

Biology 1010: The Evolution & Diversity of Life Spring 2015

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

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Emails: Please use our Blazeview emails for course matters

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Office Hours: Tues 2:00-3:00 & Thurs 1:30-2:30 or By Appointment. Please feel free to call the office or email to schedule a more convenient time. Anytime I am in my office, you are welcome to stop in to ask quick questions.

Instructional Design: There will be online assignments to introduce you to lecture information before every class. These will be listed on the syllabus and on the calendar in Pearson's Mastering. You will also complete online homework that will give you the opportunity to practice answering questions and identify any areas that need clarification. This is so that we can use class for elaboration of important concepts, explanation of anything that was unclear, and learning activities that are more effective than sitting and taking notes.

Text: Biology: The Core (1st Edition) Eric J. Simon (2015) Pearson

Required Technology Platforms:

LMS=Blazeview: Learning Management System - Your VSU Account: This will be used for all class communication, listing your assignments, and access to various resources. (<http://www.valdosta.edu/academics/elearning/blazeview-d2l.php>) Free

CMS=Mastering - Course Management System - This is a complete electronic version of the book and a versatile software product that will be the basis for most of your assignments. It is integrated with D2L, so you must access the program from a direct link in Blazeview initially, and then you can bookmark the page for future assignments.

SRS=: Learning Catalytics: Student Response System called Learning Catalytics is part of Mastering and is a BYOD Bring Your Own Device alternative to clickers that uses (SmartPhone, LapTop, I/Android Pad, or Text Phone) This will play an important part as the communication tool for attendance & class participation grades. You are responsible for having your device in class for every session or you will be considered absent.

Educational Outcomes: 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." The BIOL 1020 Biodiversity Lab is a co-requisites that complements this course by covering parallel material.

Course Content: To meet that VSU Core Outcome, there is a short introduction at the start of the course dealing with the first chapter in the text. The first module is on *Evolution* and will describe the evolutionary processes responsible for the diversification that has taken place since the origin of life. The second module is *Biological Diversity* and covers the breadth of organisms in the living world. In the *Ecology* module, emphasis is on the Biology Departmental outcomes that call for the ability to "interpret ecological data pertaining to the behavior of the individual organism in its natural environment and the structure and function of populations, communities, and ecosystems."

Academic Honesty: Class members 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. 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, Farber Hall 1115, 245-2498.

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

BIOL 1010B Course Objectives

Essential Questions:

How does the Theory of Evolution explain the history of life and the vast diversity of living organisms?
 How have biologists classified organisms in order to recognize their similarities and differences?
 How do abiotic factors influence the communities of organisms within the ecosystems that make up the biosphere?

Basic Knowledge & Skills Students Will Acquire:

Evolutionary History
 Biological Diversity of Living Organisms
 Principles of Ecology

Learning Outcomes - Students will be expected to:

- I. Describe the evolutionary processes responsible for the diversity of living organisms.
- II. Distinguish each of the major Taxa and describe the defining characteristics.
- III. Compare and contrast how abiotic factors influence the biotic features of major ecosystems in Georgia.

Proof of mastery for each will be demonstrated by the knowledge & skill shown in:

- I. Online Mastering Assignments – Completion of reading and interactive, adaptive programs.
- II. Participation & Writing – Active responses during lecture & summaries of course content
- III. Midterm & Final Exams - Based on Text, Lectures, Discussions, Field Trips, & Videos

Attendance: You are expected to attend all class meetings. Attendance will be taken via the Learning Catalytics program. If you forget your phone, you will not be able to earn participation points for that day. You will only be allowed to sign in for attendance 3 times during the semester. Being tardy or leaving early 3 times is an unexcused absence. If you do miss class, you are responsible for obtaining notes from another student. 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. I will not give you the notes or tell you what you missed because there are too many students in the class.

Assignments: We will use the *MasteringBiology* software program from Pearson that is designed to improve your reading comprehension and give designed practice working to learn the course content. This is an adaptive program that adjusts to a student's individual skills, especially the ability to know what you understand. The *Mastering* package also has quizzes and practice activities. Any electronic assignments and the electronic submission of your papers must be done by the deadline posted in Blazeview. Late submissions will not be accepted. No Exceptions! Paper assignments will be typewritten, single-spaced and no more than one page in length. Your formal name and the date should be in the upper right corner and there should be a title. Papers will be graded for both content and writing on 10 point scales. (10 = Excellent, 8= Good, 6= Adequate,). If you miss the description of the assignment in class, it is your responsibility to contact a classmate. Assignments will also be posted on Blazeview.

