

**GENERAL BIOLOGY LAB  
BSC 1010L**



FLORIDA A&M UNIVERSITY  
**BIOLOGICAL  
SCIENCES**  
COLLEGE OF SCIENCE AND TECHNOLOGY

**Instructor: Dr. Eriola Betiku (Contact Information)**

**Course:** BSC 1010L General Biology Lab (L13)

**Credit:** One (1) semester hour

**Lecture Meeting:** Tue/Thu 12:30PM – 1:45PM

**Location:** BLPC 101 (Benjamin Perry)

**FAMU Office:** Rm. 509 Jones Hall

**Office Hours:** Wed/Fri 2PM – 4PM or By ZOOM or F2F appointment

**FAMU Office Phone:** (850) 412-5058

**E-Mail:** [eriola.betiku@famuedu](mailto:eriola.betiku@famuedu)

## Course description and objectives

This is a foundational course that introduces students to biology, the scientific study of life during three hours of lecture each week. General Biology I is divided into 5 Units in which students will learn the scientific method, the biochemical basis of life, cell structure and function, cell division, genetics, mechanisms of inheritance and biological diversity. Students will demonstrate their mastery of the previously mentioned topics by successfully completing on-line MasteringBiology homework, worksheets, case studies, quizzes, 5 Unit Exams and a cumulative Final Exam.

## Student Learning Outcomes

1. This course provides preparation for a host of post-baccalaureate paths, including graduate school, professional training programs (e.g., medicine, health sciences), teaching biology at any level as well as entry-level jobs requiring an understanding of basic biology.
2. To develop critical thinking skills and apply foundational biology concepts successfully to novel situations.
3. Of additional importance is the ability to successfully and accurately communicate biological information in both oral and written form, not only to professional scientists, but to the general public as well.
4. To inspire them to discover more about and understand the natural world by acquiring not only facts and concepts but also the skills and knowledge that will supply them with the tools to become life-long learners and educators in the rapidly expanding world of biological sciences. Below is an outline of the skills and perspectives we believe are desirable for students graduating with a degree in Biological Sciences.

## Learning Objectives

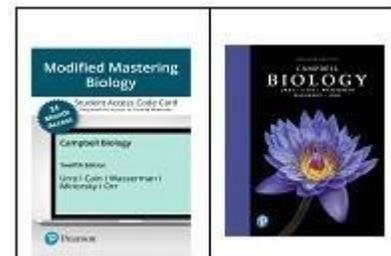
1. Apply the scientific method by a) stating a question, researching the topic, b) determining appropriate tests, c) performing tests, d) collecting, analyzing, and presenting data and e) finally critically evaluating scientific information as related to real world problems and proposing new questions and/or solutions to such problems.
2. Analyze the basic biochemistry of life, e.g., why water and carbon, which are fundamental for many biological molecules, and explain why they are essential for formation and maintenance of life on Earth.
3. Compare and contrast prokaryotic and eukaryotic cells with special emphasis their respective organelles and organelle functions and use that knowledge to explain how organisms are classified into domains and how they are interrelated.

- Evaluate and describe the structure, function and properties of the plasma membrane
- Describe the roles of chloroplast, mitochondria and enzymatic control of biochemical pathways and then integrate this into a scenario outlining "energy management describing/ and to outlining the photosynthesis and cellular respiration.
- Compare and contrast asexual and sexual reproduction and describe the stages of the cell cycle, mitosis and meiosis with special emphasis on outlining the function that each kind of cell division performs.
- Demonstrate an understanding of the terms gene, allele, mutation, dominant, recessive, autosomal, sex-linked, haploid, diploid by using them to correctly predict the genotypes and phenotypes of progeny in genetic crosses (monohybrid and dihybrid) by solving genetics problems.

