

BIOL 1107 Principles of Biology I

20110 - In person - MW 12:30 – 1:45 pm - HS 101

Spring 2025

# WELCOME TO BIOL 1107 Principles of Biology I

*I hope you are looking forward to this class as much as I am! We will be discussing multiple biological lecture topics including an introduction to biology, chemistry, macromolecules, cell structures, cell membranes, metabolic pathways, cell communication, cell division, DNA structure and replication, DNA transcription and translation, gene expression and trait inheritance. It will be an intense class with a lot of information, but if you study and put in the work for assignments and exams, you will do great!*

# INSTRUCTOR INFORMATION

Instructor:Dr. Jennifer Hatchel, Professor of Biology

Office:208 Camden Center

Office Hours: **Brunswick:** M/W 8:30-9:30am, T/TH 12:00 – 2:00pm

**Camden:** T/TH 8:30-9:30am All other times by appointment only.

Email:[jhatchel@ccga.edu](mailto:jhatchel@ccga.edu) *\*preferred method of communication\**

**Please remember to include your name and which class you are in this semester in your message. I am teaching four different biology/microbiology courses this semester so you just can’t say, I am in your biology/microbiology class…be sure to specify which one.**

Expected Response Time: Responses to email will typically occur within 24-48 hours, unless it is the weekend or a holiday.

# COURSE DESCRIPTION

3 Class Hours; 3 Credit Hours

## This is one course in a sequence of two courses designed for majors in biology and related fields. Topic areas include the chemistry of cells, cell structure and function, cellular metabolism, DNA structure and function, genetics, and control of gene expression.

\*Please note: BIOL 1107 (Principles of Biology I) is geared toward majors in science (especially majors in Biology or associated science/medical programs). This course may be challenging for non-science majors. If you do not require this specific course for your major, there are other life science classes available. Suggested courses are: BIOL 1120 (Intro to Environmental Science) or BIOL 1140 (Plants and Society). Please speak with your advisor to make sure that any courses you take count toward your degree.

## Prerequisites/Corequisites:

BIOL 1107L, Principles of Biology I Laboratory

# COURSE MATERIALS

Waymaker Biology for Majors I from Lumen Learning: In this course you will use Waymaker Biology for Majors I instead of a traditional textbook. Waymaker provides your course materials digitally inside your course’s D2L (Brightspace) webpage. You can access all readings, videos, a study plan, quizzes and other activities through D2L.

**Directions for Students Purchasing Waymaker:**

Students are prompted to enter an activation code or online payment on the module quiz. Two quizzes will have a free pass, and from there you will need to purchase access to Waymaker.

1. **Purchase Online:** You can purchase Waymaker with a credit card for $35-40 when you access your first quiz in this course.
2. **Bookstore:** You can purchase a Waymaker access code from the school bookstore. Note that the bookstore price may be slightly higher than if you purchase online.

Video Instructions for Purchasing Waymaker: <https://youtu.be/ptfTkFv_V4s?si=Cqg4GEle-3fbMAEh>

Succeeding with Waymaker:Make sure you review the Succeeding With Waymaker Module. You will find videos that walk you through how to access Waymaker and how to complete your readings and assignments here: <https://youtu.be/f9_colFGIrw?si=EsescAaowMD8YCCv>

Study Plan Graded Participation:Here is a video explaining how the grade is calculated in the Study Plan: <https://youtu.be/FVZA1NVE0u0?si=ljE0LE6TlOz3CHnZ>

Additional information about Waymaker**:** Waymaker is different from other course materials in these ways:

* There is no separate textbook. Everything you need is in the D2L course webpage, including an e-Book.
* The study plans in Waymaker will provide guidance on where to focus your attention. As you complete self-check questions, Show What You Know sections in the study plans, and quizzes, you’ll get feedback on which areas you need to read and study more.
* You can take graded quizzes multiple times. Quizzes help you learn. You can take your quiz at least twice; only the higher score will be recorded.
* Instructors can see where students are struggling. I can see how you do on your quizzes and offer individualized help when you need it. I can also see if you are doing the self-checks and practice activities. I’m here to help you!

