

Valdosta State University
Department of Biology, College of Arts and Sciences
BIOL 1010 C: The Evolution and Diversity of Life
Lecture Syllabus, Fall 2013

Instructor: Dr. Cy L. Mott

Office: Bailey Science Center 1212

Office Hours: Monday 2:00 – 4:00 P. M., Tuesday 3:30 – 4:30 P. M. or by appointment

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Note: Please DO NOT send messages through BlazeVIEW, as they are not automatically forwarded to my VSU email account. Using the email address above will result in the most prompt response.

Course Time and Location: (Jennett Lecture Hall 2211): MWF 1:00 – 1:50 P. M.

Prerequisites: None

Corequisites: BIOL 1020 Biodiversity Lab

Required Texts:

Biology: Concepts and Investigations, Marielle Hoefnagels, 2nd edition with Connect Plus Access Card

Personal Response System (“Clickers”): ResponseCard NXT

Registering your clicker: <http://www.valdosta.edu/academics/elearning/documents/nxt-student-response-guide.pdf>

You are required to have access to the course textbook in order to complete assigned readings. Readings are to be completed ***before*** class in order to be able to participate in class activities. Homework and exam questions will be based on readings from the text as well as in class material. A copy of the textbook is placed in the course reserves at Odum Library. In addition, students are required to access to the Connect website. Access to the site is included with the textbook package available at the VSU bookstore or can be purchased separately from the Connect website. Each student must also have their own individual ResponseCard clicker in order to actively participate in class.

Course Description: This class fulfills 3 of the 11 general education credit hours required in section D1 (Science, Mathematics, and Technology) of the VSU core curriculum as prescribed by the University System of Georgia. The course will address the VSU Learning Outcome that states: "Students will demonstrate understanding of the physical universe and the nature of science, and they will use scientific methods and/or mathematical concepts and reasoning to solve problems." According to the VSU Undergraduate Course Catalog, BIOL 1010 is “an introduction to the diversity of life on Earth with a special emphasis on ecological and evolutionary processes and relationships.”

General Course Goals: The primary goal of this course is to introduce you to the underlying principles of biology. Because this is an introductory course, no one topic will be studied in great detail. However, you should have sufficient background at the end of the quarter to pursue

interesting topics in higher level courses. You should also gain the background necessary to understand the biology behind many of the problems and issues facing this country. It is also hoped that you will gain an understanding of how biologists and other scientists approach problems.

Specific Course Goals: By the end of this course, students will be able to answer questions that demonstrate an understanding of fundamental concepts of biology, including:

- 1) the scientific method and experimental design; the mechanisms of evolution and the biological outcomes of evolutionary processes; and the hierarchical nature of biodiversity (GEO 5; BEO 1-4);
- 2) perform a variety of standard lab techniques used in biological research (Lab: GEO 5);
- 3) use critical thinking skills and written communication skills to analyze and evaluate the content quality of written and visual media relating biological knowledge (GEO 4 & 7);

Attendance: Attendance in lecture is expected of all students and will be verified through participation in class using clicker responses; students not responding to clicker questions for > 20% of days throughout the semester will receive an “F” for the course due to non-attendance (updated records of your attendance **will not** be provided throughout the semester, therefore students who frequently miss class must be responsible for keeping track of their own attendance habits). If you do not have a clicker for a particular day in class, you will be recorded as “absent”. Excused absences for college-approved activities and in cases of personal emergencies (i.e., death in the immediate family or student hospitalization) will be approved at the discretion of the instructor if provided with suitable documentation (which may include doctors’ notes, hospital admittance forms, or obituaries). In the case of college-approved activities, students must provide a minimum notice of five (5) business days to the instructor so that accommodations can be made. Lecture exams missed without prior approval cannot be made up, and all points associated with missed lectures will be forfeited. Students missing lecture exams with prior approval must take exams **before** their scheduled absence; no student will be permitted to take a lecture exam after it has been administered to the rest of the class. Students with potential course conflicts that restrict them from arriving or leaving class on time should consult with the instructor immediately, and any student arriving > 5 minutes late will be marked as “absent” (verified through clicker responses).

Assessments:

Exams (300 points): The dates for all exams are included in the Tentative Schedule (i.e. subject to change). **YOU MUST BRING A PENCIL WITH YOU.** All cell phones must be turned off during exams, and students using cell phones during an exam will automatically earn a zero (0) for that exam. All book bags, books, purses etc. must be placed at the front or back of the room at the start of the exam; **NO EXCEPTIONS.** If you do not feel comfortable putting your purse, bag, books, etc. on the stage, do not bring them with you to class. Hats, sunglasses, or other cryptic attire cannot be worn during exams, earphones may not be used during an exam, and students will be required to sit every other row. Students are not permitted to leave the classroom during an exam once it has begun, and any students doing so will earn a zero (0) for that exam. **Once the first student has turned in their exam, no students arriving late after this time will be permitted to take the exam.**

Review sheets with topics on which the students will be tested will be provided prior to the exam. These review sheets will contain a list of topics that the student is expected to understand; the review sheets do NOT contain the details that may appear on the exam. While the professor makes a reasonable effort to make these sheets all inclusive, it is entirely possible that a topic will be inadvertently left off that will appear on the exam if covered in lecture.

