Biology 1010: The Evolution & Diversity of Life Fall 2005

Department of Biology, College of Arts & Sciences, Valdosta State University

Instructor: Dr. Leslie S. Jones **Office:** 1096 Bailey Science Center
Phone: 229-219-1337 **Email:** lesliesj@valdosta.edu

Office Hours: Mon 10:30-11:30 & Wed 2:00-3:00 or By Appointment. Please feel free to call the office or use email to schedule a convenient time. Anytime I am in my office, you are welcome to stop in to ask quick questions.

Textbook: Starr, C. & Taggart, R. (2006). Biology: the Unity and Diversity of Life. (11th Edition)
This book will provide critical scientific content and you are required to read the chapters listed in the Plan for Instruction before the lecture on the day they are listed. There will frequently be Inclass writing assignments that will be based on the reading. Any information in the text could be included on the examinations whether or not it is mentioned in class. The interactive CD is very well-designed and will certainly help you be sure that you understand the material.

Course Objectives: This class fulfils 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. 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." This lecture and the BIOL 1020 Biodiversity Lab are co-requisites that complement each other by covering parallel material.

Course Description: The class will meet on Mondays and Wednesdays from 3:30-4:45 in 1011 Bailey Science Center. This is a large lecture hall and class sessions will be based on visual PowerPoint presentations. Slides will consist mostly of images with very little text. This requires students to be present, listen carefully, and take careful notes in order to assimilate the course content. Lectures will not be taken from the text, so there is no reason to haul the book to class. Do not assume that these sessions will be endless monologues. When it is possible, there will be activities in class and I will frequently ask questions and appreciate voluntary responses. There will also be times that I will ask questions and expect students to answer these in your notes.

Instructional Philosophy: My role as the instructor is to provide coherent explanations of these aspects of biological science, but you hold the responsibility for learning this material. Just attending class, memorizing material, and taking the tests is not enough. You will only learn by making an effort on the assignments and studying because I design conceptual test questions that require you to think and demonstrate that you have mastered the material. Rote learning (memorization) is the most transient form of knowledge and is a waste of time because you will forget most of it very quickly. However, if you develop a true conceptual understanding of the material, you will not forget most of what you learn and it will be a much better use of your time and mine.

Academic Honesty: Members of the class are expected to maintain high standards of integrity. This course will use the VSU Handbook Code of Ethics as a basic standard of behavior, but everyone in the class is required to read the Biology Department Plagiarism Policy. Dishonesty will not be tolerated and any student misconduct will be reported to the Office of the Dean of Students. Evidence of cheating will result in no credit for the assignment or depending on the case, a grade of "F" for the course. Always cite your sources of information. Never copy text from a book or website and represent it as your own work.

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. Students not registered with the Special Services Program should contact the Special Services Office, Nevins Hall 1115, 245-2498.

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

Educational Outcomes:
"Describe the evolutionary processes responsible for biological diversity, explain the phylogenetic relationships among the major taxa, and provide illustrative examples." (Department of Biology – Educational Outcome #2 in the VSU catalog)

Enduring Understanding:
Recognize how misrepresentation of the Theory of Evolution and the failure to understand the distinction between scientific and religious knowledge has led to the Evolution/Creationism Controversy.

Essential Questions:
What is the nature of science as both a body of knowledge and a set of systematic processes?
How does the Theory of Evolution explain the history of life and the vast diversity of living organisms?

Plan for Instruction:
I. Nature of Science - background on how the scientific disciplines systematically strive to understand the natural world
II. Ecology - the interactions of organisms and their environments
III. Evolution -the explanatory framework for biological science showing genetic changes over time in populations
IV. Biodiversity - similarities among and differences between different taxonomic groups of organisms
V. Humans and the impact our species has on the dynamics of the natural world

Assessment:

Examinations	4 Midterm Exams (10% Each on Sections I-IV)	40%
	Comprehensive Final Exam	30%
Other Factors	Outside Assignments	10%
	In Class Writing Exercises	10%
	Attendance	10%

Class Sessions: Please be on time to class and if you are ever late, enter through the rear doors without disturbing the class. You can expect the meetings to last the full 75 minutes. Do not pack up you notebook or rattle your book bag until 4:45. This is a large lecture hall and there are 119 other people in the course, so I expect everyone to be considerate of the other students. Do not bring food or drinks into the auditorium. Turn off your cell phones & pagers before class begins. During the class session, refrain from holding private conversations. If I have to stop the lecture for a disruption more than once, you may be asked to leave. Repeated problems will result in a reduction of your grade or permanent removal from the course.

Attendance: You are expected to attend all class meetings and attendance will be taken on a random basis though the In-class Writing Exercises. Everyone is allowed 1 absence without penalty, but anymore than one will impact your grade. If you do miss class, you are responsible for obtaining notes from another student, so make contact with a classmate and exchange phone numbers early in the semester. Anyone who misses more than 20% of the class sessions can receive a failing grade for the course.

Examinations: Examinations will be multiple choice tests. Do NOT try to memorize the course material because the questions will probe for your understanding of the concepts that are the foundation of the course material. You are responsible for all of the information presented in the lectures and anything covered in the assigned chapters of your textbook. We will discuss the type of questions you can expect before the first exam and will go over the entire first exam during the following class session. Each of these tests will be scored for 100 points, but there will be 110 questions and you can miss any 10 questions without jeopardizing your grade. If you have an emergency and can't make the exam, be sure to contact me within 24 hours by office phone or by email. Make-up exams will only be given for valid reasons with documented excuses and these will be essay tests that are much more difficult. The final examination will be comprehensive, consist of 200 multiple choice questions, and cover all accumulated course content.

