GRAYSON COLLEGE

Course Syllabus

Course Information
BIOL 1107
Biology II Laboratory

Professor Contact Information
Instructor/Professor: Michael B. Keck, PhD

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Although students must register for a separate course number for lab and lecture, the two "courses" are in fact the same course and are separated only for scheduling and reporting reasons. Your final grade is derived from the combination of your lecture and laboratory grades (70/30 respectively). Together the lecture and laboratory satisfy the state learning objectives (CS1, CT2, CT3, EQS2, and TW1) and therefore must be taken concurrently.

Co-requisite: BIOL 1307 required; Prerequisite: College readiness in reading required.

Course Description

BIOL 1107. Biology II Laboratory. (0-2-1). This laboratory-based course accompanies Biology 1307, Biology for Science Majors II. Laboratory activities will reinforce study of the diversity and classification of life, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals. Concurrent enrollment in a lecture section (BIOL 1307) is required. Prerequisite: College readiness in reading required. (R)

State Core Objectives Met in this Combined Lecture/Lab Course:

1. Communication Skills, CS1 – Students will develop, interpret, and express ideas through written communication.
2. Critical Thinking Skills, CT2 – Gather and assess information relevant to a question.
3. Critical Thinking Skills, CT3 – Analyze, Evaluate, and Synthesize Information.
4. Empirical and Quantitative Skills, EQS2 – Students will describe, explain, and predict natural phenomena using the scientific method.
5. Teamwork, TW1 – Students will work cooperatively with their pears and leaders to more effectively solve problems by utilizing insights from multiple perspectives.

Student Learning Outcomes Met in this Combined Lecture/Lab Course:

1. Describe & demonstrate knowledge of modern evolutionary synthesis, natural selection, micro and macroevolution, and speciation.
2. Describe phylogenetic relationships and classification schemes and distinguish between them.
3. Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
4. Describe basic animal physiology and homeostasis as maintained by organ systems.
5. Compare different sexual and asexual life cycles noting their adaptive advantages.
6. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.
7. Apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
8. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
9. Communicate effectively the results of investigations.

Required Textbooks (ISBN # included) and Materials for Laboratory

Laboratory Text *Exploring Biology in the Lab*, 3rd edition, Morton Publishing Company. ISBN: 9781617317552. This can be purchased through bookstore, (retails at $106.95 new) or an outside vendor.

Required Assignments & Academic Calendar

In case of inclement weather, emergency closings, or other unforeseen disruptions to scheduled classes, student must log onto their Canvas accounts for directions on where or how to continue their coursework.

All tests and quizzes, will be administered in the regular classroom during normal meeting times.

Lab		Schedule, Bio 2 Lab
1		Introduction
2		Classification & Systematics (Lab 17)
3		Classification & Systematics (Lab 17); Bacteria (Lab 19)
4		Protists (Lab 20); Fungi (Lab 25); Plants: nonvascular (Lab 21); seedless vascular (Lab 22)
5		Plants: Gymnosperms (Lab 23); Angiosperms (Lab 24); Roots, stems, & leaves (Lab 25)
6		Sponges & cnidarians; (Lab 28)
7		Flatworms (Lab 29); rotifers (Lab 29); Annelids (Lab 29)
8		**Midterm Exam/Lab practical**
		Spring Break—no class
9		Mollusks (Lab 29); Nematodes (Lab 30)
10		Arthropods (Lab 30)
11		Echinoderms (Lab 31); Invertebrate chordates (Lab 31); Fish (Lab 31)
12		Tetrapod vertebrates (amphibians, reptiles, birds, & mammals; Labs 31 - 32); (CS1, CT2, CT3, EQS2, TW1)
13		Fetal pig dissection (Lab 32)
14		Fetal pig dissection (cont.) or field trip to Hagerman NWR
15		**Final exam/Lab Practical**

Methods of Evaluation

A student's final grade will be determined by both lecture and laboratory scores. **Seventy percent (70%) of the final grade will be based on your lecture grade and 30% will be based on your laboratory grade. You will receive the SAME grade in lecture and lab.**

In the laboratory portion of the course, daily grades will be based largely on quizzes covering the material from the preceding week. Some daily grades may be based on participation in various exercises or on the completion of assignments (e.g., dissections). Students will receive a "0" if they are not present for a daily grade quiz/assignment. The lowest of the daily grades will be dropped. The remaining daily grades will be averaged and will constitute 60% of the final grade.

