Biology 1010: The Evolution & Diversity of Life Fall 2015

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

Instructor: Dr. Leslie S. Jones
Office: 1096 Bailey Science Center
Emails: Please use **our** *Blazeview* emails for course matters
My VSU email lesliesj@valdosta.edu should only be used only if it is urgent.
Phone: 219-1337
Office Hours: Tues & Thurs 2:00-3:00 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 almost every class. These will be listed on the syllabus and in *Blazeview* on a calendar. 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: Concepts of Biology, Mader (2016) McGraw Hill in the Connect Platform (eBook & eLearning)

Required Technology Platforms:

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

CMS=McGraw Hill *Connect*: Course Management System - This is a complete electronic version of the book and a versatile software product that will be the basis for the pre-reading assignments and graded pre-tests. (http://connect.mheducation.com/class/l-jones-b---tr-500-615)

SRS=: Turning Point Technologies: Student Response System – You will be required to have your own clicker in class every day. This will be used for interactive Q&A and to track attendance.

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, the first chapter in the text will be expanded into a unit on the Nature of Science to start the semester. In the second ***Ecology*** unit, 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." The final unit covers ***Evolution*** and will describe the evolutionary processes responsible for the diversification that has taken place since the origin of life.

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. Any fraudulent use of clickers will result in the same penalty. I expect to see one and only one clicker on your desk at every class session.

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 clicker program or a sign in sheet. If you forget your clicker, 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 *Connect* software program from McGraw Hill 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 *Connect* package also has quizzes and practice activities. Any electronic assignments on *Connect* and the electronic submission of your papers in *Blazeview* must be done by the deadline. 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. Assignments will also be explained and posted on *Blazeview*. Papers will be graded for both content and writing on 10 point scales. (10 = Excellent, 8= Good, 6= Just Adequate,). If you miss the description of the assignment in class, it is your responsibility to contact a classmate. Assignments will also be explained and posted on *Blazeview*.

Assessment:

Online Assignments	
LearnSmart	20%
Connect Practice & Pretests	15%
Blazeview Writing Assignments	15%
Examinations	50%
3 Midterm Exams (10% Each) & Comprehensive Final Exam (20%)	

BIOL 1010 - Tentative Course Schedule and Plan for Instruction

Dates	Topics	Assignments
The Nature of Science		
1. The Natural World		
Aug 18	- Levels of Organization	Alphabetical Hierarchies
20	– Course Information	Syllabus
2. The Living World		
25	- Life	Purchase & Register Clickers
27	– Biological & Other Sciences	Register for Connect & Student Info Due 9/9
3. The Scientific Enterprise		
Sept 1	– Processes & Reasoning	Mythos & Logos Paper & Survey (Due 9/3)
3	- Classification & Taxonomy	Read Chapter Sections 16.4 & 16.5 Ch. 1 *LearnSmart*: Due 9/4
4. The Nature of Science		
8	– Unit Test	Pretest (3 Attempts) Due 9/7
10	- Test Review	Personal Reflection Due 9/13
The Revelations of Ecology		
5. Global Variation		
15	– Patterns on Earth	LS 40.1 - 40.3
17	– Significance of Water	LS 40.4 - 40.13
6. Local Systems		
22	– Nutrient Cycling	LS 39.11 - 39.14
24	– Energy Flow	LS 39.7 – 39.10
7. Organismal Relationships		
29	– Population Dynamics	LS Ch. 37
Oct 1	– Animal Behavior	LS Ch. 38
8. Interdependence		
6	– Coexistence	LS Ch. 39.1-39.6
8	– Symbiosis	Ecology Practice Due 10/9
Oct 8th = Midterm		
9. The Revelations of Ecology		
13	- **NO CLASS FALL BREAK**	
15	- Unit Test	Ecology Pretest Due 10/14
The Theory of Evolution		
10. The Evolution/Creationism Controversy		
20	– Myths & Truths	Ecology Unit Reflection
22	– Social Disputes	
11. Evolutionary Thinking		
27	– Evolutionary Thinking	LS Ch. 14
29	– Evidence	
12. Evolutionary Change		
Nov 3	– Natural Selection & Speciation	LS Ch. 15
5	- History of Life	LS Ch. 16
13. The Other Kingdoms		
10	- Origins & Prokaryotes	LS 17.5-12
12	– Protists, Plants & Fungi	LS Ch. 18 & 19
14. Our Kingdom		
17	– Animals	LS Ch. 20.1, 3-5, 7-16 (Not 20.2 & 20.6)
19	– Human Evolution	LS Ch. 21 Evolution Practice Due 11/21
15. The Theory of Evolution		
24	– Unit Test	Evolution Pretest (Due 11/23)
26	- **No Class - Thanksgiving**	
16. Human Impact		
Dec 1	– Anthropogenic Disruption	LS Ch. 41
3	– Sustainable Practices	

COMPREHENSIVE FINAL EXAM – Wednesday, December 9th from (5:00-7:00)

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. I am not going to police cell phones and you will be able to use them for some class activities, but not social activity. If I see you with ear buds in or texting (and it is obvious) I may stop the class to speak to you. During the class session, please refrain from holding private conversations. I will also stop class for rude behavior. If I have to stop the lecture for a disruption more than once, you will be asked to leave. Repeated problems will result in a reduction of your grade or permanent removal from the course.

Computer Assignments: 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 can start as early as you want for all of the chapters in each unit to be sure you get the chapters completed on time.

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.

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. 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 and be sure to send me the case number so I can try to do something about it.

There will be short writing assignments that help you think about the course content and allow you to express your opinions. 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 – they will not be graded. If you miss a deadline, I am sorry, but it is not fair to other students to make exceptions.

