>
<td>TITLES AND BRIEF BIOGRAPHIES TO T.A.</td>
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<td>27. Dec. 5 (W)</td>
<td>Student presentations: practice and critique</td>
<td>LOAD ALL PPT TALKS</td>
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<tr>
<td>28. Dec. 7 (F)</td>
<td>GRADUATE RESEARCH PROPOSAL CONFERENCE -- 312A HOLDSWORTH</td>
<td>HALF-DAY to ALL DAY (depending on number of presentations)</td>
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<td><em>(Note: Dec. 7 is the last day of classes)</em></td>
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REFERENCE LIST:


