BIOL 4900C: Biology Senior Seminar
Spring 2013 Course Syllabus, Valdosta State University

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Office Hours: Monday & Wednesday 2:00-3:00
Please feel free to call my office or use VSU email to schedule a convenient time for an appointment. I would be more than happy to speak to students anytime the office doors are open.

Course Meetings: 5:00 – 7:00 on Mondays in 1202 BSC
4:00 - 4:50 on Thursdays in the Powell Hall

Course Description: This is the capstone course in biology which means that the purpose is to pull together the different aspects of your coursework, culminate your academic major, and leave you with a sense of the purpose of your college education.

Learning Outcomes: This course appraises students' ability to independently research current topics in biological science and competently present "state of the art" information in both oral and written formats. The assignments address several of the objectives of VSU General Education and the Biology Department:

Biology Outcome #1. Develop and test hypotheses, collect and analyze data, and present the results and conclusions in both written and oral formats used in peer-reviewed journals and at scientific meetings

VSU Outcomes:
#4. Students will express themselves clearly, logically. and precisely in writing and in speaking, and they will demonstrate competence in reading and listening. They will display the ability to write coherently in standard English; to speak well; to read, to understand, and to interpret the content of written materials in various disciplines; and to listen effectively and to understand different modes of communication.

#5. Students will demonstrate knowledge of scientific and mathematical principles and proficiency in laboratory practices. They will understand the basic concepts and principles underlying scientific methodology and be able to collect, analyze, and interpret data. ... They will learn a body of scientific knowledge and be able to judge the merits of arguments about scientific issues. They will be able to use basic knowledge of statistics to interpret and to analyze data. They will be able to evaluate arguments based on quantitative data.

#7. Students will demonstrate the ability to analyze, to evaluate, and to make inferences from oral, written. and visual materials. They will be skilled in inquiry, logical reasoning, and critical analysis. They will be able to acquire and evaluate relevant information, analyze arguments, synthesize facts and information, and offer logical arguments leading to creative solutions to problems.

Academic Honesty: Members of the class are expected to maintain high standards of integrity. Always cite any source of original information. Never copy text from a classmate, book, or website and represent it as your own work. The VSU Biology Department Statement on Plagiarism is included as part of this syllabus to clarify common types of academic misconduct. Dishonesty will not be tolerated; evidence of cheating whether intentional or not will result automatic failure in the course.

Special Services: Students requiring classroom accommodations or modifications because of a documented disability should discuss this need with me at the beginning of the semester and contact the Access Office in Farber Hall 1115, 245-2498.

Family Educational Rights & Privacy Act: Grades cannot be posted by Name, Social Security Number, or other Personal Identifiers. Grades and student work will not be given over the telephone, by email or to another student.

Biology 4900C Tentative Class Schedule (Subject to Change)

Date		Class Topic	Assignment
Jan	7	Biological Evolution	
	10	Advanced Research Searching (Library 3270)	Student Information Sheet
	14	Reading Scientific Literature & Citations	Approved Topic & 3 Reprints
	17	Science Seminar in Powell Hall	
	21	Paraphrasing & Annotated Bibliography	Thesis & Background
	24	Science Seminar	
	28	Effective Writing & Paper Requirements	Annotated* Bibliography (8 Primary Papers)
	31	Science Seminar	
Feb	4	Flow & Transitions	Analysis & Synthesis
	7	Science Seminar	
	11	Revision	Introduction & Conclusion
	14	Science Seminar	
	18	Peer Review	**Full Draft Due - No Exceptions**
	21	Science Seminar	
	25	Effective Oral Presentations	Peer Reviews
	28	Science Seminar	
Mar	4	MFT Review	Revised Paper & Draft PowerPoint
	7	Science Seminar	
13 & 14		**SPRING BREAK – No Class or Seminar**	
	18	**PRESENTATIONS:**	**PowerPoint Revisions – No Exceptions**
	21	Science Seminar	
	25	**PRESENTATIONS:**	
	28	Meet for Presentations - No Seminar because of GSTA	
Apr	1	**PRESENTATIONS:**	
	4	Science Seminar	
	8	Major Fields Test (Take Photo ID to Testing Center in Powell Hall)	
	11	Science Seminar	
	17	**PRESENTATIONS:**	
	18	Last Week of Seminar	
	24	**PRESENTATIONS:**	
	25	Meet for Presentations - No Seminar	
May	**3**	**Friday, 5:00-7:00pm**	***Final Exam Session:** **Reserved for any unfinished or repeat oral presentations**

