

# BIOL1010 Syllabus\* Fall 2023

## 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 Hours:** Currently scheduled for: Monday 2:00-4:00, Wednesday 10:00-12:00, Thursday 9:00-11:00 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. If these times are changed I will announce new hours in class and post on BV. 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, etc., as well as 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 fulfills one portion of Area D of the Learning Outcomes for Valdosta State University's Core Curriculum (<http://www.valdosta.edu/academics/general-education-council/ge-outcomes.php>): Students will demonstrate understanding of the physical universe and the nature of science, and they will use scientific methods and/or mathematical reasoning and concepts to solve problems.

Specifically, students will:

- a. Learn about the nature of science and how to build scientific knowledge;
- b. Demonstrate a fundamental knowledge of evolution and how it relates to biodiversity;
- c. Effectively organize, communicate and apply their knowledge of biology to their everyday lives.

**Textbook:** OpenStax Concepts of Biology (<https://openstax.org/details/books/concepts-biology>). It's free.

**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. 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.

## 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.
- You must be able to 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).
- GUIDES peer mentors will also be available to help you out. More information will be announced in near future.
- 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.

## Fall 2023 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.

<b>Unit I: Nature of Science &amp; Evolution</b>	
August 14	Introduction to BIOL1010
August 16	Themes & concepts of biology (Section 1.1) The process of science (Section 1.2)
August 18	<b>Chapter 11: Evolution &amp; Its Processes</b> Discovering how populations change (Section 11:1)
August 21	Discovering how populations change (Section 11:1) and introduction to DNA and heredity
August 23	Mechanisms of Evolution (evolutionary processes that disrupt equilibrium) (Section 11.2) Evidence of evolution (Section 11.3)
August 25	Speciation (Section 11.4)
August 28	Common misconceptions about evolution (Section 11.5)
August 30	Review and Catch-up
September 1	<b>Exam 1</b>
<b>Unit II: Unifying Themes Across Organisms (part 1)</b>	
September 4	No class: Labor Day
September 6	Unifying Themes in Biology (order, adaptation, homeostasis, energy processing, transport of molecules, growth and development, reproduction, response to stimuli)
September 8	<b>Chapter 16: The Body's Systems</b> Homeostasis and Osmoregulation (section 16.1) Digestive System (section 16.2)
September 11	Circulatory and Respiratory Systems (section 16.3)
September 13	Endocrine System (section 16.4)
September 15	Musculoskeletal System (section 16.5)
September 18	Nervous System (section 16.6)
September 20	A few adaptations & characteristics (why physiology is so interesting)

September 22	Catchup & Review
September 25	<b>Exam 2</b>
<b>Unit III: Unifying Themes Across Organisms (part 2)</b>	
September 27	<b>Chapter 17: The Immune System &amp; Disease</b> Viruses (section 17.1) Innate Immunity (section 17.2)
September 29	Adaptive Immunity (section 17.3) Disruptions in the Immune system (section 17.4)
October 2	<b>Chapter 18: Animal Reproduction &amp; Development</b> How animals reproduce (section 18.1)
October 4	Development and Organogenesis (section 18.2)
October 6	Human reproduction (section 18.3)
October 9	No Class: Fall Break
October 11	Diseases in the news
October 13	Catchup and Review
October 16	<b>Exam 3</b>
<b>Unit IV: Biodiversity</b>	
October 20	<b>Chapter 12: Diversity of Life</b> Organizing life on earth (Section 12.1) Determining evolutionary relationships (Section 12.2)
October 23	<b>Chapter 13: Diversity of Microbes, Fungi, &amp; Protists</b> Domains of life
October 25	Prokaryotic diversity (section 13.1) Eukaryotic origins (Section 13.2) Protists (Section 13.3) Fungi (Section 13.4)
October 27	<b>Chapter 14: Diversity of Plants</b> The plant kingdom (section 14.1) Seedless plants (section 14.2)
October 30	Seed Plants: Gymnosperms (section 14.3) Seed Plants: Angiosperms (section 14.4)
November 1	<b>Chapter 15: Diversity of Animals</b> Features of the Animal Kingdom (section 15.1) Sponges and Cnidarians (section 15.2) Flatworms, Nematodes, and Arthropods (section 15.3)
November 3	Mollusks and Annelids (section 15.4) Echinoderms and Chordates (section 15.5) Vertebrates (section 15.6)
November 6	Review and Catchup
November 8	<b>Exam 4</b>
<b>Unit V: Ecology</b>	
November 10	<b>Chapter 19: Population &amp; Community Ecology</b> Population demographics & dynamics (Section 19.1) Population growth & regulation (Section 19.2)
November 13	The human population (Section 19.3) Community Ecology (Section 19.4)
November 15	<b>Chapter 20: Ecosystems and the Biosphere</b> Energy flow through ecosystems (Section 20.1) Biogeochemical cycles (Section 20.2)