There will be four exams (excluding the final) given throughout the semester. Each exam will consist of a variety of types of questions that will include, but are not limited to, matching, multiple choice, true/false, and labeling. Each exam will count for 100 points, and the lowest exam score will be dropped. If you miss an exam, this will automatically count for the dropped exam score.

There will be NO make-up exams. Only students with a previously-approved, University-related excuse may take an exam early. Your best policy: **DO NOT MISS EXAMS!**

Final (200 points): The final is mandatory, cumulative, and of a format similar to the other exams. The date of the final is Friday, December 6 (2:45 P.M. - 4:45 P.M.). **NO EARLY EXAMS WILL BE GIVEN UNDER ANY CIRCUMSTANCES!** Potential scheduling conflicts must be brought to the attention of the instructor as soon as possible, but having multiple finals on the same day does not represent a scheduling conflict...it represents being a typical college student.

Homework (100 points): Using the Connect website, students will be assigned tasks associated with the LearnSmart program (a part of the Connect platform). Each assignment is designed to insure that students have read the chapter material **before** such material is discussed in lecture. Twelve assignments will be given throughout the semester, and the top ten scores will comprise the homework grade.

Your current grade in the course can be calculated at any time by dividing the number of points earned you have earned (which will appear in BlazeVIEW) by the total points possible for assignments, exams, etc. completed to date (Total points possible for each assignment will also be shown in BlazeVIEW).

THERE IS NO EXTRA CREDIT FOR THIS COURSE!!! DO NOT EVEN BOTHER ASKING!!!

Grade Scale:

- A = 90-100%
- B = 80-89%
- C = 70-79%
- D = 60-69%
- F = < 60%

Withdrawing from the course: The last day to withdraw without penalty is Thursday, October 3, 2013. If you do not officially withdraw, and instead just stop coming to class, you will receive an F for the course.

Academic conduct: Cheating / plagiarism will not be tolerated and may result in a failing grade for the assignment, exam, or the class. The Department of Biology has a plagiarism policy, which can be viewed at any time on the department homepage.

Privacy Act (FERPA): The Family Educational Rights and Privacy Act (FERPA) prohibits the public posting of grades by social security number or in any manner personally identifiable to the individual student. No grades can be given over the telephone or email because positive identification cannot be made.

Students with disabilities: Students requiring special accommodations because of disability should discuss their needs with me as soon as possible. Those needing accommodations that are not registered with the Special Services Program must contact the Access Office for Students with Disabilities located in Farber Hall. The phone numbers are 245-2498 (voice) and 219-1348 (tty).

Student Conduct:

- 1) Children, friends, or pets are not allowed in lecture
- 2) **No active cell phones, iPods, or other electronic/multimedia devices in lecture** without instructor approval. This rule is in effect at the time class starts, and all electronic devices, if present, should be placed in bags or otherwise out of site. If usage of such items persists, students will be asked to leave. If a student refuses to leave or cannot be convinced to leave by his/her classmates, the instructor will ultimately leave the classroom, and students will still be responsible for material that would have been taught during that time. Repeat offenders may be dropped from the class by the instructor.
- 3) Each homework assignment will have a set number of days during which it can be completed, and students will always be made aware of the “completion window”. Online assignments will never be “reopened” once the completion window has closed, regardless of any reason students may provide for failing to complete an assignment. In addition, no student will be provided early access to online assignments.
- 4) Students that wish to bring laptop computers to class should seat themselves so as to eliminate distractions to classmates; if students are using such equipment in a distracting manner (i.e. checking email, web-surfing, listening to music, etc.) laptops will be banned from the classroom for all students.
- 5) Cheating of any kind will not be tolerated; this includes copying another student’s material, cheat sheets, electronic devices, etc. There will be no first warning, and I will recommend the maximum penalty for the first violation, up to and including **expulsion from the university**. As students, you are also responsible for policing each other. Consequently, anyone aiding a “cheater” or not reporting observed cases of cheating to the instructor will be considered an accomplice and subject to similar penalties as those actually cheating.

I maintain office hours for students needing to discuss course material, and these hours will always be available unless students are otherwise notified in advance. Office hours are meant to address specific questions students may have, not to re-teach lecture material in the case of student absence. If students cannot attend these scheduled office hours, they may make an appointment for an alternate time. However, if a student schedules an appointment outside of scheduled office hours and does not arrive, that student will lose the opportunity to schedule appointments outside of established office hours in the future.

NEVER, EVER, EVER, EVER EMAIL ME TO ASK WHAT YOU MISSED IN LECTURE IF YOU ARE ABSENT; IT IS YOUR JOB TO CONSULT WITH CLASSMATES AND DETERMINE WHAT YOU MISSED!!!