Biology 4900C Course Requirements

Assessment: Biology 4900 is ultimately graded on a Pass/Fail (S/U) basis. Satisfactory completion or a passing grade depends on achieving at least a 70% average on the accumulated course assignments. If you miss any assignments, you must ask a classmate, do not email the instructor. Any work not submitted by the deadline (Start of Class Meeting) on the required date will either be given a zero. Do not expect exceptions to this. If your work is not finished when the papers are collected, they will not be graded and you miss important feedback. As seniors, there is a default assumption that you will display a responsible attitude, take pride in your work, and leave no question about a satisfactory grade for the course. It is very unwise to take a minimalist approach, doing as little as possible, because I will not hesitate to assign an unsatisfactory final grade if your work is below the standard (70%) expected in the course.

Attendance & Participation	10%
Assignments	20%
Oral Presentation	30%
Final Paper	50%

Other Requirements: Both the **ETS Major Field Test** and the **Biology Department Senior Exit Questionnaire** are required as part of the course. The Major Field Test is a comprehensive, standardized examination of your content knowledge that is prepared by the Educational Testing Service. The department uses these scores to evaluate the effectiveness of the curriculum and the biology program. There will be class discussions about how to review for the test so that everyone can increase their confidence in their grounding in biological science. The Biology Department will pay for the first test. Any student scoring below 140 points will be required to repeat the test at their own expense until their score is satisfactory. The Biology Department Exit Questionnaire is a survey that assesses your experiences as a Biology Major at VSU. We are currently revising the old paper form and the new version will be electronic.

Attendance:

Every student is expected to attend all Class Sessions and the Weekly Science Seminars. Attendance points will be seriously reduced (25%) for any unexcused class absence. More than four class absences will mean automatic failure for the course. If there is a good reason for missing any sessions, please notify me (preferably in advance, by email). Seminar attendance will be monitored with the seminar forms that are to be given to a Biology Faculty member after each seminar.

Class Participation:

Everyone is expected to be actively involved in the conversations that are part of this course and the Science Seminar Series. If you ask a public question at a Science Seminar, be sure to see that it is recorded for Extra Credit toward your final participation grade. It is also extremely important to fill out evaluations of classmates presentations and make it a regular habit to ask at least one question of the student speakers during the research presentations. This grade for everyone starts at 100%. This can be inflated to 125% by consistent, active, and thoughtful contributions (especially questions to the speakers at science seminars). This grade will be diminished by failure to become involved, thoughtless/rude behavior, or anything that detracts from the learning experiences of other students. Lack of attention or improper behavior at public seminars will also be considered.

Valuable Resources:

VSU Biology Department Website
Purdue Owl Online Writing Lab - http://owl.english.purdue.edu/
Library Reference Science Consultant – Odum Library (333-7149)
The Quarterly Review of Biology
Council of Biological Educators (CBE) Style Manual
Biology Tutoring at the Student Success Center: The SSC is located in Langdale Residence Hall and provides free peer tutoring in core curriculum courses, including biology, chemistry, math, writing, and foreign languages for all VSU students. There is also free professional academic advising and on-campus job information. Visit the website: www.valdosta.edu/ssc or call 333-7570 to make an appointment. If you are not a strong writer, start seeing them early in the semester.

BIOL 4900C Senior Research Project

Course Theme: "Novel Strategies Representing the Evolution of Reproduction"

Students are required to select a topic that is substantiated by a reasonable body of accessible, primary scientific research. Any extant organism can be selected. Every person will have a distinctly different topic and claims to a topic will be made by emailing your draft title, justification of the novelty, and the formatted references for 3 primary papers. You will get a confirmation if the topic is open or notification to search for another if it is taken or not appropriate. Topics that were used last year will not be repeated.