The following link is for technical requirements/support for D2L and Respondus: [https://portside.ccga.edu/d2lsupport](https://nam11.safelinks.protection.outlook.com/?url=https%3A%2F%2Fportside.ccga.edu%2Fd2lsupport&data=05%7C01%7Cllynch%40ccga.edu%7C3fc16cb78f8e4ad123c308dbe0a297fa%7C14b4890eb48946b3b1382861452d0d92%7C0%7C0%7C638350761174587931%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=pB6Bf5bhf%2FShTeJoMzMM%2FtRZ1Xxjf28rdpfxCV99zos%3D&reserved=0)

# OUTCOMES AND EVALUATION

## Course Learning Outcomes:

* Demonstrate knowledge and understanding of core principles in cellular and molecular biology
* Interpret and analyze assigned readings in biology
* Understand and apply the scientific method

## General Education/Program Learning Outcomes:

In addition to the course learning outcomes, this course will also address these College general education outcomes and competencies:

* Students will be able to demonstrate the ability to solve problems and draw conclusions by analyzing situations and explaining them in numeric, graphical or symbolic terms.
* Students will demonstrate the knowledge of fundamental scientific concepts, the scientific method, and utilize laboratory procedures to observe natural phenomena.

**This is a Core IMPACTS course that is part of the STEM area.**

Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help master course content, and 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
* Teamwork

Methods of Evaluation:

**Brightspace (formerly Desire 2 Learn (D2L))** will be used for class communication, content delivery, submitting assignments, and posting of grades. Lack of familiarity with Brightspace/D2L will not be accepted as an excuse for missing assignments.

**Attendance Verification:** All courses utilize standard procedures for attendance verification that include a reasonable amount of activity during the first days of classes. To establish presence in this course, students must be in attendance on campus for class and complete a quiz on D2L. Students not attending in person or completing this quiz will be reported to the registrar as not attending. This could affect your financial aid as well as your spot in the class so please make sure to attend and complete the quiz.

**Lecture Exams**

There will be three in-person 100-point lecture exams during this course plus the final exam. The questions will be in multiple formats (multiple choice, true/false, short answer, essay, etc…) and will test you on material covered in lectures (on slides or as part of Dr. Hatchel’s additional notes), readings, and videos. You need to review/study all materials covered in the lectures given prior to the exam. During exams, all personal materials (purses, backpacks, books, notes, cell phones, etc…) must be placed away from the student. The use of notes, the PowerPoint slides, the textbook, the Internet, other students, or any other sources of information is not allowed on any of the exams. The use of any of these items will be considered cheating on the exam and will result in a “0” on the exam.

**No makeup exams will be given. If you miss a single exam for whatever reason (you forgot, you or someone in your family was sick, you had a family emergency, etc…), you can replace that exam grade with the same percentage that you earn on your final exam. If you complete all lecture exams, then you can replace your lowest lecture exam score with the final exam percentage.** This means if you score an 82% on the final, then the exam you miss will also be an 82%. If you didn’t miss any of the exams and your lowest exam score was a 42%, then an 82% would replace the 42%. IF you miss more than one exam, it is up to the instructor how to handle the missing grade for the second exam. The final exam can only replace **one** exam!

**In-Class/Homework Assignments**

Short assignments (in-class activities, chapter study plans, chapter quizzes, homework) will be given during the course and will make up 500 points of the final grade. In-Class assignments will need to be submitted at the end of class on paper while chapter study plans, chapter quizzes, and homework will be completed in D2L. Please note that assignments are due on the dates designated. **If an emergency arises OR if you make arrangements with me ahead of time, I may agree to accept a late assignment**. If I do not agree or if you have not made prior arrangements with me, and you turn in a late assignment you will receive a lower grade. Assignments submitted late, but within 24 hours of the deadline will lose 10%. Assignments received between 24 and 48 hours after the deadline will lose 25%. Assignments received between 48 and 72 hours after the deadline will lose 50%. Assignments will not be accepted later than 72 hours after the deadline unless previously discussed with the instructor. Be aware that my definition of “emergency” includes such things as “surgery” and “being in labor”, NOT “I was hung over” or “my dog ate my homework.”