Notes/Study Tips:

- a) Remember when sending an email that your professor’s name is not “Hey”; an email should begin with Dear Dr. (insert name), then continue with your message written in actual English words (not text language), and conclude with terms such as “Sincerely”, “Thanks in advance”, etc. Realize that many older people (i.e. your professors) are not biologically linked to their phones in the ways observed in younger generations...please

allow up to three (3) business days before sending a follow-up email if you haven't received response.

- b) There is a documented positive relationship between how often you attend class and your grade...why pay thousands of dollars a semester to not take advantage of someone that you are paying to educate you?
- c) Educators recommend studying 2-3 hours per week for each credit hour, which means you should be studying 8-12 a week for this class, not counting the time spent in class. Without fail, the number one thing students say when describing why they did not achieve the academic goal they had set for themselves: "I should have studied more!"
- d) Don't simply write down the things that the instructor writes down; believe it or not, they may be saying something important even when they don't write it down! If you are not sure if it's important, write it down anyways, just to be sure. If your instructor talks too fast, ask (don't tell) him/her to slow down...this is your very expensive education, so get what you need out of it.
- e) The phrase "***I don't know***" is the most powerful phrase in the sciences, because it allows us to push past the boundaries of current knowledge. Students are often embarrassed to admit they don't know something, but not knowing is what has allowed the world's greatest scientists to uncover new things. Odds are, if you don't know, half of the class does not know either...
- f) When students say "I can multi-task while studying", what they really mean is "I enjoy doing twice as much work for half of the result". If you eliminate distractions (TV, music, crowds, etc.) your increased focus will allow you to absorb the information much faster and more completely, allowing you time for more enjoyable activities (unless studying is your most enjoyable activity).
- g) **BIOLOGY IS HARD!** Few students ever list something in the sciences as an "easy major", so the earlier you realize the difficulty of the field, the less likely you will be to panic, become unorganized, or, most often, blame the instructor for being "too tough".
- h) The phrase "*D for Degree*" no longer applies, as approximately 120,000 students a year are graduating with a biology degree, to such extent that just having the degree is no longer the easy way into getting a job. Due to the overabundance of degree-holders, those with lower GPAs will only have those jobs available to them that better students did not want (DON'T salt your food during an interview before you taste it)...
- i) Most students view higher education as the way to get a job...but you have a job right now as a student, and you should get into the habit of practicing good workplace ethics now: be on time, be prepared, and take responsibility for yourself (because no one else will!)

VALDOSTA STATE UNIVERSITY GENERAL EDUCATIONAL OUTCOMES (GEO)

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 perform basic algebraic manipulations and to use fundamental algebraic concepts to solve word problems and equations. 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.

DEPARTMENT OF BIOLOGY EDUCATIONAL OUTCOMES (BEO)

1. Develop and test hypotheses, collect and analyze data, and present the results and conclusions in both written and oral format used in peer-reviewed journals and at scientific meetings.
2. Describe the evolutionary process responsible for biological diversity, explain the phylogenetic relationships among the other taxa of life, and provide illustrative examples.
3. Demonstrate an understanding of the cellular basis of life.
4. Relate the structure and function of DNA/RNA to the development of form and function of the organism and to heredity
5. Interpret ecological data pertaining to the behavior of the individual organism in its natural environment; to the structure and function of populations, communities, and ecosystems; and to human impacts on these systems and the environment.

TENTATIVE Schedule: Subject to change

Date	Topic	Chapter Reading
12-Aug	Course Introduction	NA
14-Aug	What is Life?	1
16-Aug		
19-Aug		
21-Aug	What is Science?	
23-Aug	The Genetic Basis of Biodiversity	7
26-Aug		
28-Aug		
30-Aug		
	EXAM 1	
2-Sep	LABOR DAY - NO CLASS	
4-Sep	What is Evolution and How does it Happen?	11
6-Sep		
9-Sep		
11-Sep		
13-Sep	What is a Species?	13
16-Sep	What is the Evidence for Evolution?	12
18-Sep		
20-Sep		
23-Sep		
25-Sep	EXAM 2	
27-Sep	The Physical Template of Biodiversity	38
30-Sep		
2-Oct		
4-Oct	Population Ecology	36
7-Oct		
9-Oct		
11-Oct		
14-Oct	Community Ecology	37
16-Oct		
18-Oct		
21-Oct		
23-Oct		
25-Oct	How do we classify organisms?	12
28-Oct	Prokaryotes and Protists	16, 17
30-Oct		
1-Nov		
4-Nov	Protists and Fungi	19
6-Nov	EXAM 4	
8-Nov	Plants	18
11-Nov		
13-Nov		
15-Nov	Animals	20
18-Nov		
20-Nov		
22-Nov		
22-Nov	Threats to Biodiversity	39
25-Nov	THANKSGIVING BREAK - NO CLASS	
27-Nov	THANKSGIVING BREAK - NO CLASS	
29-Nov	THANKSGIVING BREAK - NO CLASS	
2-Dec	Review, Q + A, Practice Questions, etc.	
6-Dec	FINAL EXAM (2:45 - 4:45)	ALL