

# Biology 1010A: The Evolution & Diversity of Life Fall 2017

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

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<b>Emails:</b>	<b>Please use our <i>Blazeview</i> emails for course matters</b> My VSU email <a href="mailto:lesliesj@valdosta.edu">lesliesj@valdosta.edu</a> should only be used only if it is urgent.		

**Office Hours:** Mon & Wed 11:00-12:00 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 questions.

**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.

**Instructional Design:** Given that the student/instructor ratio is over 100/1 there will be certain constraints, but efforts will be made to make this more than a mundane lecture class. Since memorization will not be enough to succeed in this biology class, active learning will be promoted via online assignments in a *Connect* program associated with the eBook. These introduce you to lecture information before every class, and deadlines will be listed on the syllabus and the assignment page in *Connect*. You must keep track of the deadlines because these will not be reopened for any reason. 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 just sitting and taking notes. There will be one Personal Essay assignment for each unit to provide an opportunity for thought and discussion of the relevance of each topic. You will also be assigned online interactive homework for each unit called a Practice assignment. These will give you 3 graded opportunities to apply the information and identify any areas that you need to study more extensively. Before each exam, you will have access to a Practice Test which contains a large pool of multiple choice question from which you will have 3 graded chances to try 50 questions as preparation. On the Practice and Pretests, only your highest grade out of your 3 attempts will count.

**Academic Honesty:** Members of the class are expected to maintain high standards of integrity which specifically means doing your own homework. This course will use the VSU Handbook Code of Ethics as a basic standard as well as the Biology Department Plagiarism Policy posted at: <http://www.valdosta.edu/colleges/arts-sciences/biology/documents/resources/PlagiarismPolicy.pdf> Students are required to present a VSU ID card prior to any exam in the course. Evidence of dishonest conduct or cheating will result in no credit for the assignment and depending on the case, a grade of "F" for the course. Do not expect lenience for claims that on the grounds of not knowing better. You will be reported to the Dean of Students and the incident will be on your record. Employers such as school systems do call that office at VSU to check on whether you have a record of such infractions.

**Access Statement:** Students with disabilities who are experiencing barriers in this course may contact the Access Office for assistance in determining and implementing reasonable accommodations. The Access Office is located in Farbar Hall. The phone numbers are 229-245-2498 (V), 229-375-5871 (VP) and 229-219-1348 (TTY). For more information, please visit VSU's Access Office or email: [access@valdosta.edu](mailto:access@valdosta.edu).

**Title IX Statement:** Valdosta State University (VSU) is committed to creating a diverse and inclusive work and learning environment free from discrimination and harassment. VSU is dedicated to creating an environment where all campus community members feel valued, respected, and included. Valdosta State University prohibits discrimination on the basis of race, color, ethnicity, national origin, sex (including pregnancy status, sexual harassment and sexual violence), sexual orientation, gender identity, religion, age, national origin, disability, genetic information, or veteran status, in the University's programs and activities as required by applicable laws and regulations such as Title IX. The individual designated with responsibility for coordination of compliance efforts and receipt of inquiries concerning nondiscrimination policies is the University's Title IX Coordinator: Maggie Viverette, Director of the Office of Social Equity, [titleix@valdosta.edu](mailto:titleix@valdosta.edu), 1208 N. Patterson St., Valdosta State University, Valdosta, Georgia 31608, 333-5463.

**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:

What has made the natural sciences so effective at unraveling some of the mysteries of life & the universe?

How does the Theory of Evolution explain the History of Life, Biological Diversity, & the Interdependence of Living Organisms?

## Learning Outcomes - Students will be expected to:

- I. Distinguish the unique features of the natural sciences and the characteristics of living organisms.
- II. Describe the evolutionary processes that have been influential throughout the history of life.
- III. Compare and contrast the basic characteristics, classification, & ecology of living organisms.

