

# GRAYSON COLLEGE

## Course Syllabus

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### Course Information

**BIOL 1307 General Biology Lecture and BIOL 1107 General Biology Lab**

**General Biology II**

**Spring 2021**

**Online Course**

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### Professor Contact Information

Professor name: Cathy Harris

Office phone: 903-271-6712 (cell) between the hours of 9am-6pm only

Email: harrisc@grayson.edu

Office location: Science Building Office upon request

Office/campus hours: upon request

Support personnel for Science: 903-463-8797

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### 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 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 core objectives (CS1, CT2, CT3, EQS2, and TW1) and therefore must be taken concurrently.

Concurrent enrollment in a lecture (BIOL 1306) and laboratory section (BIOL 1106) is required.

Prerequisite: College readiness in reading required.

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### Course Description

**BIOL 1307. Biology II.** Fundamental principles of living organisms including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Study and examination of the concepts of cytology, reproduction, genetics, and scientific reasoning are included. Laboratory activities will reinforce the knowledge and provide opportunities to practice skills.

Concurrent enrollment in laboratory section (BIOL 1107) is required. Prerequisite: College readiness in reading required. (R)

**BIOL 1107. Biology II.** This laboratory-based course accompanies Biology 1307, Biology for Science Majors I. Laboratory activities will reinforce the fundamental principles of living organisms, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Study and examination of the concepts of cytology, reproduction, genetics, and scientific reasoning are included.

Concurrent enrollment in lecture section (BIOL 1307) is required. Prerequisite: College readiness in reading required. (R)

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**State Core Objectives Met in this Combined Lecture and 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 peers and leaders to more effectively solve problems by utilizing insights from multiple perspectives.

**Student Learning Outcomes Met in this Lecture and Lab Combined Course**  
(Student Learning Outcomes will be addressed in the lecture and/or the lab.)

Upon successful completion of this course, students should be able to do the following:

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1. Describe and demonstrate knowledge of modern evolutionary synthesis, natural selection, population genetics, 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 scientific investigations.
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**Required Textbooks (ISBN # included) and Materials**

Lecture Text: *Biology* by [OpenStax College](https://openstax.org). This is a **FREE** open education resource provided by Rice University, download the text at [www.openstaxcollege.org](http://www.openstaxcollege.org)

ISBN: 978-1-938168-09-3

To access: 1) go to <http://cnx.org/content/col11448/latest/> 2) you will see options for the downloading of the text. Select what suits your needs, if you do not know your needs, then download the PDF file.

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**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.** *This schedule is subject to change with fair notice. You will be notified in your Canvas shell if a change is required.*

<u>Due Date</u>	<u>Assignments</u>
Jan 17	<b>Lab Report 1</b> <b>Introduction Discussion</b> <b>Canvas Quiz</b> Begin major assignments for Module 1
Jan 24	<b>Lab Report 2</b> Continue major assignments for Module 1
Jan 31	<b>Module 1 Assignments (2)</b> <b>Module 1 Discussion</b> <b>Lab Report 3</b> Begin major assignments for Module 2
Feb 7	<b>Lab Report 4</b> Continue major assignments for Module 2
Feb 14	<b>Lab Report 5</b> Continue major assignments for Module 2
Feb 21	<b>Lab Report 6</b> Continue major assignments for Module 2
Feb 28	<b>Lab Report 7</b> Continue major assignments for Module 2
Mar 7	<b>Module 2 Major Assignments (2)</b> <b>Module 2 Discussion</b> Begin major assignments for Module 3
*Mar 21*	<b>Lab Midterm</b> Continue major assignments for Module 3
Mar 28	<b>Lab Report 9</b> <b>Lab Report 10</b> Continue major assignments for Module 3
Apr 4	<b>Lab Report 11</b> Continue major assignments for Module 3
Apr 11	<b>Lab Core Group Assignment</b> <b>Module 3 Major Assignments (2)</b> <b>Module 3 Discussion</b> Begin major assignments for Module 4 this week
Apr 18	<b>Lab Report 12</b> Continue major assignments for Module 4
Apr 25	<b>Lab Report 13</b> Continue major assignments for Module 4
May 2	<b>Module 4 Major Assignments (2)</b> <b>Module 4 Discussion</b> Review for the lab final and final exam – see rubric for final exam before starting
May 4	<b>Lab Final</b>
*May 6*	<b>Final Due</b>

**Important Dates:**

First day of classes	January 11, 2021
MLK Day – no classes	January 18, 2021
Census Date	January 27, 2021
Spring Break – no classes	March 8-12, 2021
Last day to drop/withdraw from course	April 8, 2021
Final Exams	May 3-6, 2021

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**Methods of Evaluation**

Your 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.**

To calculate a final grade in lecture and lab: You 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:  $(0.72 * 0.70) + (0.86 * 0.30) = \text{final grade}$ . If you perform this equation, you calculate  $0.50 + 0.26 = 0.76$  or 76% as a final course grade, because your lecture grade contributes more to the final grade than your laboratory grade. This calculated grade will then be reported for BOTH lecture and lab sections to the registrar.

Categories	Points
Lab Reports (13)	10
Lab Midterm	75
Lab Group Assignment	20
Lab Final	75
Assignments (8)	50
Discussion (4)	50
Final	100

The following grading scale will be used to determine your final grade in the course:

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

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**Methods of Instruction**

This class is 100% online. The course will use the free textbook, lab manuals and videos for instruction.