Scientific Literature:

As soon as the topic is confirmed, it is important to look for current research being done in this field. A primary paper is the original publication of a scientific finding by the investigator(s) in a "reputable journal." Initially, obtain printed copies of 3 recent primary papers related to the topic. These papers will be used for the class on types of literature during the third class session. Four more must be summarized and turned in as noted on the course schedule. No less than 7 primary papers must be cited in your paper; 3 can be historic, but 4 must be published after 2000. Up to three scientific reviews from upper level scientific journals may be cited. Articles from Scientific American, Popular Books and General Websites must be approved.

Background on General Reproduction in Related Organisms:

Part of the foundation for the current research will be a section of the paper that summarizes what is generally known about the basic reproductive strategies of this group of organisms. Use text books or secondary sources for this section and since it is common knowledge there will be no citations. Two double spaced pages should contain 1-2 well-organized paragraphs that deal with asexual/sexual and taxonomic subdivisions of the organisms. The handwritten notes used to write this section must be submitted as part of the assignment.

Annotated Bibliography:

The 7 primary papers will be paraphrased and submitted in the form of an extensively annotated bibliography. The references must be precisely formatted according to the APA style. Summary paragraphs of each article must contain reference to the authors in the form of a citation as well as: 1) what was investigated, 2) the basic methodology, 3) a summary of their findings, & 4) how this relates to your paper.

Peer Review:

Every student will evaluate a draft of another student's paper according to a format discussed in class. Revisions based on the peer review will be made before a draft is submitted to the instructor.

Thesis & Outline:

The topic of your research must ultimately be stated, in your own words, in a concise descriptive thesis statement that is the proposition or focus of your study. A detailed Outline should include the working title, general sections or subheadings with bullets for the points that will be included in these sections.

Historic & Scientific Background:

Use the history of the sub-disciplines contributing to your subject to get a basic grounding of the science and technology that has contributed to the knowledge of the organisms you are studying. Everyone will be expected make one PowerPoint slide of a Timeline and give an informed synopsis of this in your oral report.

Written Paper:

Detailed instructions for the formal paper will be given out and discussed in class. These will be 10 – 12 pages long, excluding title page, figures, images, and references. The Initial Draft will be revised and credit for the paper will only be given when all comments have been addressed in the Final Revision of your term paper. Two copies of this final paper must be submitted. Failure to complete a satisfactory paper, by the deadline, will result in automatic failure or an Unsatisfactory grade for the course.

Oral PowerPoint Presentation

The oral reports will be delivered as dynamic, visual PowerPoint presentations. Slides with pure text are not allowed. Include relevant photographs as possible, to raise interest. Each group of presenters is encouraged to make the class meeting as pleasant as possible with refreshments for the class. The slides for the presentation must be checked by the instructor one week before and again on the Monday of the week of the presentation.

VSU Biology Department Policy on Plagiarism

Plagiarism is a broad term used to describe many forms of cheating that involve taking credit for someone else's work. The most blatant type of plagiarism is copying from another source without giving credit to the author. Anytime the original ideas of someone else are used, appropriate citations must reference the source. The failure to acknowledge the use of someone else's ideas, even when they are paraphrased, (whether intentional or not), constitutes plagiarism. Using a paper written by someone else is obviously plagiarism. In addition, the improper citation of references can fall under this spectrum of offences. Plagiarism is equivalent to looking at someone's test and copying down their answers. It is the theft of intellectual property. The simplest way to avoid plagiarism is to give credit where credit is due! This document has been developed by the biology department faculty to explain plagiarism by clarifying appropriate academic behavior, identifying common mistakes or violations, and warning students of the serious consequences for academic misconduct relating to the misrepresentation of original work. Recognition of and respect for the ownership of property is one of the distinguishing features of civilization. Ideas come from individuals and are effectively owned by their originators; thus they are intellectual property. In the academic sphere, the ideas of others are often encountered, most often in published form. As with tangible property, intellectual property is subject to ownership and protection. Moreover, publication establishes ownership of intellectual property. It is essential to respect the ideas and writing of others by scrupulously citing the sources of any and all ideas that are taken from other people's work.