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

- I. Online on *Connect* Assignments – Completion of reading, *LearnSmart*, Practice, & Pretests, & short Papers
- II. Midterms & Final Exam - Based on Text, Lectures, Discussions, & Videos

## Assessment:

### Online Assignments

LearnSmart	10%
Connect Practice & Pretests	10%
Personal Essays & Other Blazevieview Assignments	10%
Attendance*	10%

### Examinations

4 Midterm Exams (10% Each) & Comprehensive Final Exam (20%)

## Examinations:

Examinations will be 100 question multiple choice tests that assess conceptual understanding of course content. 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 4 tests will count for 10% of the 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 150 - 200 multiple choice questions, and cover all accumulated course content for 20% of your grade. Your Test Scores will be available on *Blazevieview* approximately 24 hours later.

**\*Attendance:** You are expected to attend all class meetings. A class list will be passed around every day for you to initial. Being tardy or leaving early 3 times is counted as an unexcused absence. If you arrive late for class, go up the stairs and enter the back of the room, sit in the back section on the right and be sure to contact the TA so that you are marked on his Tardy list. The TA will be in charge of Attendance and it is up to him to decide whether absences will be excused or not. If you do miss class for any reason, you are responsible for obtaining notes from another student. Make contact with a classmate and exchange phone numbers early in the semester. I will not give you the notes or tell you what you missed because there are too many students in the class. Anyone who misses more than 20% of the class sessions will receive a failing grade for the course. Here is how your grade will be calculated:

No Absences	125%
1 Absence & All Made-Up	100%
2 Absences	75%
3 Absences	50%
4 Absences	25%
More than 4	0%
More than 6	Course Failure

**Email:** We are going to use the *Blazevieview* email for class. There is a certain standard of etiquette in higher education that is very different from the way you interact with your friends while texting. My VSU email is for emergencies.

My title is Dr. Jones and start any email with that included in a greeting.

The first thing you should do is tell me which of my classes you are in.

The next sentence should contain the reason for your message.

After you explain yourself using good grammar & spelling – This is not a “text message”

Proofread – I do not expect garble from people who are working toward a college diploma

Close the message properly showing you know the proper decorum to use with your professor

Finally, if you are not polite, do not expect a response from me – I will be busy filing it in my “Rude Email” file, and I may enter it in the faculty contest for the “Rudest Email of the Year”

## BIOL 1010B Class Protocol

**Class Sessions:** Most students come to class to learn and I will not tolerate behavior that disrupts the learning environment. Come to class prepared to concentrate & pay attention. Since some people may not know what is expected in a college classroom, the following rules should make this clear. If I have to stop class and speak to you about a disruption, I will ask to see you after class, and if it happens more than once you will be told to leave.

**Class Rules:**

1. Attend to your personal needs before class and refrain from getting up during class unless it is urgent.
2. Class will start promptly at 2:00, please have your notebooks open and be ready to pay attention and begin.
3. Once class begins, refrain from side conversations. If you are asking about a word in lecture, make it short & quiet.
4. If a classmate is being rude or distracting you, let them know or say "Shhhhhh" loud enough for me to hear.
5. The VSU rules are no eating or drinking in the lecture hall. Water bottles are fine.
6. You are welcome to have your laptops, pads, & phones in class to record lectures, look up terms, and photograph slides. However, this is not an invitation to skype, take calls, or read & send texts. If anyone is bothering you with such behavior, report them to me after class or by email. There will be grade penalties for this type of disruption.
7. Class will end at 3:15, unless you see "THE END" on a slide before, so do not pack up & rustle your packs before this.

**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>)

**CMS-McGraw Hill Connect:** Course Management System - This is a complete electronic version of the book and a versatile software product for the graded, adaptive pre-reading *LearnSmart*, practice assignments and pre-tests.

**Text:** Marielle Hoefnagels -Biology: Concepts & Investigations 4<sup>th</sup> Ed.(2018) McGraw Hill in the *Connect* Platform (eBook & eLearning) The Bookstore charges \$106.25 for the same access number that can be purchased directly from publisher for \$85.00 using a credit card on the registration site: **<http://connect.mheducation.com/class/l-jones-fall-2017-5>** Everyone may sign up for a free 2-week trial until your financial aid money is available or you are sure you will stay in the class. If you want a hard copy, you can purchase a loose-leaf version for \$25.00 with a credit card when you register for *Connect*.