Assessment:

Online Assignments –MasteringBiology & Blazeview Chapters, Writing Assignments , Quizzes & Pretests	30%
Class Participation Attendance, Learning Catalytics, & Other Participation Points	20%
Examinations 3 Midterm Exams (10% Each) & Comprehensive Final Exam (20%)	50%

BIOL 1010B Spring 2015 – Assignments in *Biology: The Core*

<u>Date</u>	<u>Topic</u>	<u>Assignments Due BEFORE Class (No Exceptions!)</u>
Jan 12	Levels of Organization	1.1, 1.2, 1.5
14	Characteristics of Life	2.1, 2.2, 2.7, 9.5 & Student Information Sheet
EVOLUTION Unit		
21	Myths & Truths	Open Book Online Test
26	The E/C Controversy	1.7, 1.8
28	Origins	7.1, 7.8, 8.1, 12.19
Feb 2	Evidence	7.3, 7.4
4	Reproduction	7.2, 7.9
9	Population Genetics	7.5, 7.6
11	Timing	7.7, 7.8, 7.10
16	Human Evolution	10.1, 10.6, 10.11
18	Human Diversity	Human Classification Chart on Blazeview
23	Evolution Exam	Online Practice & Review
BIODIVERSITY Unit		
25	Classification	1.6, 7.11, 7.12
Mar 2	Advances	1.4, 8.6, 8.8
4	Prokaryotes	8.2, 8.3, 8.4
9	Protists	8.7
11	Fungi	9.1, 9.2
16	Plants	9.3, 9.6, 9.11 (9.7, 9.9, 9.10)
18	Invertebrates	10.2, 10.3, 10.4, 10.5
SPRING BREAK		
30	Chordates	10.8, 10.9, 10.10
Apr 1	Biodiversity Exam	Online Practice & Review
ECOLOGY Unit		
6	Abiotic Factors	12.1, 12.2, 12.4
8	Energy Flow	12.3, 12.9
13	Biomes	2.5, 12.5, 12.6, 12.7
15	Interactions	12.8
20	Biodiversity	12.10, 12.11, 12.12
22	Populations	12.13, 12.14, 12.15
27	Ecology Exam	Online Practice & Review
29	Human Impact	12.16, 12.17, 12.18
May 4	Exam Review	Essay Due on Blazeview
May 8	Final Exam – Friday - 5:00-7:00 pm	

BIOL 1010B Class Protocol

Class Sessions: Please be on time to class and if you are late, enter through the rear door without disturbing the class. I expect everyone to be considerate of the other students. Do not bring food or drinks to class. Since cell phones will be used instead of clickers, you may use them for class work, but not social activity. During the class session, please refrain from holding private conversations. I will stop class for rude behavior. 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.

Examinations: Examinations will be multiple choice tests that assess. Do NOT try to memorize the information because the test questions will probe your understanding of the concepts. I am not interested in whether you are good at rote learning. We will discuss the type of questions you can expect before the first exam and will go over part of the first exam during the following class session. Each of these tests will be scored for 100 points, but there will be 110 questions, so 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 for 20% of your grade. Your Test Scores will be available on Blazeview.

eLearning on McGraw Hill's Connect

Your success in this course depends on your completion of the online assignments. These comprise 50% of your grade, so they are very important because they help you learn the information and prepare for the tests. Effort on these assignments is clearly correlated to the grades students receive. However, do not just do this work without thinking. You will waste the time you spend doing these activities, if you do not concentrate on learning as you do it.

The *LearnSmart* (LS) prompts are lower order questions that drill on vocabulary and basic concepts. Think about the questions when you read the prompts. Think about what the answer is. Indicate how confident you really are. If you get the question wrong, ask yourself why you did not know it. That type of thinking is the best thing you can do to improve your learning. If you look back and it is right in the book, consider the fact that you might need to read more carefully.

You will find the lectures much easier to understand after finishing these exercises. As you do *LS*, jot down words on questions you miss so that you can be sure to look for those explanations in lecture. If something is still unclear, be sure to ask. Do not expect questions like these on the test because those will be conceptual and require higher order thinking.

Decide on an alias for *LearnSmart* so that you can see how well you do compared to your classmates. You must send Andy your alias by email because we are keeping track and will not only announce the winner, but the top 5 members of the class will get extra credit on their test grade for working hard. (Last year one student went from a B to an A on her final grade because she was always in the top five.) You can start as early as you want for all of the chapters in each unit to be sure you get the chapters finished before the deadline.

