BIOL1010 Syllabus* Fall 2024

Introduction to Biology: The Evolution and Diversity of Life (3 hours)

**Students are responsible for understanding the information in this syllabus*

Instructor: Dr. Theresa J. Grove

Office: BC 1036 (in the CoSM Dean's Suite)

Student (Office) Hours: Currently scheduled for: Monday 10:00-11:00, Tuesday 8:00-10:00, Wednesday 11:00-12:00, Thursday 2:00-3:00 and by appointment). As the semester progresses, it's possible that I will have to change these times to better accommodate students or if something changes in my schedule due to my administrative responsibilities. If I have to cancel office hours due to a meeting, I will post on BlazeView. Student hours are in person, however, if you need to meet online, I can schedule Teams meetings outside of these regular hours.

Email: tjgrove@valdosta.edu (After 6 p.m. I may not respond until the next morning. If you send me an email over the weekend, I may not respond until Monday morning. I only infrequently check Blazeview messages (~ 1x/week), so please use my tjgrove@valdosta.edu account.

Office Phone: 229-333-5336

Announcements: I routinely post announcements on BV about due dates, homework, changes to office hours, etc. I also make announcements at the start of class.

Lecture (BC 1011): MWF 9:00-9:50 a.m.

Prerequisite: None

Course Description: This course cannot be taken for credit toward the major in biology. An introduction to the diversity of life on Earth with a special emphasis on ecological and evolutionary processes and relationships.

Course Objectives: This course is a Core IMPACS course that is part of the **T***echnology, Mathematics & Sciences area*. Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas.

This course will help students master course content and will support students' broad academic and career goals. This course should direct students toward a broad Orienting Question: *How do I ask scientific questions or use data, mathematics, or technology to understand the universe?*

Completion of this course should enable students to meet the following Learning Outcome: *Students will use the scientific method and laboratory procedures or mathematical and computational methods to analyze data, solve problems and explain natural phenomena*.

Course content, activities and exercises in this course should help students develop the following Career-Ready Competencies: *Inquiry and Analysis, Problem-Solving, and Teamwork.*

Specifically, students will:

- Strengthen their curiosity and ability to ask questions;
- Learn about the nature of science and how to build scientific knowledge;
- Demonstrate a fundamental knowledge of evolution and how it relates to biodiversity;
- Effectively organize, communicate, and apply their knowledge of biology.

Textbook and Other Required Resources:

- OpenStax Concepts of Biology (https://openstax.org/details/books/concepts- biology). It's free.
- Materials to take notes during lecture which may include paper/notebook/pen/pencil or a laptop/tablet

Attendance: Attendance in lecture is expected by all students. If you miss class it is your responsibility to get caught up with the material from class.

Illnesses: If you are sick don't come to class. Follow CDC guidelines for COVID exposure and illness and use common sense. If you have any questions, don't hesitate to ask. If I have to miss class due to an illness, I will

post an announcement in BV, and I will most likely post a lecture (or lectures) for you to watch on your own until I return.

Blazeview D2L: Take advantage of the resources on BV, which include the following:

- Check BV for course announcements.
- Lecture slides will usually be available by ~7:00pm the day before the lecture.
- I will record lectures and post them on BV. These recordings are not a substitute for attending lectures, but are meant as a tool to clarify content outside of lecture. If there are technology issues (or I forget to hit 'record'), the lecture recording will not be available.
- Grades will be posted in BV. If you have any questions about your grade, see me.

How You Earn Your Grade (and how to calculate it)

To calculate your grade, add up the points that you earn and divide by the total points possible. Multiply this number by 100% to get a percentage. I reserve the right to curve (or not curve) the final course grade (or any exam grade) at the end of the semester. Any extra credit assignments will get added to your total points earned. The grading scale is below.

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

- **Lecture Exams (500 points total after lowest exam grade is dropped):** A total of five (5) 'regular' exams and one (1) cumulative final exam will be given during the semester (a total of six exams). Each exam will be worth 100 points and will be multiple choice. No online exams will be given. The lowest exam grade out of the six exams will be dropped, which means that the final is optional.

  If you miss an exam you must contact me within 24 hours in order to makeup an exam; this makeup exam may have different questions. If you do not contact me within 24 hours, then this is the exam that will be dropped. ***Unless approved by Dr. Grove, a student will have 5 days from the day of the originally scheduled exam to makeup the missed exam; exam makeup times are Monday 7-7:50am, Wednesday 4:00-5:00pm, Friday 2-3:00pm, or during scheduled student (office) hours: Monday 10:00-11:00, Tuesday 12:00-2:00, Wednesday 11:00-12:00, and Thursday 2:00-3:00. The location will be announced. Students must communicate with Dr. Grove to schedule a time.*** If a student is approved to makeup the exam after 5 days, the format of the exam will be different and will consist of fill in the blank, short answer and multiple choice. Exam grades will not be posted or handed back until all students complete the exam.