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## **Class Attendance and Participation**

Attendance and Participation Academic success is closely associated with regular class attendance and course participation. All successful students, whether on campus or online, are expected to be highly 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 faculty' instructions. Students taking courses during compressed semester timeframes such as mini-mester, summer sessions, and 8-week courses 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. Instructors are required to include in their syllabi the attendance policy for the courses(s) they teach. The college considers absences equal to or greater than 15% of the course's requirements to be excessive. In order for students to be counted as having attended a class before the census date, the following guidelines are to be used:

- Physical attendance in class with an opportunity for instructor and student interaction
  - Submission of an academic assignment
  - Completion of an exam, interactive tutorial, or computer-assisted instruction
  - Attendance at a study group assigned by the faculty
  - Participation in an online discussion in the class
  - Contact with a faculty member to ask a question
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## **Student Responsibilities, Conduct & Discipline**

### **Communication**

Preferred method of contact is through Canvas messages. Also use Grayson College email and phone (as listed above). Communicate with each other through Canvas messages first.

### **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.

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.

## **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. Even through Canvas messages, online behavior is expected.

## **Phone/electronic device Policy**

All phones and other electronic devices must be turned off before entering the classroom. Text messaging is not permitted during class. If you have an emergency and need to take a call during class, you must inform the instructor before the beginning of class. Turn your ringer to vibrate, and when your call comes in, pick up your belongings and leave the classroom. You may return the next time the class meets.

## **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 is a form of scholastic dishonesty involving the theft of or fraudulent representation of someone else's ideas or words as the student's original work. Plagiarism can be intentional/deliberate or unintentional/accidental. Unintentional/Accidental plagiarism may include *minor* instances where an attempt to acknowledge the source exists but is incorrect or insufficient. Deliberate/Intentional plagiarism violates a student's academic integrity and exists in the following forms:

- Turning in someone else's work as the student's own (such as buying a paper and submitting it, exchanging papers or collaborating on a paper with someone else without permission, or paying someone else to write or translate a paper),
- Recycling in whole or in part previously submitted or published work or concurrently submitting the same written work where the expectation for current original work exists, including agreeing to write or sell one's own work to someone else,
- Quoting or copy/pasting phrases of three words or more from someone else without citation,
- Paraphrasing ideas without citation or paraphrasing incompletely, with or without correct citation, where the material too closely matches the wording or structure of the original,
- Submitting an assignment with a majority of quoted or paraphrased material from other sources, even if correctly cited, when original work from the student is expected,
- Copying images or media and inserting them into a presentation or video without citation,
- Using copyrighted soundtracks or video and inserting them into a presentation or video without citation,
- Giving incorrect or nonexistent source information or inventing source information,
- Performing a copyrighted piece of music in a public setting without permission,
- Composing music based heavily on someone else's musical composition.

This course uses Turn It In technology for plagiarism as well as the instructor. If plagiarism is detected then the student will be given a written warning and the ability to turn in the work within the deadline given for full credit. For a second offense, the student will be given another written warning and the ability to turn in the work within the deadline given for no more than a 70. The student will also be reported to the Dean. For a third offense, the student will be given a 0 and no chance to make up the work. The student will also be reported to the Dean. The occurrence is not per assignment but per time in the course.

### **Student Responsibility**

You have already made the decision to go to college; now the follow-up decisions on whether to commit to doing the work could very well determine whether you end up working at a good paying job in a field you enjoy or working at minimum wage for the rest of your life. Education involves a partnership that requires both students and instructors to do their parts. By entering into this partnership, you have a responsibility to show up for class, do the assignments and reading, be engaged and pay attention in class, follow directions, and put your best effort into it. You will get out of your experience here exactly what you put into it – nothing more and nothing less.

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

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### **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). These are available electronically .
14. Immediately report damaged equipment to your instructor.
15. Thoroughly wash hands with soap and water before leaving the laboratory.

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### **Care of the Microscope**

You will be using microscopes in this class. These are expensive and must be shared among laboratory sections. To this end they must be used and cared for to ensure continued proper operation. The following is a list of basic handling and use of the microscopes.

1. Check the number on the microscope assigned to you with its corresponding place on the bench or in the cabinet.
2. Grasp the microscope arm firmly with one hand, and lift the instrument carefully from the shelf. Hold it upright and close to your body when carrying it. Gently place it on the laboratory bench

away from the edge of the bench.

3. Remove the dust cover, uncoil the power cord, and plug it into an appropriate outlet.
4. Examine the microscope to see if any damage is apparent or if the microscope was put away in an unacceptable condition, if so report this immediately to your instructor.
5. Clean all lenses by wiping several times with an acceptable lens paper. Do not use paper towels, Kleenex, clothing, or other types of material on lenses, *especially do not use Kimwipes!*
6. Examine the stage to see if it is free of oil, that no slide has been left on the stage, and that the stage is racked all the way down into the lowest possible position. The scanning objective (or low power objective) should be in the path of light position. In other words, you want the objectives and the stage to be as far apart as possible.
7. Turn on the light to check if it is functional.
8. Follow your lab manual's and instructor's directions for using the microscope.
9. At the end of each lab session, turn off the light and check the stage to be sure no slide is on it and it is clean.
10. Clean all lenses with dry lens paper. If the oil immersion objective lens has been used, clean it last to avoid contaminating the other objectives with oil.
11. Rotate the nosepiece so that the scanning objective (low power objective) is in the light path.
12. Rack the stage down so that the objective and stage are as far apart as possible.
13. Unplug the power cord and rewind it. Replace the dust cover.
14. Carry the microscope as previously described back to the bench or cabinet, returning it to its appropriate (numbered) place

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**WAIVER OF LIABILITY: (You will sign a waiver in class acknowledging this.)** As a Science student in a Grayson 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 GC 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 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.**

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