**McGraw Hill Customer Support:** Call **(800) 331-5094** if you have any problems with the program. If you have problems with *Connect*, YOU must call McGraw Hill. Get the Case Number. If they do not help you, then email me in BlazevieW and be sure to send me the case number so I can try to do something about it.

We will use the *Connect* software program from McGraw Hill to give you designed practice working on the course content in LS (*LearnSmart*) which is an adaptive program that adjusts to every student's individual skills. If you pay attention and learn as much as you can in LS you will get far more out of the lectures. Your success in this course depends on your completion of these online assignments. These comprise 30% of your grade, and they are very important because they help you learn the information and prepare for the tests. Effort on these assignments is directly correlated to the grades students receive. You waste the time you spend doing these activities, if you do not concentrate on learning as you do them.

The *LearnSmart* (LS) prompts are lower order questions that drill on vocabulary and basic concepts. Think about the questions when you read the prompts and 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. *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. You can go back and drill on *LearnSmart* as often as you want after the deadlines.

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. Any online assignments on *Connect* must be done by the deadlines. Late submissions will not be accepted. No Exceptions! 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. So that you can prepare for the tests and exam, there will be a *Connect Practice* activity toward the end of each unit. A *Connect Pretest* is due at midnight the night before the exam. Practices & Pretests will be interactive and higher order questions, so your grades on these should give you an idea if you are prepared. You can do these unit assignments 3 times and your best score will count. Find your Metacognitive score in the report section and compare it to the grade you want on a test because there is usually a high correlation between these and how people score on the tests.

# Writing Assignments

**Objectives:** In order to encourage you to see the relevance of the topics covered in this course, there will be six essays required as part of the course content. These assignments also have been designed help you to learn, outside the classroom, through your own writing. Writing is an important way to learn because if you can construct sentences about something, it will organize your understanding in your mind or let you know that you need to seek more information about a subject. Papers are also an opportunity to display your knowledge through more than just exams. These assignments also allow you to pursue the connections between your own personal interests and what we cover in class, so you should take pride in them. If you do not follow the following guidelines, your grade will be reduced.

**Focus:** Well-crafted writing always has a specific purpose. Decide on a thesis for the assigned topic and a specific case you want to make before you start writing. Even if it is only a paragraph, every composition should have a central idea. Your thesis should directly address the nature of the writing assignment. Write the thesis down and check throughout the writing process to be certain that the work supports it. Starting a paper can be the hardest step, so if you feel blocked, try brainstorming. Take a blank sheet of paper without lines, and just write down any ideas you have or do some reading to get ideas. Look over these thoughts for ideas that go together in the form of a thesis.

## Essay Topics:

Nature of Science – Explain the relationship between science and the natural world, in detail.

Race – Define race, clarify how it has been used in a human context, and explain how human diversity has been used to justify racism?

Evolution – How do you feel about studying Evolution in this class? What have you heard about it, and why has it become socially controversial?

Biodiversity – Explain the distinctions between prokaryotes, protists, plants, fungi, and animals.

Ecology – Using specific examples, explain why the natural world is best described as a dynamic equilibrium.

Human Impact – Compare and contrast the natural world prior to anthropogenic disruption to what we see today.

**Organization:** Before you begin to write, think through how you plan to develop your thesis and use an outline to structure your thoughts with a sequence that makes sense. An Introduction and Conclusion will be the first and last paragraphs, but they can actually be written last. Start paper with something catchy in the first sentence to interest the reader. Make it perfectly clear, in the introductory statement or 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. Quotations & Subheadings are not to be used in these short assignments; let the topic sentences of the paragraphs serve that purpose. Avoid using phrases such as "In this paper I will discuss..." since it is much more sophisticated to avoid this type of "crutch statement."

**Paragraphs:** For these assignments, you should have 3 paragraphs, single-spaced on no more than one side of one page of paper. The first sentence of each paragraph is a topic sentence that shows what the paragraph covers. ONE SENTENCE IS NEVER AN ENTIRE PARAGRAPH because there should be at least 3 sentences elaborating any significant idea.