**Final Examination**

This is an in-person comprehensive, multiple-choice test worth 200 points of the final grade for the course. Questions will be multiple choice and will be taken from lecture notes and assigned readings. ALL information covered during a lecture is possible test material, even if it is not on the PowerPoint, and the student is expected to not only memorize the information, but also be able to apply it. The final will be given in person on the specified date on the final exam calendar. You need to review all materials covered in the lectures given prior to the exam. During exams, all personal materials (purses, backpacks, books, notes, cell phones, etc…) must be placed away from the student. The use of notes, the PowerPoint slides, the textbook, the Internet, or any other sources of information is not allowed on any of the exams. The use of any of these items will be considered cheating on the exam and will result in a “0” on the exam. **Makeup final exams require additional permissions and will only be given for extreme circumstances at the instructor’s discretion.**

**Weight of course components:**

3 Lecture Exams 300

In-Class/Homework 500

Final Exam 200

**Total 1000 points**

Grading Scale:

You earn the grade you make in this course. The following scale will be used:

90% or higher = A; 80-89% = B; 70-79% = C; 60-69% = D; below 60% = F

# COURSE POLICIES

Time Commitment:

For 1 credit hour, federal regulations require courses be designed for at least 3 hours of student work per week. So for a 3 credit lecture course, this should be at least 9 hours per week – typically 3 hours in class and **6 hours outside of class**. The amount of time to complete activities for this course will vary for each student; please plan to dedicate at least 9 hours per week for lectures, studying, and coursework. Feel free to utilize office hours to discuss success strategies to manage your time.

Make-Up Work Course Policy:

It is within a faculty member’s purview to request documentation for students with repeated absences who request accommodations on completing assignments.Make-up work will always be at the discretion of the instructor but will follow what is listed in the sections above.

Attendance Course Policy:

In order to perform well in this class, you need to be present for the notes given in lecture. You should also make every attempt to be on time to class and to stay for the entirety of the class. Coming in late and/or leaving early will also be considered as lack of attendance. In the event of illness or emergency, please notify your instructor. Students with 3 or fewer absences/instances of tardiness/leaving early will be given a 2% addition to their final course grade (i.e. if you have a 78% for your final grade and miss less than 3 classes, your final grade would be an 80%).

**\*You should NOT attend class if you are feeling ill with symptoms of COVID-19 or any other contagious disease (e.g., flu, cold, strep throat).** If you test positive or are exposed to COVID-19, follow [CDC guidelines](https://www.cdc.gov/coronavirus/2019-nCoV/index.html) to protect your classmates, professors, and their families. *And communicate with me promptly.* Documented absences will not count against the bonus.

Student athletes, SGA representatives, etc. must reach out to me during the first week of class to discuss any out-of-class activities that may impact your attendance.

Expected Feedback Time:

You will receive grades/feedback on assignments or exams within one week typically, but at least prior to the next similar assignment and/or test.

## Other pertinent information may be added, such as:

*I expect all students to be respectful and attentive during class. Please do not talk, text, sleep, or surf the internet while I am lecturing because it is distracting. If you have a question, please raise your hand and wait to be called on. If you have a comment to share on the topic, please do so, but please try to keep it brief. If I deem your conduct to be disrespectful or disruptive, I reserve the right to ask you to leave the classroom.*

**Student Appeals:** In the event that a student identifies a need or concern in a course (including grade appeals), they must follow the chain of command for communication as follows:

1. Students will contact the **course instructor** via email documenting the concern. Email is preferred as it creates a written record of the communication with a date and time stamp.
2. If necessary, a face-to-face meeting with the course instructor may be scheduled.
3. Students will provide adequate time for the course instructor to respond to the concern addressed. Adequate time is defined as the amount of time the course instructor indicates in their syllabus for response times to communications.
4. In the event that the situation is unresolved, students may contact the Department Chair of Natural Sciences, Dr. Tate Holbrook, via email (cholbrook@ccga.edu). The email communication should include the previous steps taken and summarize the current status of the issue to date. Please give 48 hours during the business days and 72 hours over weekends to receive a response. (Response times may be longer during campus holidays.)
5. If the situation remains unresolved, students may communicate the concern(s) to the following individuals in the following order: 1) Dean of Arts and Sciences, 2) Provost, and 3) President.

