

# EVOLUTION AND DIVERSITY OF LIFE LAB- BIOL 1020 ONLINE

## COURSE INFORMATION:

- a. **Title:** Evolution and Diversity of Life (BIOL 1010 Section A)
- b. **Instructor:** Dr. John Elder ([jfelder@valdosta.edu](mailto:jfelder@valdosta.edu))
- c. **Office:** 2088 Bailey Science Center, Valdosta State University
- d. **Phone:** 229-333-5762

**CATALOG DESCRIPTION:** Corequisite: BIOL 1010 Online. This course cannot be taken for credit toward the major in biology. A laboratory course to accompany Biology 1010 emphasizing the diversity of life.

## COURSE OBJECTIVES:

This course fulfills one portion of Area D of the Learning Outcomes for Valdosta State University's Core Curriculum: 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. (<http://www.valdosta.edu/academics/general-education-council/ge-outcomes.php>)

Students will participate in the process of scientific inquiry by asking scientific questions, developing hypotheses, predicting outcomes of experiments, collecting and interpreting data and drawing conclusions from the results. 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.

## COURSE MATERIALS:

SimuText – The course will use simulation software and resources from SimuText. Instructions for registering for your section will be provided by your instructor. You are required to be registered in the software during your first two days of the semester. Visit <https://simutext.zendesk.com/hc/en-us/categories/200170134-Check-Your-Tech-> to confirm that the SimUText application will work on your computer, and/or to explore your options if there is a problem.

**INSTRUCTIONAL ACTIVITIES:** The simulations and activities assigned in this course are designed to help you understand the processes of evolution and ecology and how they relate to the diversity of life on our planet. The activities allow you to develop and test hypotheses and build your scientific understanding. The labs are also designed to assist with your understanding of concepts covered in BIOL 1010 Online. As you work through the activities, focus on the learning objectives for each unit and relate them to the content covered in BIOL 1010.

**COMMUNICATION:**

**Email:** Email is the simplest and primary way to contact me outside of class and is the quickest way for me to contact you as well. You are required to check and maintain your Valdosta State University email account. I will only communicate with you through this official email account.

**Do NOT email using the Blazeview system,** all email should be sent directly to [jfelder@valdosta.edu](mailto:jfelder@valdosta.edu) using your VSU issued email account.

**Notes on emailing your professor:**

**In order to get a reply to your emails you must** do the following in your email communication:

- Include your course number and section in the subject line of any email (BIOL 1020 P).
- Communicate as you would at work and in a professional manner. This includes using proper grammar and spelling, a greeting and salutation, and be sure to include your full name at the end of all emails.

**GRADING PROCEDURES:** Letter grades will be assigned based on the following tables:

**Final Letter Grade**

A: 90 – 100%

B: 80 – 89%

C: 70 – 79%

D: 60 – 69%

F: &lt; 60%

| <b>Course Component</b> | <b>% of Course Grade</b> |
|-------------------------|--------------------------|
| Labs                    | 60%                      |
| Graded Questions        | 30%                      |
| Discussion              | 10%                      |
| <b>Total</b>            | <b>100%</b>              |

**Labs:** There are 11 lab activities for the entire course. All of the assigned labs have exercises and questions to be completed. You are expected to work through the exercises to completion and fully answer the questions presented in each section. Labs are graded based on completeness and a demonstrated understanding of the material throughout all portions of the assigned exercises. Labs are to be completed by the designated date and time.

**Graded Questions:** Each lab ends with a set of graded questions that relate to the lab activity and your responses will be scored based on correct answers. The lowest grade will be dropped and not included in your final grade. All questions/answers are to be submitted by the designated date and time for each assignment.

**Discussion:** The course will use discussion board to reflect on what you are learning and also what you are finding challenging. You will be scored based on your weekly engagement with course material and your peers in online discussion boards. Scoring will be based on the Weekly Lab Discussion rubric available online.

**There will be NO MAKE-UPS and NO EXTRA CREDIT!**

**ACADEMIC HONESTY POLICY:** Cheating, plagiarism (submitting another person's material as one's own, or doing work for another person which will receive academic credit) are all impermissible. This includes the use of unauthorized books, notebooks, or other sources in order to secure or give help during an assignment or exam, the unauthorized copying of examinations, assignments, reports, or term papers, or the presentation of unacknowledged material as if it were your own work. **Plagiarism detection software may be used during this course to detect possible instances of plagiarism.** Students are responsible for knowing, understanding and complying with the VSU Student Code of Conduct, in Appendix A of the Student Handbook (<http://www.valdosta.edu/stulife/handbook/>)

If substantial evidence exists for a violation of this policy, ***the student(s) involved will receive a grade of 'F' for the course*** and an official record will be filed following the Academic Integrity Response along with a letter to the Dean of Students (<http://www.valdosta.edu/academic/AcademicHonestyPoliciesandProcedures.shtml>).

**ACCESS OFFICE:** 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. For more information, please visit VSU's Access Office or email: [access@valdosta.edu](mailto:access@valdosta.edu).

**FEDERAL PRIVACY ACT:** It is illegal to release personal information about an individual to others. Therefore grades, averages, and other personal information about any person will not be released to another person or over email.

**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 sexual harassment and sexual violence), sexual orientation, gender identity, religion, age, 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: the Director of the Office of Social Equity, [titleix@valdosta.edu](mailto:titleix@valdosta.edu), 1208 N. Patterson St., Valdosta State University, Valdosta, Georgia 31698, 229-333-5463.

**STUDENT SUCCESS CENTER:** The Student Success Center (SSC) at Valdosta State University is located in Langdale Residence Hall above the Tech Shop and is available to all students. The SSC provides free peer tutoring in core curriculum courses, including biology, chemistry, math, writing, and foreign languages. The SSC also provides free professional academic advising and on-campus job information in one location. Call 333-7570 to make an appointment, or visit the website: [www.valdosta.edu/ssc](http://www.valdosta.edu/ssc).

## Tentative Topics and Reading Assignments

### Week 1

1. Understanding Experimental Design
2. Darwinian Snails Lab
3. Evolution for Ecology (Starts Day 1; Must be Completed by end of Week 3)

### Week 2

4. Genetic Drift and Bottlenecked Ferrets Lab
5. Sickle Cell Alleles Lab

### Week 3

6. Evolutionary Evidence Lab
7. Flowers and Trees Lab

### Week 4

8. Understanding Population Growth Models Lab

### Week 5

9. Isle Royale Lab

### Week 6

10. Niche Wars Lab

### Week 7

11. Nutrient Pollution Lab