**Format:** Always have an original title on your paper, centered at the top of the page. Think of something that summarizes the unique slant you are taking because we have to read many of these. It should catch our interest. Your papers are to be typed using something comparable to 12-point Times New Roman type, single-spacing, and 1 inch margins. Other professors often expect double-spacing, but I prefer to read single-spacing and require your papers to be single-spaced. After a draft, 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 substantial text or no less than 800 words.

**Grading:** These short papers will each be worth 10 points. Outstanding papers will receive an additional 2 points. Assignments will be described in class, so listen carefully and be sure that you know what is expected or ask about anything that is unclear. There will also be a description on the Dropbox in Blazevie. 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 by other people who write well or even a visit to the SSC can also make a difference. You do not need a science tutor to read these papers. Ask for an English or Writing tutor at the SSC. Proofread your own work to avoid careless errors. Spelling, Punctuation, and Grammar do effect the quality of your work and your grade. These papers will be graded on Effort, Quality, Organization, Content, and whether or not you followed these directions. We will look specifically at your coverage of the topic and the clarity and thoughtfulness of your presentation. Do not complain about your grade because it is very unlikely that it will be changed. Instead, learn from the feedback and improve your next paper.

## Automatic Grade Reductions:

- Failure to follow these instructions
- Inaccurate or deficient scientific content
- Lack of focus, failure to compile a convincing argument, or make a good case
- Typographical Errors
- Grammar, Spelling, & Punctuation Mistakes
- Lack of a clear thesis & missing topic sentences in each paragraph

## Requirements for Submission:

Submit your work on Blazevie in the designated assignment box as a PDF because this will ensure that the formatting will be preserved. The due date will be indicated on the Blazevie Dropbox, but the box will actually close 24 hours after the due date. Late work will be graded down by 10%. If you fail to submit your work by the time the box closes, it will not be accepted, so that is the reason to turn assignments in early.

# BIOL 1010 - Tentative Course Schedule and Plan for Instruction

Dates	Topics	Assignments
<b>Nature of Science</b>		
1. The Natural World		
Aug 15	Levels of Organization	Alphabetical Arrangements
17	Patterns in Nature	
2. "Race" Has No Biological Basis		
22	Scientific Racism	p.325
24	Diversity of Skin Color	p.250-255
3. The Sciences		
29	Processes	
31	Reasoning	LS Ch 1
4. Life		
Sept 5	Life	NoS Practice Due (Best of 3 Attempts Counts Due 9/4)
7	NATURE OF SCIENCE TEST	NoS Pretest (Best of 3 Attempts Due 9/6)

## Theory of Evolution

5. Explanations		
12	Social Controversy	Personal Essay on Evolution
14	Origins	LS Ch. 15
6. Change over Time		
19	Evidence	LS Ch. 13
21	Selection	LS Ch. 12
7. Evolution Summary & Assessment		
26	Speciation	Evolution Practice (Due 9/23)
28	EVOLUTION TEST	Evolution Pretest (Due 9/25)

## Biological Diversity

8. Earliest Organisms		
Oct 3	Prokaryotes	LS Ch 17
5	Protists	LS Ch 18
9. Autotrophs		
9	NO CLASS FALL BREAK	
11	Plants	LS Ch 19
10. Heterotrophs		
17	Fungi	LS Ch 20
19	Animals	LS Ch 21
11. Assessment		
24	Taxonomy	Biodiversity Practice (Due 10/23)
26	BIODIVERSITY TEST	Biodiversity Pretest (Due 10/25)

## Ecology

5. Ecosphere		
Nov 2	Biomes	LS Ch. 39
2	Ecosystems	LS Ch. 38
6. Communities		
7	Nutrient Cycling	
9	Energy Flow	Personal Essay on Ecology
7. Populations		
14	Populations	LS Ch. 37
16	Animal Behavior	LS Ch. 36
8. Assessment		
21	ECOLOGY TEST	Ecology Practice (Due II/18)
23	NO CLASS – THANKSGIVING HOLIDAY	Ecology Pretest (Due II/20)
16. Anthropogenic Disruption		
27	Environmental Issues	LS Ch. 40
29	Human Impact	Personal Essay on Human Impact on the Natural World

COMPREHENSIVE FINAL EXAM – Wednesday, December 6<sup>th</sup> from (2:45-4:45)

# ***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 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. 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 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* 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.