  Any content from lecture, assignments and quizzes is fair game for an exam. 'Regular' exams will have ~45-50 multiple choice questions; the final will have ~100 multiple choice questions. On each exam there may be a few questions (2-3) on "old" material. All exams will be completed during class. ***Students will not be allowed to leave during an exam.***

  All exams are closed book. Communicating with other living humans, using a cell phone or any other item to look at information covered on an exam during an exam is considered cheating. If caught, you will earn a zero for this exam, and this zero will be calculated in your final grade (it can't be your dropped exam).

- **BlazeView (BV) Online Quizzes (~100 points total):** To help you prepare for lecture exams, multiple choice quizzes with 5-10 questions will be given throughout the semester. All BV quizzes (all 1st and 2nd attempts) count towards your final grade. You will complete these quizzes 2 times, and both scores will count towards your total points earned. Why take the quiz two times?
  - Purpose of the 1st attempt: to figure out the answers
  - Purpose of the 2nd attempt: to practice recall of the information

  BV Quiz Grading Explained: For the first attempt, each question is worth 1 point, and for the second attempt each question is worth 0.25 points. ***Scores on both attempts count towards your final***

grade, which means both attempts are required. The 1st attempt is worth 4x more than the 2nd attempt. Take your time to go over the material and answer the questions correctly. The 2nd attempt is very low stakes to for you to see how much you remember.

BV Quiz Logistics: The ***1st attempt*** will be open book and will not be timed so that you can make sure your answers are correct. The 1st attempt will open on Friday at 9am and close (be unavailable) on Wednesday at 9am. Each question will be worth 1 point. While the ***2nd attempt*** is also considered open book, they will be timed (1 minute/question) and will have the same questions as the first attempt. The 2nd attempt will open on Wednesday at 9am and will close Friday at 9am (become unavailable). Each question will be worth 0.25 points (worth ¼ the amount of points as the 1st attempt).

These quizzes will be completed on BV. There will be no quizzes during the first week of class (August 19-23), but all of these quizzes combined will be worth a total of ~100 points. ***All BV quizzes will count towards your grade (there will be no dropped quizzes).***

Each student will be given 5 opportunities to re-open the 1st attempt of 5 quizzes. To do this, you must send me an email to tjgrove@valdosta.edu within a week (7 days) of the due date for that particular 1st attempt, give me the quiz number (e.g. Quiz 1), and ask me to re-open it. No questions will be asked. ***The 2nd attempt timed quizzes will not be reopened.*** 1st attempts will not be reopened if you email me more than 7 days after the due date. When I reopen the quiz you will have 5 days to complete it.

- **Additional Assignments (~50 points):** Some small additional homework assignments will be given throughout the semester (about 1 per week). They may include take-home or BV assignments. Assignments will be worth variable points. Online assignments will open and close automatically; generally, no late assignment will be accepted once the due date passes without an approved excuse (Dr. Grove determines whether or not an absence is excused). Any assignment information that is given during lecture will also be posted in BV. There will be a few extra credit engagement/participation assignments given during the semester, which will be explained in class and posted in BV. It is the student's responsibility to attend class and check BV to hear about these assignments.
- **Lecture 'Quizzes' (~100 points):** To help you prepare for lecture exams, short 'quizzes' (10 pts: 5 questions, 2 points each) will be given in lecture throughout the semester. These quizzes ***usually*** occur at the end of a lecture, and they ***usually*** will not be announced. Approximately 15 quizzes will be given throughout the semester, and the highest 10 will be counted towards your grade. A missed quiz (for any reason) cannot be made up. Please do not think that there are plenty of chances to miss quizzes because if you miss 5 quizzes because of not-so-good choices, and then you have a legitimate reason (excused illness, university function, etc.), you will still not be able to make up the quiz.

  Lecture quizzes will have various formats including, but not limited to, closed book, open book, and group quizzes. Quizzes may also have confidence components included with each question. The confidence component is designed for you to think about your mastery of the subject and will ask you if you are "Confident" or "Not Confident" with your answer. Students who are accurate and confident in their knowledge and understanding of the material will earn the most points, and students who are wrong, but think they are right will earn the least amount of points. Essentially, the metacognitive component of the quiz should increase the confidence in students who do know the material, but may not be confident in their understanding, and to help some students who are overly confident in their understanding of the material recognize that they are not as prepared as they think they are. The point values for your answers will be: 2 pts: Right answer and confident, 1 pts: Right answer but not confident, 0.5 pt: Wrong answer and not confident, 0 pts: Wrong answer but confident

Support, Engagement and Success

- I want you to succeed and I will work with you and support you to help you learn the material. Come to my office, ask questions in class, or set-up additional appointments with me.
- However, to learn the material, you must also engage with the course content. Cramming a few days before the exam (or even a week before the exam) is not a good habit. You should go over the material (new and old) each week. Being a full-time student is a full-time job.
- Self-reflection is an important skill. Evaluate your own actions/study habits and be willing to change how you study. If you don't know what to do, see me or check out the Academic Support Center (ASC).
- Be curious about yourself, course content, college, and your goals. Be an active participant in class, in college, and in your life.

