



## General Biology - BIO 100 Syllabus Hudson County Community College

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**Course Title: General Biology**

**Course Number: BIO100**

**Credits: 3**

**Instructor:**

**Email:**

**Office:**

**Prerequisites: None**

**Phone:**

**Office Hours:**

**COURSE DESCRIPTION:** This is an introductory course in contemporary biology designed to provide a foundation for further studies in biology. Instructional techniques include lectures and demonstrations.

### **STUDENT OUTCOMES/OBJECTIVES:**

Upon completion of this course students will be able to:

1. Evaluate the Scientific Method; identify the components of the Scientific Method.
2. Differentiate living from nonliving, they will use taxonomy. Identify the different forms of life on earth.
3. Distinguish between atoms and molecules; elements and compound; protons, neutrons, electrons, and define what are compounds and acid/ base.
4. Define the building blocks for all living as carbohydrates, saturated and unsaturated fatty acids, proteins and distinguish the different levels of structures and their diverse functions.
5. Recognize cells structure as the basic unit of life. compare the basic parts of eukaryotic cells organelles function in a cell, and distinguish bacteria from eukaryotic cells, protists and viruses. Compare and contrast meiosis (sexual) and mitosis (somatic cells); and describe the different stages in cell cycles. Identify chromosomes as the eukaryotic genes
6. Contrast DNA/ RNA structure and describe the DNA replication mechanisms, transcription and translation from DNA-RNA-proteins.
7. explain the concepts of Mendel inherited experiment. Define homozygous, heterozygous, genotype and phenotype & Discuss the ethical issues that surround the release of bioengineered organisms.
8. explain ways in which natural selection can affect a population over time, and the order of the taxonomic categories used in classifying organisms. Recognize the differences between viruses, bacteria, archaea and protists.



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Required Text Book:

Biology: Life on Earth, 12th Edition. Audesirk, Gerald | Audesirk, Teresa | Byers, Bruce E. ISBN-13:9780135261484

### **EVALUATION CRITERIA AND METHODS:**

- |                          |      |
|--------------------------|------|
| 1. Two Exam              | 30%  |
| 2. Midterm               | 25%  |
| 3. Final Exam            | 25 % |
| 4. Article summary       | 10%  |
| 5. Students Presentation | 10%  |

**A ( 95-100), A- (90-94), B+ ( 86-89), B (80-85), B- (75-79)**

**C+ (71-74), C (65-70), D (60-64), F (LESS THAN 60)**

### **Course outline:**

Week	Topic	L.O
1st	An Invitation to Biology & scientific method	SLO 1
2 <sup>nd</sup>	Life's Chemical Basis	SLO 2
3 <sup>rd</sup>	Molecules of Life	SLO 3,4
4 <sup>th</sup>	The Cell Structure	SLO 5
5 <sup>th</sup>	How the Cells Reproduce Mitosis & Meiosis	SLO 6
6 <sup>th</sup>	Midterm Exam Select articles for discussion and presentation	
7 <sup>th</sup>	DNA Structure and Function	SLO 7



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8 <sup>th</sup>	Observing Patterns in Inherited Traits	SLO 8
9 <sup>th</sup>	Studying and Manipulating Genomes	SLO 9
10 <sup>th</sup>	Evidence of Evolution	SLO 10
11 <sup>th</sup>	Viruses, Bacteria, and Archaea	SLO 11
12 <sup>th</sup>	Protists	SLO 11
13 <sup>th</sup>	Students Presentations	
14 <sup>th</sup>	Students Presentations	
15 <sup>th</sup>	<b>Final Exam</b>	

**Attendance & Make Up Exams.** Students are expected to follow attendance guidelines as presented in the syllabus provided by the instructor. However, in case of an emergency or illness, students are advised to notify their instructor or counselor immediately. The instructor will determine the validity of the absence. The exceptions to instructor discretion exist when members of armed forces are called for training or assignment or any case where students are legally required to be elsewhere. Pending the submission of appropriate documentation reasonable accommodations for make-up work shall be provided, and in accordance with guidelines included in the syllabus. Make up exams will be given only in extenuating circumstances. It is your responsibility to let me know that you missed an exam. All make up exams are more difficult than the original.

**COURSE REQUIREMENTS.** Attendance, punctuality and participation are required. Students missing more than 2 classes may receive a failing grade. Cell phones should be turned off in the classroom.

**Library Component:** Students are encouraged to use the library to complete their research paper. They may use database such as: Science @direct, EBSCO, and many others. The paper must follow the APA format and the student must select and extract a peer review research journal article, and write a two pages' review on that research article. You should use the HCCC library database and other resources.



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**Incomplete:** An INCOMPLETE grade for the course is given under specific conditions when a student, because of serious and unexpected reasons, cannot complete the requirements of the course. For example, if a student did not attend the final because of illness his or her excuse must be verified by a physician. Other absences from other assigned activities must be made up at another appointed time. To arrange for an incomplete grade, the student must see the instructor before final exam.

### ACADEMIC INTEGRITY

Academic integrity is central to the pursuit of education. For students at HCCC, this means maintaining the highest ethical standards in completing their academic work. In doing so, students *earn* college credits by their honest efforts. When they are awarded a certificate or degree, they have attained a goal representing genuine achievement and can reflect with pride on their accomplishment. This is what gives college education its essential value.