November 17	Terrestrial, aquatic & marine biomes (Sections 20.3 and 20.4)
November 29	<b>Chapter 21: Conservation &amp; Biodiversity</b> Introduction to the Importance to biodiversity (Section 21.1)
November 22	No Class: Thanksgiving Break
November 24	No Class: Thanksgiving Break
November 27	Threats to biodiversity (Section 21.2)
November 29	Preserving Biodiversity (Section 21.3)
December 1	Catchup & Review
December 4	<b>Exam 5</b>

### **Final Exam I Friday, December 8 at 8-10am (No early finals will be given)**

**Midterm:** Midterm is October 5, and October 12 is the withdrawal deadline.

**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. 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. Except under extreme circumstances, students must setup a time to retake the exam within 5 business days of returning to class. Exam grades will not be posted until all exams are taken.

Any content from lecture, assignments and quizzes is fair game for an exam. 'Regular' exams will have ~40-50 multiple choice questions; the final will have ~110 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 1<sup>st</sup> and 2<sup>nd</sup> 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 1<sup>st</sup> attempt: to figure out the answers
  - Purpose of the 2<sup>nd</sup> 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. The 1<sup>st</sup> attempt is worth 4x more than the 2<sup>nd</sup> attempt. Take your time to go over the material and answer the questions correctly. The 2<sup>nd</sup> attempt is very low stakes to for you to see how much you remember.

BV Quiz Logistics: The **1<sup>st</sup> attempt** will be open book and will not be timed so that you can make sure your answers are correct. The 1<sup>st</sup> attempt will open on Sunday at 11:59pm and close (be unavailable) on Thursday at 11:59pm (so you have 4 days to complete). Each question will be worth 1 point. While the **2<sup>nd</sup> attempt** is also considered open book, they will be timed (1 minute/question) and will have the same questions as the first attempt. The 2<sup>nd</sup> attempt will open on Thursday at 11:59pm and will close Sunday at 11:59pm (become unavailable). Each question will be worth 0.25 points (worth ¼ the amount of points as the 1<sup>st</sup> attempt).

These quizzes will be completed on BV. There will be no quizzes during the first week of class (August 14-18), 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 1<sup>st</sup> attempt of 5 quizzes. To do this, you must send me an email to [tigrove@valdosta.edu](mailto:tigrove@valdosta.edu) within a week (7 days) of the due date for that particular 1<sup>st</sup> attempt, give me the quiz number (e.g. Quiz 1), and ask me to re-open it. No questions will be asked. **The 2<sup>nd</sup> attempt timed quizzes will not be reopened.** 1<sup>st</sup> 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 4 days to complete it.

- **Additional Assignments (~50 points):** Some additional homework assignments will be given throughout the semester. 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.
- **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 beginning and/or end of a lecture, and they usually will not be announced. If you arrive late or leave early, you will have less time to complete the quiz or you may miss it completely. Approximately 15 quizzes will be given throughout the semester, and the highest 10 will be counted towards your grade. A missed quiz 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 do 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

**Academic conduct:** Cheating and plagiarism will not be tolerated and may result in a failing grade for the assignment, exam, or your 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.

**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](mailto:access@valdosta.edu). To request reasonable accommodations for pregnancy and childbirth, contact Ms. Myia Miller, Title IX Compliance Officer, at [maburden@valdosta.edu](mailto: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.

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