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 show 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 80 students in this class, so it is your responsibility to log on and learn to use the *Blazeview & Connect* programs after I explain them in class.

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 3 tests will count for 10% of the grade and will be 100 questions. 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* about 24 hours later.

Expectations on BIOL 1010 Writing Assignments for Dr. LS Jones

Objective
Written assignments will reinforce class lessons and will help you to learn, outside the classroom, through your own thinking. Papers are an opportunity to display your knowledge through more than just exams or what you might or might not say in class. These assignments also allow you to show your own style of expression and personal interests, so you should take pride them.

Focus
Well-crafted writing always has a specific purpose. Every paragraph or paper should have a distinct thesis or central idea. Your thesis should directly address the nature of the writing assignment. Decide on the topic and a specific case you want to make before you start writing. Write the thesis or topic sentence down and check back throughout the writing process to be certain that the work supports it. Concentrate on demonstrating your understanding of the scientific information.

Paper Organization
Before you begin to write, think through how you plan to develop your thesis and use an outline to structure the paper. An Introduction and Conclusion will be the first and last paragraphs of your paper. Start paper with something catchy to interest the reader. Make it perfectly clear, in this introductory section, what your point or central idea will be. Support that concept throughout the body of your paper. Paragraphs in the middle will be the Body of your text. Subheadings should be used for clarity. Your assignments in this class should usually be in first person. Avoid using statements such as "In this paper I will discuss…" since it is much more sophisticated to avoid this type of "crutch statement."

Paragraphs
Divide the paper by major themes and make each of these a distinct paragraph. You should have at least 3 paragraphs on a 1-page, single-spaced paper. The first sentence of each paragraph is a topic sentence that shows what the paragraph cover. ONE SENTENCE IS NEVER AN ENTIRE PARAGRAPH because there should be at least 3 sentences elaborating any significant idea.

Format
A header on the upper right should include the student's name and the date of submission. Each paper should have a creative title identifying the approach to the assignment. Since the course will be paperless, coversheets are not necessary. Your papers are to be typed using something comparable to 10-12 point Times New Roman type, single-spacing, and reasonable (0.5 to 1 inch) margins. Other professors often expect double-spacing, **I require single-spacing**. The lengths of these papers are stated in the assignments. After your draft your ideas, if the paper is too long, go back through and shorten it up by taking out the less important aspects. If it is too short, go back and incorporate more support or add more detail to what you are saying. When I say 1 page that means one sheet of paper that is full of text. Put your references and heading on that sheet. Use the word counting function on your word processor to be sure your text is 600-800 words per assigned page when single-spaced.

References
Any very general scientific information does not need to be cited. We consider this common knowledge because the place you found it is not the original source of the information. How would you know? The answer is if you can find the same information in 2 or 3 books, it does not require a citation in the text or a reference at the end of the paper. However, you must be very careful about giving appropriate credit to the sources of any original outside information that you use. If you use original information, it should be cited in the text of the paper. You also should have properly formatted references at the end of the paper that include: Author (Last name, Initials), Year (In parentheses), Title, Place & Name of Publisher, Pages. Use the APA or American Psychological Association style and check the web if you want an example of this. Even WWWeb sources must be cited properly. Be sure to reword or paraphrase text from any of your sources to avoid plagiarism. Paraphrasing means changing more than 1 word in a sentence. Think about what something says and completely restate it in your own words. No direct quotes are allowed in papers for this course to prevent you from making your paper look like a mosaic of other people's ideas. The point of writing is to demonstrate your thinking, so first person is usually fine.

Grading
Your assignments will be described in detail in lecture, so listen carefully and be sure that you know what is expected or ask about anything that is unclear. Grades will be docked for any failure to follow directions precisely. If you need more clarification than is given in the *Blazeview* description, contact your classmates by email, phone, or posting a question on the *Blazeview* discussion board. Focus on the objective of the assignment and address it clearly in thesis of your paper. You can dramatically improve your work if you critique your own rough draft and revise it at least once. Outside feedback can also make a difference. Proofread to avoid careless errors. Spelling, Punctuation, and Grammar do effect our impression of the quality of your presentation. These papers will be graded on Effort, Quality, Organization, Content, Proper citations and whether or not you followed these directions. I will look specifically at extent of your coverage of the topic and the clarity in your presentation of the material. If you need assistance with your writing, please see me for help and/or contact the Student Success Center. There will be a due date on the *Blazeview* assignments. If you miss that, you have 24 hours to submit the assignment late with a 10% reduction in the grade before you are locked out. I will not accept late work after that!

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

 # 1. Pre-Read the Book & Do *LearnSmart* before the Lectures – The *Connect* chapter assignments are due on specific days, before class when the lectures will begin covering the specific topic. Read the book so that you will come in knowing how to spell words and have some familiarity with key ideas.

#2. Attend Class and Take Detailed Notes – The information in class sessions will not 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. If you miss something in lecture, leave a space in your notes where you can look it up on the web or come to office hours for an explanation. 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 next to you in class. 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 the Text after Class Sessions** to be sure you have mastered the material. Find Websites on the topic for more information. If you know you need to work hard for good grades, take detailed study notes on the book modules to reinforce the concepts.

#6. Make a Vocabulary List of Important Terminology – Construct a list of the terms you do not know and define then 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* will check your familiarity with the vocabulary. The *Blazeview* papers prompt you to think outside of the box and will reinforce the content. The *Connect* practice activities and pre-tests 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.

#8. Get 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 also designated Biology tutors in the Student Success Center who can also help.

#9. Plan Ahead for Tests – Write the dates in your calendar, then count back one week to remind yourself to start preparing. 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.