

Senior Seminar

BIOL 4900 A, Fall 2008

INSTRUCTOR: Dr. David L. Bechler

OFFICE: Room 2030, Biology/Chemistry Building

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TEXTS: None required.

COURSE SCHEDULE INFORMATION

Course	Days	Time	Room	Presentations
BIOL 4900 A	M	05:00-06:50 pm	BC 1202	Class presentations, 13 Oct to 1 Dec 2014
	R	04:00-04:50 pm	Powell Hall	Professional speakers presentations

PREREQUISITES: Senior standing and completion or co-registration in all required courses in the senior curriculum for biology.

COURSE GOALS: This is the capstone course in biology. It is designed to assess the students' ability to research topics in biology independently, assimilate information and disseminate information in an organized and understandable fashion.

Educational Outcomes and Standards: The following educational outcomes are met in this course.

- Biology Educational Outcomes 1-5 met as defined on page 117 of the Undergraduate Catalog, http://www.valdosta.edu/academics/catalog/1213/ugrad/documents/UG_131-146.pdf
- University Educational Outcome, <http://www.valdosta.edu/academics/academic-affairs/vp-office/general-education-council/ge-outcomes.php>

GRADING: This course is graded on an S/U basis (Satisfactory/Unsatisfactory), with a U being a the equivalent to failure.

GENERAL COURSE REQUIREMENTS: Each student is required to prepare both a 25-30 minute oral presentation, which will be followed by questions from the class, and a 12-15 page paper on a topic assigned at the beginning of the semester. More explicit requirements for these assignments are listed below. In addition, students are required to:

1. Attend all the seminars given by other students,
2. Attend the Science Seminar Series in the Science Fall Seminar series in Powell Hall Auditorium, see <http://www.valdosta.edu/colleges/arts-sciences/science-seminars/welcome.php> for dates speakers will be presenting presentations.
 - Note that additional speakers will be added onto the presentation list through the course of the semester. So be sure to check the web page regularly.
3. Take the ETS Major Field Test in biology and complete the departmental Senior Exit Questionnaire.
4. **Key Points**→ Failure to attend at least 90% of the scheduled Science Seminars or failure to complete either the Major Field Test or the Exit Questionnaire will result in an automatic grade of "U" for the course.

The Written Paper and Presentation

The main portion of the written paper (main Body and References) must not exceed 15 double spaced, typed pages, with a size 11 or 12 font in Calibri or Time New Roman. Figures, tables, charts, etc. are not counted as part of the 12—15 pages and should be placed after the Reference section at the end of the main portion of the paper. All papers must be typed and possess correct spelling and grammar. Both a hard copy and an e-copy in Word must be turned in by 6 October 2014. Scientific names must be underlined or in italics. The paper should follow the following format:

THE MAIN BODY

- Introduce the topic.
- Present concepts and theories relevant to the topic.
- Define key terms.
- Present basic information gained by past research on the topic.
- Discuss experimental procedures involved in gaining information on the topic.
- Discuss possible points of controversy which exist or changes in thinking as newly gained information has forced researchers to modify and rethink past ideas.
- Present past and current research work on the topic.

The main body of the paper can be organized as you feel is appropriate. You can use:

- An historical approach,
- Arrange your discussion by ideas and concepts,
- Present basic theory with supporting research results
- Focus on controversy and dissent associated with competing ideas.

How you write the paper depends largely on your perspective of the topic. If you have any questions, come and see me so we can discuss your ideas before you begin writing.

When researching information for the Body of the paper, you should use books which review the topic, governmental publications if appropriate, and professional journals which provide research results, both past and present, central to the topic discussed.

SUMMARY or CONCLUSIONS

The Summary or Conclusions should briefly restate the major points of the Body of the paper and not present any new information. It should not be more than two paragraphs in length. No references should be cited in the Summary. The Summary is in a sense the equivalent of the abstract of a research paper.

Reports and presentations will be graded on content (as outlined above), style, and ability to use the English language at an appropriate level, with content as the major criterion. Failure to complete both the presentation and the written paper in a satisfactory manner will result in a grade of "U" for the course.

COURSE GRADE

Course Grade = 60% written paper + 40% oral presentation

SPECIFIC REQUIREMENTS: The actual presentation must last at least 25 minutes with five minutes of questions at the end. For the oral presentation, a copy of the PowerPoint presentation must be e-mailed to dbehcler@valdosta.edu one week prior to the date of the presentation to allow time for editing and computer compatibility checks. The reports must be based on a minimum of fifteen references, at least ten of which must be from the primary literature (Research articles from recognized scientific journals). Textbooks may be used for background information in the introduction, but do not count as part of the required fifteen references. Websites may only be used as references for figures, maps, diagrams, tables and data sources such as Palmer Drought Indices that are located at science based web sites such as the US Geological Survey, US Fish and Wildlife, etc. All references, including textbooks, must be cited where appropriate in the paper and listed in alphabetical order in a "Literature Cited" section at the end of the written paper using the Cite function, APA style as found in Google Scholar.

Example → Fournie, J. W., & Overstreet, R. M. (1985). Retinoblastoma in the spring cavefish, *Chologaster agassizi* Putnam. *Journal of Fish Diseases*, 8(4), 377-381.

An exception to the above reference are references that involve web pages. In this case the name of the organization and the web site address are to be listed in the reference section as follows:

Example → National Oceanic and Atmospheric Administration. (2014). Palmer Drought Index, <http://www.ncdc.noaa.gov/oa/climate/research/prelim/drought/palmer.html>

Note that many of the references you will need may not be in Odum Library. You will either have to request them

through interlibrary loan or get them via JSTOR or GoogleScholar. You should start your research early—like now. See the class handout for proper referencing and siting of references in the text and the reference section.

SEMINAR TOPICS— CRAYFISH BIOLOGY AND BIOSPELEOLOGY

Aquaculture of Crayfish	Crayfish Sensory Systems
The Biology of Subterranean Salamanders	History of Biospeleology
Crayfish Physiology	Crayfish Behavior
Microbiology of Caves: Bacteria and Fungi	The Biology of Subterranean Insects
The Use of Caves by Bats	Crayfish and their Role in Food Webs
The Biology of Subterranean Amphipods	Crayfish Habitat Use
Crayfish Endocrinology	Cave Structure and their Associated Ecosystems
The Biology of Subterranean Arachnids	Crayfish Diseases and Maladies
The Biology of Subterranean Millipedes	The Biology of Subterranean Isopods
Biology of Subterranean Crayfish	The Genetics of Subterranean Organisms
Review of the Life History of Crayfish	Crayfish as Alien Species
Crayfish Neurobiology	The Biology of Subterranean Fishes
Biology and Distribution of Cave Crickets	Regressive Evolution in Cave Organisms
Crayfish Systematics	Role of Bat Guano in Cave Communities

The following deadlines and dates must be adhered to:

- 18 August 2014—first class meeting in Room 2014.
- 1 September 2014—submit a list of 12 possible references by via e-mail with the references written in the format above. If you are having trouble locating references, see me and I will help you get started.
- 15 September 2014—submit outlines of your paper and oral presentation by e-mail.
- 13 October to 1 December 2014—attend all student presentations.
- Attend presentations by professional scientist in Powell Hall auditorium and sign in on attendance sheet at the end of the seminar.

Notes

Special Note 1: Grades will be neither posted nor given out over the telephone or by e-mail.

Special Note 2: Students requiring special accommodations because of disability should discuss their needs with me as soon as possible. Those needing accommodations who are not registered with the Access Office which can be visited 1115 Nevins Hall. The phone numbers are 245-2498 (voice) and 219-1348 (tty).

Special Note 3: Academic dishonesty and plagiarism—the written paper must be in your own words and written solely by you. Therefore, all written materials will be examined for plagiarism. If you wish you may quote from publications, but you must acknowledge your sources by citations and when quoting a paper, place the quotes in parentheses. For additional information go to the following web site:

<http://www.valdosta.edu/academic/AcademicHonestyPoliciesandProcedures.shtml>

If an individual is caught plagiarizing a source of information, they will be given a grade of "U" for the course and a **formal complaint** filed with the office of the dean of students. To test for plagiarism, known sources of literature will be examined for copies that match in part or in total the papers you must submit.

Office hours--The best times to see me are usually Monday through Thursday, 8 am to 4 pm. My class schedule is as follows during the week and when in class am not available for consultation:

- Monday → 11am – 12pm, 5 – 7 pm Lecture
- Tuesday → Open except for occasional field work
- Wednesday → 11am – 12pm
- Thursday → 4 – 5 pm Science Seminar, 5 – 7 pm Lecture
- Friday → 11 – 3 pm, lecture and lab