

BIOL 4900 A SENIOR SEMINAR, SPRING 2021
Tues 12:45-1:35; Mon 5-6:50 pm, Rm. 1203

Instructor: Dr. Brad Bergstrom, office 1107 BC, 333-5770, bergstrm@valdosta.edu
Office Hours (phone or MS Teams): MT 3-4 W 2-4; other times by appt.

Course Objective

and disseminate the information in an organized and understandable fashion in both written and oral forms. Besides demonstrating comprehension of their topic and competence in communication skills, students take the ETS Major Field test in biology and complete the Senior Exit Questionnaire

- or Corequisite: completion of all required courses in the senior curriculum for

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| Grading: | Outline of paper with most major references (DUE MAR. 1): | +10 |
| | Oral (MS PowerPoint) presentation | +40 |
| | Written Paper (DUE Friday after your scheduled presentation) | +40 |
| | Participation in discussion | +10 |
| | TOTAL | 100 points |
| | Each absence from scheduled class or required <u>seminar</u> * | -10 |
| | Failure to score 140 or higher on Major Field Test | -40 |
| | Failure to complete Exit Questionnaire | -20 |

*The seminars (ca. 5-6) will be online lectures you must watch and evaluate; they will be announced, with links, via e-
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assignments with one-week open window for completion will be made available.

70-100 points = Satisfactory (S); 0-69 points = Unsatisfactory (U)

Topic: APPLIED ECOLOGY

1. Ecology of emerging zoonotic viruses
2. Parasitic diseases (non-virus) in a warming world
3. Link between environmental contaminants and human cancer
4. Ecosystem effects of pesticide use

6. Top-down -up regulation of ecosystems
7. Population Viability Analysis for conserving rare species: theory and practice
8. The growing ecological role of invasive exotics
9. Theories of species diversity (esp. geographic patterns)
10. Environmental sex determination in a warming world
11. diversity hotspots (including new discoveries)
12. Parasitism as a force shaping communities (species assemblages)
13. Alternative energy from an ecological perspective is there a free lunch?
14. Is human population growth *the primary* threat to the Biosphere? (both sides)
15. Are Genetically Modified Organisms (GMO, or GE) a threat to ecosystems?

Independent Literature-research Project

Your primary task in this course will be to research thoroughly the state of the science, as reflected in the current technical literature, of one well-defined question or area of applied ecology. You will become something of an expert on this one area, enough so that you can lucidly explain to your colleagues and me (as well as readers of your paper) what science currently knows about this question, and what controversies or debates exist among experts in this field. Whenever possible, I would encourage you to present evidence on both sides of a divided question and to conclude which side is more persuasive to you (this will not be applicable to all topics). You should also be able to answer good questions from the audience, which may be elicited by your presentation but not explicitly covered in your presentation *everything you know*).

Paper: prepare a typed, double-spaced throughout (including tables, figure captions, and Literature Cited) manuscript of *no fewer than 10 pages* (not counting a title page or tables or figures) examining the important theories and evidence related to the research. I will require that this be turned in both through BlazeView and in print. The paper must be printed in a 12-point font *without right-justification*. Margins should be set to 1 inch on all 4 sides. Page 0 (Zero, unnumbered) will be a title page, page 1 will begin the Introduction. As this is not original

and must end no earlier than halfway through page 10). Place each section heading or subheading in Bold Font on its own line. DO NOT put extra line spaces between paragraphs in any of these sections. Following Literature Cited, you may then append (in strict order, no exceptions!), Tables (1 through n), then Figures (1-n), and in some cases, Appendix (A through Z). Put a single staple through the manuscript; no binders, no plastic.

Your Lit. Cited must have AT LEAST 10 references, and all of these must actually be cited at least once in the text of your paper (parenthetically, by Author last name and year, nothing else, at the end of a sentence or phrase citing a conclusion of that paper). At least 7 of these references must be primary literature i.e., scientific articles reporting original results from peer-reviewed biological journals, and not review articles. If you cite a review article

Outline: an outline of your paper, with title, all subheadings and nested outline of points to be addressed within each, along with complete citations (in proper Literature Cited format) of most of **March 1**. Use the nested I, II, III; A, B, C; 1, 2, 3; i, ii, iii style. I will make individual appointments via MS Teams 2-3 weeks before the due date to discuss your progress on your outlines.

Presentation: Toward the end of the semester, you will be assigned a 25-min time slot to present your thesis in spoken and audio-visual format to the class and any visitors. It should be prepared using PowerPoint, and should include outline-form text, organized to help you present your speech, accompanied by data in Table and/or Graph form and possibly other images (e.g. Jpegs, Quick-time

Note, any data table or figure, or graphic, that you import from some other source MUST have an attribution (citation) and the bottom of the graphic or the PPT slide. In some cases, these can be done like a citation

In other cases, you may give an authority, with a website URL at the bottom of the slide, without corresponding Literature Cited reference.

Your presentation must last for at least 12 minutes and not more than 16 minutes and have 5-10 minutes for questions and discussion. I will deduct points for any time your presentation lasts less than 12 minutes or more than 16. This means you must rehearse your talk several times, and time yourself. I will also deduct points if you are rushing through your presentation to get in under the 16-min limit, or dragging or repeating to stretch it out beyond the 12 min.

PLAGIARISM: there is a ZERO TOLERANCE policy toward plagiarism in both your presentation and especially in your written paper. Any instance of plagiarism will result in automatic and instant failure in this course (i.e., receiving an unsatisfactory or U). You do not get a re-do! The words, ideas, data, illustrations and other graphics produced by any person and published in any means are the intellectual property of that person, and any use of those that is not fully attributed (e.g., by proper citation in your paper) and is not presented in your own words (i.e., by paraphrasing or summarizing, not by quoting) is plagiarism and **will** result in failure!

-A sentence composed of the same words as another person (author) wrote, or *nearly* the same words (with a few changed) is plagiarism and will result in automatic failure.

-A sentence composed of the same words as another person (author) wrote with quotation marks placed around it, even if attributed by citation, will be considered plagiarism in this course and will result in automatic failure. In other words, **DO NOT QUOTE!! PARAPHRASE AND CITE!**

-Presentation of an idea, or results, or conclusions, or data, from another author or authors without citation of a published source (parenthetically, at the end of the sentence where such idea is discussed) will be considered plagiarism in this course and will result in automatic failure. You

-3 sentences

within the parentheses at the end of a sentence may be warranted, when both studies made essentially the same conclusion.

-Repeated citation of one and only one source throughout a section (or paragraph, or certainly a page) of your paper, is also plagiarism, because you are relying on that one paper to organize your thoughts, your thesis, your analysis you are not doing it yourself. This is especially a risk with

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