

BIOL 7000, Introduction to Research
Spring Semester 2011, Section A (CRN# 21246, 2 Credit hours)
Department of Biology, College of Arts & Science, Valdosta State University

Lecture & Discussion (BC 2022): **W 6:00 p.m. – 7:50 p.m.**

Instructor: Dr. Brian C. Ring
Office: BC 2092
Office hours: **T & R** 11:00 a.m. – 12:00 p.m. or by appointment.
Phone: 249-4841 (Dept. office 333-5759)
Email: bcring@valdosta.edu (**please use BlazeView first**)

Pre-Requisites: Acceptance into the graduate program in biology.

Course Description: An introduction to the scientific method, primary research literature, methods of literature review and scientific writing. A research proposal is required by the end of the semester. This course is to be taken during the student's first semester in the graduate program (if possible). In addition, students will learn about procedures for achieving approval for working with biohazards, hazardous materials, recombinant DNA, and animals in a compliant manner (IACUC); tour the biology department facilities, learn about various faculty research areas and appropriate health & safety measures, and how to submit a grant proposal through VSU Office of Sponsored Programs & Research Activities (OSPRA).

Course Objectives: Upon completion of this course the student should be able to:

- 1) Meet all requirements and deadlines for successful completion of the MS thesis (**BO1-BO4**);
- 2) Perform a literature search and prepare a research proposal on a significant biological question (**BO1, BO2, BO3, GE3, GE4, & GE7**);
- 3) Engage in writing and peer review of research proposals (**BO2, BO3, BO4, GE3, GE7, & GE8**);
- 4) Utilize appropriate university & departmental institutions for performing compliant research (**BO2 & GE5**).

These course objectives support the VSU Biology Department Graduate Program Outcomes # 1-4 and the University General Educational Outcomes # 3, 4, 5 & 7 as listed in the VSU Graduate Catalogue (see below).

VSU Biology Educational Outcomes (BOs):

BO1. To demonstrate competency in factual content and interpretation of the major biological concept areas of cell and molecular biology, genetics, organismal biology and evolution and ecology.

BO2. To demonstrate the ability to identify significant biological research questions, develop research protocols, and properly analyze research questions through the use of the scientific method.

BO3. To produce a systematic and thoroughly researched thesis suitable for publication and appropriate to the thesis sub-disciplines.

BO4. To participate in activities related to the profession.

VSU General Educational Outcomes (GEs):

GE1. Students will demonstrate understanding of the society of the United States and its ideals.

GE2. Students will demonstrate cross-cultural perspectives and knowledge of other societies.

GE3. Students will use computer and information technology when appropriate.

GE4. Students will express themselves clearly, logically, and precisely in writing and in speaking, and they will demonstrate competence in reading and listening.

GE5. Students will demonstrate knowledge of scientific and mathematical principles and proficiency in laboratory practices.

GE6. Students will demonstrate knowledge of diverse cultural heritages in the arts, the humanities, and the social sciences.

GE7. Students will demonstrate the ability to analyze, to evaluate, and to make inferences from oral, written, and visual materials.

GE8. Students will demonstrate knowledge of principles of ethics and their employment in the analysis and resolution of moral problems.

Required Materials: None

Grading Policy: Students will be given several assignments to complete throughout the semester relating to applying for review and permission to conduct research projects. These will include, but are not limited to: Library and primary research literature methods, Animal Care Committee research protocol approval, Biohazard Committee research review and approval, Recombinant DNA protocol review and approval, Grants and Contracts funding database search, mock (or real) Grant writing. In addition, students will participate in faculty research seminars and discussions. 75% of the

grade will be based upon satisfactory completion of assigned projects. 25% of the grade will be based on attendance and participation in faculty presentations and discussions.

Tentative Schedule: Please note that dates are tentative and will change depending on faculty availability and the rate at which material is covered.

January

Wednesday 12 –First class meeting, Introduction, Sample proposal & review
Wednesday 19 - Speaker – Brian C. Ring, Proposal Critique & Discussion
Wednesday 26 - Biosafety & Recombinant DNA Approval- Jennifer Turco

February

Wednesday 2 - Library Instruction- Laura Wright, Odum Library room 2634 (second floor)
Wednesday 9 - Animal Use & Care – Theresa Grove
Wednesday 16 - Speaker - Jim Loughry, **Proposal Outline Due**
Wednesday 23 - Speaker - OSPRA- Barbara Gray

March

Wednesday 2 - Speaker – TBA
Thursday 3 - Midterm, last day to drop without penalty
Wednesday 9 - Speaker – TBA
Week of 14-18 – Spring Break
Wednesday 23 – Speaker – TBA, **Proposal Rough Draft Due**
Wednesday 30 – Speaker – TBA

April

Wednesday 6 - Speaker – TBA
Wednesday 13 - Speaker – TBA
Wednesday 20 – Speaker – TBA
Wednesday 27 - Health & Safety- TBA, **Final proposal draft due**

May

Exam week No Class

Dropping A Course Without Penalty: In order to officially drop a course without penalty, a student must obtain and fill out a drop/add form from the Registrar's Office, acquire appropriate signatures, and return the completed form to the Registrar's Office before the designated date (March 3, 2011). If you don't officially withdraw, and instead just stop coming to class, you will receive an F for the course.

Missed Assignments & Attendance: Don't miss assignments or classes. You are now graduate students and hence pre-professionals. And I expect you to perform as such. Since we only meet once a week, one missed class constitutes a significant amount of the course. Any missed assignment will automatically result in that work counting as a zero score. Absolutely no makeup work will be given. No late assignments will be accepted for a grade. Students should also be aware of the following university attendance policies: (1) Students who miss 20% of lecture time will receive an automatic failing grade for the course. (2) Students who do not regularly attend lecture, as determined by taking class role, by the proof role date may be automatically dropped from the class. (3) Students who neither drop nor attend class by the midterm date will receive an automatic F for the course.

Student identification: Students should have in their possession at all times their VSU student identification card. In order to verify the identification of students officially enrolled in the course, it is the instructor's prerogative to request official student photo identification cards at any time during lecture or during exams.

Academic Dishonesty (e.g. cheating or plagiarism): A student cheating or plagiarizing will be penalized by receiving a zero for the assignment and will be reported to the dean of students. Refer to the Student Code of Ethics in the VSU Student Handbook.

Privacy Act (FERPA): The Family Educational Rights and Privacy Act (FERPA) prohibit the public posting of grades by Social security number or in any manner personally identifiable to the individual student. No grades can be given by email or over the telephone, as positive identification can not be made by this manner.

Students with Disabilities: Students requesting classroom accommodations or modifications because of a documented disability must let me know and must also contact the Access Office for Students with Disabilities located in room 1115 Nevins Hall. The phone numbers are 245-2498 (voice) and 219-1348 (tty).