- Check out the Study Tips handout in BlazeView.
- Get organized…have an academic planner or calendar to keep track of due dates. Check out BV for a few resources.

Beyond coming to see the professor for assistance, the Academic Support Center (ASC) provides unlimited, in-person, free peer tutoring in core courses such as math, English/writing, sciences, social sciences, and languages. While Knack is not yet active, students looking for additional assistance outside of the classroom are advised to consider working with a peer tutor through Knack. VSU partnered with Knack to provide students with access to verified peer tutors who have previously aced this course. To view available tutors, visit vsu.joinknack.com and sign in with your student account. Please drop by our space in Odum lIbrary, 2nd floor, or call 229-333-7570, email asc@valdosta.edu, or visit the website (www.valdosta.edu/asc) for more information.

In addition, students have access to Student Success Coaches through the Student Success Team. The Student Success Team provides dedicated student support through one-on-one success coaching and programing designed to support students along their academic journey. Students can schedule 1:1 coaching appointments or attend one of the many workshops they will be offering during the semester. Please drop by our space in Odum Library, 2nd floor, or call 229-333-7570, email success@valdosta.edu or visit the website (https://www.valdosta.edu/administration/enrollment-student-affairs/ossr/student-success-coaching.php#coaching) to schedule a meeting and for helpful tips.

VSU Integrity Statement: Cheating and plagiarism will not be tolerated and may result in a failing grade for the assignment, exam, or final grade. It is your responsibility to read and understand the directions of all assignments, quizzes, and exams. If you have any questions, ask before the due date.

Academic integrity is the responsibility of all VSU faculty and students. Students are responsible for knowing and abiding by the Academic Integrity Policy (https://www.valdosta.edu/academics/academic-affairs/academic-honesty-policies-and-procedures.php) as set forth in the Student Code of Conduct (https://www.valdosta.edu/administration/student-affairs/student-conduct-office/student-handbook.php) and this syllabus. All students are expected to do their own work and to uphold a high standard of academic ethics. Any violations of this policy may result in the academic penalties outlined in the syllabus and may also be referred to Student Affairs for any further disciplinary action.

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, but I do post grades in BlazeView.

Access and Accommodations Statement: Students with disabilities who are experiencing barriers in this course may contact the Access Office (https://www.valdosta.edu/student/disability/) for assistance in determining and implementing reasonable accommodations. The Access Office is located in the University Center Room 4136 Entrance 5. The phone numbers are 229-245-2498 (V), 229-375-5871. For more information, please visit VSU's Access Office or email: access@valdosta.edu. To request reasonable accommodations for pregnancy and childbirth, contact Ms. Myia Miller, Title IX Compliance Officer, at maburden@valdosta.edu. Please note, you will be required to provide documentation from an appropriately licensed medical professional indicating the requested accommodations are medically necessary.

Non-Discrimination and Title IX Statement: Valdosta State University (VSU) upholds all applicable laws and policies regarding discrimination on the basis of race, color, sex (including sexual harassment and pregnancy), sexual orientation, gender identity or expression, national origin, religion, age, veteran status, political affiliation, or disability. The University prohibits specific forms of behavior that violate Title IX of the Education Amendments of 1972. Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in education programs and activities that receive federal funding. VSU considers sex discrimination in any form to be a serious offense. Title IX refers to all forms of sex discrimination committed against others, including but not limited to: sexual harassment, sexual assault, sexual misconduct, and sexual violence by other employees, students or third parties and gender inequity or unfair treatment based on an individual's sex/gender. The designated Title IX Coordinator for VSU is Ms. Selenseia Holmes. To view the full policy or to report an incident visit: https://www.valdosta.edu/administration/student-affairs/title-ix/.

Fall 2024 TENTATIVE LECTURE SCHEDULE

Note that this is a tentative schedule so topics and dates covered may change. It is possible that I may have to cancel a class because of my role as associate dean. If this is the case, I will post a recorded lecture for you to watch or some other assignment for you to complete.

Unit I: Nature of Science & Biodiversity	
August 19	Introduction to BIOL1010
August 21	Discussion: Curiosity and Biology
August 23	Introduction to unifying themes & concepts of biology (Section 1.1) The process of science (Section 1.2)
August 26	**Chapter 12: Diversity of Life** Organizing life on earth (Section 12.1) Determining evolutionary relationships (Section 12.2)
August 28	Determining evolutionary relationships (cont'd) Characteristics of living organisms (and unifying themes) revisited (Section 1.1)
August 30	**Chapter 13: Diversity of Microbes, Fungi, & Protists** Domains of life
September 2	**No Class: Labor Day**
September 4	Prokaryotic diversity (section 13.1) Eukaryotic origins (Section 13.2) Protists (Section 13.13) Fungi (Section 13.4)
September 6	**Chapter 14: Diversity of Plants** The plant kingdom (section 14.1) Seedless plants (section 14.2)
September 9	Seed Plants: Gymnosperms (section 14.3) Seed Plants: Angiosperms (section 14.4)
September 11	**Chapter 15: Diversity of Animals** Features of the Animal Kingdom (section 15.1) Sponges and Cnidarians (section 15.2) Flatworms, Nematodes, and Arthropods (section 15.3)
September 13	Mollusks and Annelids (section 15.4) Echinoderms and Chordates (section 15.5) Vertebrates (section15.6)
September 16	Review and Catchup
September 18	***Exam 1***
Unit II: How Diversity is Created…Evolution	
September 20	**Chapter 11: Evolution & Its Processes** Discovering how populations change (Section 11:1)
September 23	Discovering how populations change (Section 11:1) and introduction to DNA and heredity
September 25	Mechanisms of Evolution (evolutionary processes that disrupt equilibrium) (Section 11.2)
September 27	Evidence of evolution (Section 11.3)
September 30	Speciation (Section 11.4)
October 2	Common misconceptions about evolution (Section 11.5) Review
October 4	***Exam 2***
Unit III: Unifying Themes Across Organisms (part 1) Solutions to Challenges (i.e. Adaptations)	
October 7	Unifying Themes in Biology (order, adaptation, homeostasis, energy processing, transport of molecules, growth and development, reproduction, response to stimuli)
October 9	**Chapter 16: The Body's Systems** Homeostasis and Osmoregulation (section 16.1)
October 11	Digestive System (section 16.2)
October 14	**No Class Fall Break (October 14-15)**
October 16	Circulatory and Respiratory Systems (section 16.3)
October 18	Circulatory and Respiratory Systems (cont'd)
October 21	Cell Signaling, including Endocrine System (section 16.4)

October 23	Movement: Musculoskeletal System (section 16.5)
October 25	Catchup & Review
October 28	***Exam 3***
Unit IV: Unifying Themes Across Organisms (part 2) Solutions to Challenges (i.e. Adaptations)	
October 30	Nervous System (section 16.6)
October 31	**Last day to withdraw**
November 1	**Chapter 17: The Immune System & Disease** Viruses…why aren't they 'alive' (section 17.1) Innate Immunity (section 17.2)
November 4	Adaptive Immunity (section 17.3) Disruptions in the Immune system (section 17.4)
November 6	**Chapter 18: Animal Reproduction & Development** How animals reproduce (section 18.1)
November 8	Development and Organogenesis (section 18.2)
November 11	Human reproduction (section 18.3)
November 13	How do other organisms reproduce?
November 15	Catchup and Review
November 18	Review evolution, phylogenies, adaptation, and biodiversity (For exam 5)
November 20	***Exam 4*** (covers content thru November 15)
Unit V: Ecology	
November 22	**Chapter 20: Ecosystems and the Biosphere** Terrestrial, aquatic & marine biomes (Sections 20.3 and 20.4)
November 25	Connect to evolution, biodiversity and adaptation
November 27-29	**No class: Thanksgiving break**
December 2	Energy flow through ecosystems (Section 20.1) Biogeochemical cycles (Section 20.2)
December 4	**Chapter 19: Population & Community Ecology (select topics will be covered)** Population demographics & dynamics (Section 19.1) Population growth & regulation (Section 19.2) The human population (Section 19.3) Community Ecology (Section 19.4)
December 6	**Chapter 21: Conservation & Biodiversity** Introduction to the Importance to biodiversity (Section 21.1) Threats to biodiversity (Section 21.2) Preserving Biodiversity (Section 21.3)
December 9	***Exam 5*** **(last day of class before finals)** Makeup for this exam must be completed by Wednesday, December 11 at 5:30pm
December 13	***Final exam*** **at 8:00am-10:00am** Final exam is cumulative. No early exams will be given.

Midterm: Midterm is October 10, and October 31 is the withdrawal deadline.