LearnSmart is an adaptive program. The number of points you get and the number of times you see a topic depends on getting the correct answer and how certain you are that you know the answer. Be sure to use the Confidence prompts carefully. You get the most points if you say you are "sure" and get the answer correct. You will also finish faster if you do that. However, if you say you are "sure" and get it wrong, you lose big points. If you get it wrong with one of the other prompts, the penalty is not as bad. You will get other questions on that topic or the same question until you master it.

There will be 9 short writing assignments that help you think about the course content and allow you to express your opinions. These are all listed as *Connect* assignments and have a paper/gem clip logo. Your papers must be submitted online by the deadline. Your grades for these papers will be posted online. You get 5 points for the scientific content and 5 points for the quality of the writing, so be sure to read the suggestions on the next page. The last 2 papers will be longer and the scores will be doubled. DO NOT submit your papers by email to either of us. They only count if they are turned in on time and online!

So that you can prepare for the tests and exam, there will be a *Connect Quiz* that is due at midnight the night before these. Quizzes will be interactive and higher order questions, so these should give you an idea if you are prepared. You

can do these quizzes 3 times and your best score will count. You have to start over and do the whole thing, though. There should be feedback to help you find the content in your book if you miss these questions.

As we finish each unit, you should go to the reports page to see which topics were a problem for you. The reports even shows which *LS* questions you missed the first time. You can go back and drill on *LearnSmart* as often as you want, but you only get credit for completing *LS* before the lecture deadline.

There are 150 students in this class, so it is your responsibility to log on and learn to use these programs. If you miss a deadline, we are sorry, but it is not fair to other students to make exceptions.

If you have problems, YOU must call McGraw Hill's Customer Support! Get the Case Number and if they do not help you, then email Dr. Jones and be sure to send me the number so I can try to do something about it.

The McGraw Hill Customer Support number is 800-331-5094.

“Top Ten” Strategies for Success in Biology 1010

(You can even count up by reading from the bottom if you are a David Letterman fan)

If you want to do well in or even just pass this course, you need to think about your own approach to studying. You will not pass unless you work hard so (before you waste your time and someone’s tuition money) consider the following:

#1. Pre-Read Chapters before the Lectures – The *LearnSmart* chapter assignments are designated on the day the lecture will cover the specific topic. Read the book so that you will come in knowing how to spell words and have some familiarity with key ideas. You are required to complete 15 *LearnSmart* exercises during the semester.

#2. Attend Class and Take Detailed Notes – The information in class sessions will not be identical to your book. The scientific topics will be explained differently and additional information will be covered. Think as we go along, and if you do not understand - ask questions. Clicker prompts are designed to get you thinking, so you can evaluate your own understanding of the subject. **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.

#3. Summarize Your Notes Every Day after Class - Write a short Summary or synopsis of the information covered to be sure that you understand it all. 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. By going over your notes to be sure they make sense and writing a paragraph in your own words, you will be way ahead when it is time for a test.

#4. Get to Know Someone in the Class – Make contact with a student that sits near you. This is so that you can quickly look over at their notes if you miss something during lecture. Get notes from them if you have to miss class, and check on the specifics of assignments by phone or email. You can also study together for the exams.

#5. 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 assignments (which are not accepted if they are late). **Re-Read Chapters after Class Sessions** to be sure you have mastered the material. If you know you need to work hard for good grades, take detailed study notes on every chapter to reinforce the concepts.

#6. Make a Vocabulary List of Important Terminology – Construct a list of the terms you do not know and define them in your own words. As you go through *LearnSmart*, take note of concepts that are challenging. Drill yourself until you are sure you know these words. If any are particularly troublesome, try writing a sentence that uses the term. You must understand the “language of biology” and there is plenty of it!

#7. Use the Assignments to Be Certain You Know the Content – *LearnSmart* is a drill on lower order questions that serve as an introduction to the vocabulary. The papers prompt you to think outside of the box and will reinforce the content. The *Connect* quizzes for each unit are interactive biology exercises that serve as a good way for you to determine whether or not you really know the information. Pay special attention to the summaries at the end of the chapter and practice those questions if you need more.

#8. 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. If you do not ask, I can’t help you! There are designated Biology tutors in the Student Success Center who can also help.

#9. 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.

#10. 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** – Do not fool around and suddenly decide to work after you get behind and need to dig yourself out of a big hole.