Course Evaluations:

Course evaluations are completed online by the student during the specified time period before final exams.

College-wide Policies:

All college policies are in effect during this course. For relevant policies and procedures to the classroom, please visit [Policies Relevant to Academics](https://portside.ccga.edu/coursepolicies).

## Student Support and Resources:

* For academic assistance, the [ATTIC](https://www.ccga.edu/academics/studentsuccess/attic) and [Writing Center](https://www.ccga.edu/academics/studentsuccess/writing) offer their services, including student tutoring, in face-to-face and online formats. Visit [Find a Tutor](https://portside.ccga.edu/pid=275) or <https://www.ccga.edu/academics/studentsuccess/writing> for instructions on how to connect with a tutor or a writing coach.
* Contact eLearning for support with Brightspace (D2L) and Respondus by calling 912.279.4543 or emailing [elearning@ccga.edu](mailto:elearning@ccga.edu).
* Online support for D2L, including live chat, is available 24/7 at the [D2L Help Center](https://d2lhelp.view.usg.edu/).
* Contact Technology Services for support with passwords, email, and other campus systems by calling 912.279.5760.

Reserve Clause:

The instructor reserves the right to revise, alter, or amend this syllabus as necessary. Students will be notified in writing / email of any such changes. Any issue not directly addressed by existing class or college policy shall be managed at the discretion of the instructor.

## Full URLs for Hyperlinks Contained in the Document:

* College-Wide Policies: <https://portside.ccga.edu/coursepolicies>
* ATTIC: <https://www.ccga.edu/academics/studentsuccess/attic>
* Writing Center: <https://www.ccga.edu/academics/studentsuccess/writing>
* Find a Tutor: <https://portside.ccga.edu/pid=275>
* D2L Help Center: <https://d2lhelp.view.usg.edu/>

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| Dates | Lecture Topics (Chapter) |
| Week 1  Jan 13  Jan 15 | Course Overview  Introduction to Biology (1) |
| Week 2  Jan 20  Jan 22 | NO CLASS – HOLIDAY  Chemistry of Life (2) |
| Week 3  Jan 27/29 | Chemistry of Life (2)/Important Biological Macromolecules (3) |
| Week 4  Feb 3  Feb 5 | Important Biological Macromolecules (3)  **EXAM 1 Chapters 1-3** |
| Week 5  Feb 10/12 | Cellular Structure (4)/Cell Membranes (5) |
| Week 6  Feb 17/19 | Cell Membranes (5)/Metabolic Pathways (6) |
| Week 7  Feb 24/26 | Metabolic Pathways (6) |
| Week 8  Mar 3  Mar 5 | **EXAM 2 Chapters 4-6**  Cell Communication (7) |
| Week 9  Mar 10 - 14 | NO CLASS – SPRING BREAK |
| Week 10  Mar 17/19 | Cell Communication (7)/Cell Division (8) |
| Week 11  Mar 24/26 | Cell Division (8)/DNA Structure and Replication (9) |
| Week 12  Mar 31  Apr 2 | DNA Structure and Replication (9)  **EXAM 3 Chapters 7-9** |
| Week 13  Apr 7/9 | DNA Transcription and Translation (10) |
| Week 14  Apr 14/16 | DNA Transcription and Translation (10)/ Gene Expressions (11) |
| Week 15  Apr 21/23 | Gene Expressions (11)/ Trait Inheritance (12) |
| Week 16  Apr 28  Apr 30 | Trait Inheritance (12)  Review for Final Exam |
| Week 17  **May 5-8** | **Final Exam: Monday, May 5th, 12:30 – 2:30 pm** |