Students will be given two major lab exams (practicals). These two exams will each constitute 20% of the final grade.

Quizzes and exams may consist of multiple choice, matching, short answer, fill-in-the-blank, true and false and/or discussion questions.

Again, Laboratory grades will be calculated as:

Categories	**Percentage**
Daily grades	60%
Midterm Test	20%
Final Test	20%

The daily grade average is calculated by dropping the lowest daily grade, then adding the remaining daily grades together, and dividing by the number of daily grades (excluding the dropped one).

To calculate a final course grade, take the lecture grade and multiply by 0.70 and the laboratory grade multiplied by 0.30. You add the two resulting numbers together and get the final grade. e.g., you make a 72% average in lecture and an 86% in the laboratory. So you do the following: (0.72*0.70) + (0.86 * 0.30) = final grade. If you perform this equation, you calculate 0.50 + 0.26 = 0.76 or 76% as a final course grade.

The following grading scale will be used:

90-100 =A
80-89.99 =B
70-79.99 =C
60-69.99 =D
Below 60 =F

Methods of Instruction

The instructor will give a (typically) brief pre-lab lecture. The student will spend the majority of the lab time working actively and collaboratively with a partner or small table group on the current day's exercise(s), while the instructor is available to offer assistance. Reading assignments may be from the lab manual, other printed material, or from the Internet. Students will be required to use the Internet and/or Canvas (an online learning environment) for certain instruction/assignments.

Student Needs Services

The goal of Needs Services (disabilities and accommodations) is to provide students with educational opportunities when they have some exceptional situation that requires additional support. Needs Services is located on the second floor of the NEW Student Success Center.

The contact information for administrator of the services is:
Jeffri Hodge
(903) 463-8751 (voice or TTY)
hodgej@grayson.edu

It is the student's responsibility to notify his or her professors of the need for any accommodations. Needs Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Tutoring

This is a FREE service provided by the Student Success Center and administered by Jeffri Hodge as well. You will go to the same location and sign up for services. Note: we are ALWAYS looking for tutors, so please talk to your instructor if you are interested in helping other students with their studies and getting paid.

Withdrawing or Dropping the Course

Students need to initiate this process. Instructors should be consulted and typically sign the drop form. Instructors have set office hours for providing these services. Please check with your instructor and make an appointment for consultation. If you wait until the last drop date in the semester, you or your instructor may be unable to complete the request to the college. If the request is incomplete, you will remain in the course and receive a grade.

Class Attendance

Academic success is closely associated with regular classroom attendance and course participation.
All successful students, whether on campus or online, are expected to be self-motivated.
All students are required to participate in courses regularly and are obliged to participate in class activities and complete and submit assignments following their professors' instructions.
Students taking courses during compressed semester time frames such as mini-mester, summer

sessions, and mid-semester should plan to spend significantly more time per week on the course. Responsibility for work missed because of illness or school business is placed upon the student. More than two (2) absences are considered to be excessive. In addition, students' eligibility to receive financial aid or live in a College dormitory can be affected by withdrawal from courses. When withdrawal occurs, any tuition refund would be made in accordance with state regulations.

Student Conduct & Discipline

Classroom Behavior
Students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance and an attitude that seeks to take full advantage of the educational opportunity.

Phone/electronic device Policy
All electronic devices must be turned off before entering the classroom. Electronic devices may not be visible during class. Electronic devices include, but are not limited to, the following: phones, smart watches, music players, computers, & calculators. **Any student using an electronic device in class will be penalized 20 points on his/her daily grade for that day.**

Seating
The instructor may assign seating for individual students at any time during the semester. During lectures, the instructor may have students move to other seats in the classroom. The instructor may inform students that they are no longer allowed to sit next to each other for the remainder of the semester.

Defacing College Property
Anyone caught defacing property in the lecture or lab will be responsible for cleaning, repairing or replacing the defaced property. The individual will also receive a zero (0) for the current lab assignment. Defacing property includes, but is not limited to, writing, marking or scratching on the tables, tabletops, chairs, cabinets, counter tops, shelving or walls.