Assignments: During the semester, there will be a number of **Outside Assignments** that are designed to reinforce your understanding of the course material. These are due at the start of class, will be graded down 10% if they are turned in after class, and reduced by another 10% for every additional day they are late. These assignments should be typewritten, single-spaced and no more than one page in length. They will be graded on a 10 point scale. (10 = Excellent, 8 = Good, 6= Adequate, <5 = Deficient). If you miss the description of the assignment in class, it is your responsibility to contact a classmate. Periodically, we will also take time for brief **In-Class Writing Exercises**. These writing assignments will be constructed to prompt you to think about and issue and express an opinion. As long as you make thoughtful comments and write legibly, you will receive 5 points. If your statements are sloppy and do not indicate you have made a serious effort, the grade will be reduced to 2 points. These will be used as a record of attendance and if you miss more than one of these, your attendance grade will be reduced by 25%.

BIOL 1010 – Course Schedule

Date		Class Topic	Required Reading	Assignment
Aug	18	The Natural World	Class Syllabus	
	20	Biological Science	Chapter 1	Evolution Survey
	25	Patterns in Nature		Student Information Sheet
	27	Characteristics of Life		
Sept	1	**LABOR DAY HOLIDAY**		
	3	**MIDTERM EXAM # 1 – Nature of Science**		
	8	Exam Review		
	10	Biosphere	Chapter 48	Self-Evaluation from Test
	15	Ecosystems	Chapter 47	
	17	Communities	Chapter 46	Georgia Ecosystem Report
	22	Populations	Chapter 45	
	24	Symbiosis	Handout	Symbiosis Report
	29	**MIDTERM EXAM # 2 – Ecology**		
Oct	1	Myths & Truths about Evolution		Essay on Origins
	6	Evolution/Creationism Controversy		
	8	Origin of Life	Chapter 20	Report on E/C Controversy
	13	**FALL BREAK HOLIDAY**		
	15	Speciation	Chapter 19	Definition of a Species
	20	Evidence	Chapter 17	
	22	Genetic Change	Chapter 18	Evolution Essay
	27	**MIDTERM EXAM # 3 – Evolution**		
	29	Prokaryotes	Chapter 21	
Nov	3	Protists	Chapter 22	Disease Report
	5	Plants	Chapter 23	
	10	Fungi	Chapter 24	Diagram of Plant Evolution
	12	Invertebrates	Chapter 25	
	17	Chordates	Chapter 26	
	19	Primates		Primate Outline
	24	**MIDTERM EXAM # 4 - Biodiversity**		
	26	**THANKSGIVING HOLIDAY**		
	1	Human Diversity		
Dec	3	Behavioral Ecology	Chapter 49	Essay on Race
	8	Human Impact on the Environment		
	12	**CUMULATIVE FINAL EXAM – Friday, December 12th from 5:00-7:00**		

Strategies for Success in Biology 1010

If you want to do well in the course, please read the following:

Decide that You Plan to Succeed and Work Consistently for a Good Grade – It is your choice!

Start Working Hard at the Beginning of the Semester – Your effort should begin today. Do not fool around and suddenly decide to work after you get behind and need to dig yourself out of a big hole.

Attend Class and Take Detailed Notes – Class sessions will not be based on lectures identical to your book. The scientific topics will be explained differently and additional information will be brought in to complement your reading.

Keep an Orderly Notebook – If you use a spiral for class notes, have another folder where you can assemble all of your papers and outside information in preparation for studying for the tests.

Get to Know the Person Sitting Next to You – Before or after class, make contact so that you can look over at their notes if you miss something during lecture, get notes if you have to miss class, check on the specifics of assignments, and can study together for the exams.

Structure Regular Study Sessions – Set up a pattern of regular times that you attend to the course material and be sure to keep up with the material.

Pre-Read Chapters before the Lectures – Open the book and at least skim over chapters to get a basic idea of the subject and important terminology.

Finish Off Your Class Notes with a Short Summary – After class, go over your notes to be sure they make sense. It is good to write a paragraph or synopsis of the information covered to be sure that you understand. If not, read up on the subject in your text or on the Web or come in for help on anything you do not understand.

Re-Read Chapters after Class Sessions – If you know you need to work hard for good grades, take detailed study notes on every chapter to reinforce the concepts. Pay special attention to the summaries at the end of the chapter.

Use the Interactive CD – The exercises can serve as a good way for you to determine whether or not you really know the information.

Make a Vocabulary List of Important Terminology – Construct a list with definitions written in your own words. Drill yourself until you are sure you know them. If any are troublesome, try writing a sentence that uses the term.

Use the Web for Supplemental Information – If you are interested in something or need another explanation, find and print a Website that you can use.

Come In for Additional Help – My Office Hours are a time that I will be in my office to meet with students. I will be happy to make appointments at other times.

Plan Ahead for Tests – Spend at least a week studying gradually. Stop and rest your brain right before the test. Give the information time to sink in.

Do Not Pull "All-Nighters" – These tests require you to think, so you will not do well if you are too tired to reason and figure out the answers.