Writing assignments are a very important way for students to demonstrate the ability to assimilate information and express personal knowledge in a coherent manner. The writing process is an active learning experience involving the demonstration of academic skills such as analysis, inference, and appropriate presentation. Assessment of student writing allows faculty members to evaluate not only an individual's understanding of course material, but also the mastery of processes that are considered an important part of biological education. Therefore, it is extremely important that any written work submitted represents a student's personal synthesis displayed in sentences completely constructed by the student.

The Writing Tutorial Services website at Indiana University (http://www.indiana.edu/~wts/pamphlets/plagiarism.shtml) gives the following guidelines for avoiding plagiarism. You must give credit whenever you use:

- another person's idea, opinion, or theory;
- any facts, statistics, graphs, drawings—any pieces of information—that are not common knowledge;*
- quotations of another person's actual spoken or written words; or
- paraphrase of another person's spoken or written words.

*In the sciences there is one important clarification to these rules. Any information, even if it is a theory or original idea, that has become widely circulated enough to be found in textbooks is defined as common knowledge. For example, Charles Darwin and Alfred Wallace do not need to be cited every time "natural selection" is mentioned.

There are a variety of ways to obtain assistance on writing assignments. Your professor can clarify expectations in class, help individually in an office conversation, or elaborate instructions by email. The new VSU Student Success Center will provide personal tutoring. There are a plethora of websites devoted to providing writing tutorials. By default, the biology department expects students to use the style recommended by the Council of Science Editors (CSE, formerly and still known as CBE), and succinct directions on how to use this format for citations and references is available on various websites such as: http://library.osu.edu/sites/guides/cbegd.php. Specific examples of citation styles may be given to you by your professor that will supersede the CSE/CBE Style.

Quotations

Sometimes students get a little carried away with the use of quotations. Copying large volumes of material, placing it in quotes and citing the author is not plagiarism, but neither is it evidence of your ability to write a paper. So, you may receive a failing grade for excessive quotations because you failed to actually ***write*** the paper (see paragraph 3 above). There is a huge difference between transcribing a paper (quoting) and writing a paper (using your own words). You should use quotations judiciously when writing science papers. This style may differ from what instructors in other disciplines are telling you to do, so remember that science papers rarely use quotes of any kind. Generally, no more than five-ten words should be used in a single quote, and not more than one or two quotes per ten-page paper. If you do more than this then you must discuss it with your professor before you turn in your paper for grading.

Punishment for Plagiarism

Plagiarism will not be tolerated in the biology department. Any student caught plagiarizing will receive a failing grade on the assignment and depending on the situation may automatically fail the course. Ask before making mistakes and do not assume that we are too lazy to check or too stupid to catch cheaters. Ignorance is no excuse and do not expect sympathy for academic misconduct.

Lab Reports

Students will frequently work in groups during the laboratories. However, lab reports are **never** group projects unless specific instructions to the contrary have been given by the instructor **in writing**. When lab groups work together on projects, each person is expected to do their own analysis of the results. Never use another person's graphs, tables, or words in a report that is supposed to have been written independently. In other words, each student must prepare their own tables and graphs in addition to written descriptions within the report. If lab reports are plagiarized in whole or in part then **all reports in question will be penalized**, not just the reports that were plagiarized. Therefore, **never** give your reports to a classmate to copy.

Long-Term Consequences for Cheating

If a professor takes punitive action on a student's plagiarism incident then, depending on the situation, the incident may be reported to the Dean of Students where it will be entered into the student's disciplinary record. If you send an application to a professional program such as Medical School or Law School, those schools will contact Academic Affairs at VSU and ask them for your Disciplinary Record. **The cheating incident will then be reported to the schools to which you have applied**. So, you can see that there can be terrible long-term consequences for plagiarism.

I have read and understood this policy.

_____	_____	_____
Student Signature	Printed Name	Date