Academic Integrity
The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic Dishonesty, any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the college's policy on plagiarism (see

GC Student Handbook for details). Grayson College subscribes to turnitin.com, which allows faculty to search the web and identify plagiarized material. Students are prohibited, too, from engaging in self-plagiarism. Self-plagiarism is the act of using work created for another course and submitting that work for credit in this course. This includes work submitted previously for one of this instructor's courses. There are limited circumstances under which the instructor will permit self-plagiarism, and special permission must be received in order to do so. Those who engage in acts of self-plagiarism (without the necessary permission) will be subject to the penalties listed in this syllabus for all other acts of plagiarism

Science Department Policy

Any instance of a) plagiarism b) collusion c) cheating or d) falsifying records, will result in a "0" for the assignment. The "0" assigned for cheating cannot be dropped or replaced by another grade when calculating the final course average.

TITLE IX

GC policy prohibits discrimination on the basis of age, ancestry, color, disability, gender identity, genetic information, national origin, race, religion, retaliation, serious medical condition, sex, sexual orientation, spousal affiliation and protected veterans status.

Furthermore, Title IX prohibits sex discrimination to include sexual misconduct: sexual violence (sexual assault, rape), sexual harassment and retaliation.

For more information on Title IX, please contact:

Dr. Molly M. Harris, Title IX Coordinator (903)463-8714
Ms. Logan Maxwell, Title IX Deputy Coordinator - South Campus (903) 415-2646
Mr. Mike McBrayer, Title IX Deputy Coordinator - Main Campus (903) 463-8753
Website: http://www.grayson.edu/campus-life/campus-police/title-ix-policies.html
GC Police Department: (903) 463-8777- Main Campus) (903) 415-2501 - South Campus)
GC Counseling Center: (903) 463-8730
For Any On-campus Emergencies: 911

Campus-wide Student Policies

Grayson College campus-wide student policies may be found on our Current Student Page on our website: http://grayson.edu/current-students/index.html

Laboratory Safety Guidelines

Safety is our number one priority. To that end these are the laboratory safety guidelines:

1. Locate safety equipment: know where to find exit(s), fire extinguisher, and first aid kit. Know how to use the safety equipment.

2. Do not eat or drink in the laboratory.

3. Students should wear appropriate attire for laboratory work. Students cannot wear open toed shoes, e.g., sandals, "flip-flops"

4. Monitor risk: inform the instructor if you are pregnant, taking immunosuppressive medicines, or have any medical condition that might require special precautions in the lab, such as medications that would influence your response or reflex time. Under NO circumstances should you attend a lab session while "under the influence" of any chemical substance.

5. Avoid spills: place liquids toward the center of the bench, away from the edges.

6. Labels: read labels carefully before removing substances from containers. Properly label glassware before use.

7. Mouth pipetting is prohibited, use mechanical pipetting devices.

8. Dissection: use care at all times when handling sharp dissection tools. Wear disposable gloves when dissecting preserved materials. Cover open cuts with a bandage before donning gloves. Do not touch face or eyes while wearing soiled gloves, and wash hands immediately after gloves are removed.

9. Discard used chemicals and materials into appropriately labeled containers, do not dispose of them down the sink unless specified by the instructor.

10. Broken glass: be careful handling broken glassware with bare hands. Dispose of all cracked or broken glassware in special puncture resistant containers found in the labs, not the regular trash can.

11. Report any spills, accidents, strange occurrences, or other safety incidents to the instructor.

12. Professional conduct is expected to avoid creating dangerous situations. If you have any questions concerning the safety of a procedure, consult your instructor.

13. Know the location of the Material Safety Data Sheets (MSDS's). To find the MSDS on any product used by Grayson College, please go to this link and search **https://msdsmanagement.msdsonline.com/?ID=C9DFE03B-6CE5-4E53-AD11-CB6588BAE690**

14. Immediately report damaged equipment to your instructor.

15. Thoroughly wash hands with soap and water before leaving the laboratory.

WAIVER OF LIABILITY: (You will sign a waiver in class acknowledging this.) As a Science student in a Grayson County College laboratory course, I hereby confirm that I have been advised of laboratory safety measures and rules and agree to comply with these rules at all times during my enrollment in this laboratory course. In addition, I agree to hold harmless GCC in any event resulting from the laboratory environment.

CONTACT LENSES: (If you choose to continue wearing contact lenses in spite of our advising against it, you must sign another waiver in the class.)

I am aware of the added health risks associated with wearing contact lenses in the lab, but have elected to do so against the advice of my instructor. (If you do not sign this, you will have agreed not to wear contact lenses at any time during this course.)

Grayson County College is not responsible for illness/injury that occurs during the normal course of classroom/lab/clinical experiences.

These descriptions and timelines are subject to change at the discretion of the Professor.