Violations of the principle of academic integrity include:

- Cheating on exams.
- Reporting false research data or experimental results.
- Allowing other students to copy one's work to submit to instructors.
- Communicating the contents of an exam to other students who will be taking the same test.
- Submitting the same project in more than one course, without discussing this first with instructors.
- Submitting *plagiarized* work. *Plagiarism* is the use of another writer's words or ideas without properly crediting that person. This unacknowledged use may be from published books or articles, the Internet, or another student's work.

When students act dishonestly in meeting their course requirements, they lower the value of education for all students. Students who violate the college's policy on academic integrity are subject to failing grades on exams or projects, or for the entire course. In some cases, serious or repeated instances of academic integrity violations may warrant further disciplinary action.

**DISABILITY SUPPORT SERVICES**



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Students with disabilities who believe that they might need accommodations in this class are encouraged to schedule an appointment with Disabilities Support Services at (201) 360-4157, as soon as possible to better ensure that such accommodations are implemented in a timely fashion. All disabilities must be documented by a qualified professional such as a Physician, Licensed Learning Disabilities Teacher Consultant (LDTC), Psychiatrist, Psychologist, Psychiatric Nurse, Licensed Social Worker or Licensed Professional Counselor, who is qualified to assess the disability that the student claims to have and make recommendations on accommodations for the student. All information provided to the Disability Support Services Program will be confidential between the program, professors involved with the student, and individual student.

“Mandatory Use of HCCC Email Address: Members of the HCCC community are required to check their official HCCC email address in order to stay current with College and course communications. All college business communication between faculty, students, and staff must be sent via an official HCCC email address. If an employee or student elects to forward or link his/her HCCC email to a separate and private account, that individual remains responsible for all material transmitted to that account. Employees of HCCC shall not be responsible for any material that remains undelivered, due to defects in the private non-HCCC accounts. Failure in the operations of private email accounts shall not be cause for excuse from communications between the student and the employee. Students that encounter difficulty with HCCC email should view the FAQ’s section on the Portal. “

### **USE OF ELECTRONIC COMMUNICATION DEVICES:**

Cell phones and all other devices are not allowed during class or lab times. **All of them Telephone, iPod or computer**

### **Diversity, Equity, and Inclusion Statement**

Hudson County Community College (HCCC) fosters a welcoming environment that celebrates and encourages culturally responsive curricula, respects diverse viewpoints, and values discussions without censure or hostility. Our classrooms are strengthened by embracing all student voices and identities. The President’s Advisory Council on Diversity, Equity, and Inclusion (PACDEI) encourages students to review DEI resources and initiatives at the following link:

<https://myhudson.hccc.edu/teamsites/Pages/pacdei.aspx>

### **Statement on Camera Usage in Remote Learning Environments**



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*As a college, we strive to be student-centered and therefore encourage faculty to consider a student's individual circumstances (need for privacy, technological problems, etc.) when requiring that they turn on cameras during class. There is no legal prohibition on faculty requiring cameras be turned on during classes or college policy prohibiting such requests. If students are unable to turn their cameras on, they should communicate the circumstances to the faculty member. On-campus spaces are also available to students as an alternative to home or off campus online and remote instruction. The on-campus spaces include: Gabert Library L219, L221, L222, L419, STEM Building S217, and North Hudson Campus N224, N303D. Within these rooms, students will have access to computers, web cameras, and headsets. If there are any issues with space capacity, there are several additional rooms that can be utilized.*

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Professor & Coordinator of Biology STEM  
Chemical Hygiene Coordinator  
STEM Bulding - S504  
263 Academy Street  
Jersey City, NJ, 07306  
Tel: (201) 360-4296**



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**RUBRIC FOR PRESENTATION**

Student Name(s): \_\_\_\_\_ Date: \_\_\_\_\_

Title \_\_\_\_\_

<b><u>Evaluative Criteria</u></b>	<b><u>Point Value</u></b>	<b><u>Points Earned</u></b>
<b><u>Format</u></b> <ul style="list-style-type: none"> <li>• Review of the Gene</li> </ul>	10	
<b><u>Completed Phases</u></b> <ul style="list-style-type: none"> <li>• Provision of handout- listing/brief description of highlights</li> <li>• Provision of information (e.g., handout</li> </ul>	10	
<b><u>Delivery</u></b> <ul style="list-style-type: none"> <li>• Projected voice</li> <li>• Good eye contact</li> <li>• Appropriate body language</li> <li>• Is concise and to the point</li> </ul>	10	
<b><u>Content</u></b> <ul style="list-style-type: none"> <li>○ Discusses the topic</li> <li>○ Discusses its important for biology</li> <li>○ Discusses condition when it is alter</li> <li>• Identifies contribution of it to research</li> </ul>	50	
<b><u>Timeframe</u></b> <ul style="list-style-type: none"> <li>• Stays within allotted timeframe ( 5-10 min)</li> </ul>	10	
<b><u>Impression</u></b> <ul style="list-style-type: none"> <li>• Professional presentation</li> </ul>		



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	10	
<b>TOTAL:</b>	100	