## Required Texts, Readings, and/or Other Resources

*Modified Mastering Biology for Campbell Biology, 12<sup>th</sup> ed., Urry, et al.*

- Buying the book or a subscription to the book is NOT OPTIONAL** because you need to be able to have access to the online Mastering Biology Homework (MBHW)
  - Don't confuse the MBHW with the Canvas Worksheets, Case Studies & Quizzes
- Textbook ISBN-13: 9780135855836



## Course Content:

TENTATIVE LECTURE, ASSIGNMENT AND UNIT EXAM SCHEDULE				
Week	Date	Subject	Assignments	Chapters
1	08/23	Introduction - Themes in the Study of Life The Chemical Context of Life	MB Homework C01, C02 C01 Quiz, C02 Quiz	1 2
2	08/30	The Chemical Context of Life Water and the Fitness of the Environment	MB Homework C03 C03 Quiz,	2 3
3	09/06	Water and the Fitness of the Environment Carbon and the Molecular Diversity of Life	MB Homework C04 C04 Quiz	3 4
4	<b>09/13</b> 09/15	<b>EXAM 1-Chapters 1, 2, 3, 4</b> Structure and Function of Macromolecules		<b>1, 2, 3, 4</b> 5
5	09/20	Structure and Function of Macromolecules A Tour of the Cell	MB Homework C05, C06 C05 Quiz, C06 Worksheet	5 6
6	09/27	A Tour of the Cell Membrane Structure and Function	MB Homework C07, C11 C07 Quiz, C11 Case Study	6 7
7	10/04 <b>10/06</b>	Cell Communication <b>Exam 2-Chapters 5, 6, 7, 11</b>		11 <b>5, 6, 7, 11</b>
8	10/11	Introduction to Metabolism Cellular Respiration	MB Homework C08, C09 C08 Quiz, C09 Case Study	8 9
9	10/18	Cellular Respiration /Photosynthesis Photosynthesis	MB Homework C10 C10 Worksheet	9, 10 10
10	<b>10/26</b> 10/27	<b>EXAM 3- Chapters 8, 9, 10</b> The Cell Cycle		<b>8, 9, 10</b> 12
11	11/01	The Cell Cycle Meiosis and the Sexual Life Cycle	MB Homework C12, C13 C12 Quiz, C13 Case Study	12 13
12	<b>11/08</b> 11/10	<b>EXAM 4-Chapters 12, 13</b> Mendel and the Gene Idea		<b>12,13</b>
13	11/15	Mendel and the Gene Idea The Chromosomal Basis for Inheritance	MB Homework C14, C15 C14 Case Study, C15 Quiz	14 15
14	11/22 <b>11/24 – 25</b>	The Chromosomal Basis for Inheritance <b>Thanksgiving – NO CLASS</b>		15
15	<b>11/29</b> 12/02	<b>EXAM 5-Chapters 14, 15</b> Questions about final/tentative grades		<b>14,15</b>
16	<b>12/05-09 Finals Week</b>	12-07-22 7:30-9:30 AM		All Chapters

ABBREVIATIONS: MB = Mastering Biology C = Chapter

## Assessment/Evaluation Methods

ITEM	GRADE (%)
On-line Textbook Homework (Mastering Biology from Pearson)	10
On-line Assignments (Canvas Worksheets, Case Studies & Quizzes)	10
5 Unit Exams (lowest Unit exam dropped), Final Exam	80
Extra Credit (Attendance/Other opportunities TBA)	Variable

1. All assignments will be assessable on Canvas and must be either submitted to or completed on Canvas.
2. NO emails submission of assignments will be accepted without prearranged permission from the instructor.
3. To avoid a zero on a missed exam, you **MUST** provide a legitimate excuse, University-approved excuse for missing that exam.
4. All exams will be monitored using Respondus Lockdown Browser-Monitor, unless otherwise stated.

## Course Grading Distribution Scale

GRADING SCALE	GRADE
100.0 – 88.5%	<b>A</b>
>88.5 – 78.5%	<b>B</b>
>78.5 – 67.5%	<b>C</b>
>67.5 – 57.5%	<b>D</b>
Below 57.5%	<b>F</b>

## Class Policies

1. **Your cell phones should be put on “buzz” during class time and you should not be texting to your buds. Unless you are using them for following the lecture, your laptops should be off**
2. All students are required to take all tests at the scheduled time unless prior arrangements are made with the instructor. **One excuse that will not be accepted is that one must leave early because of pre-arranged travel plans.** In other words, don't schedule planes, buses, or car pools BEFORE scheduled exams. **You are responsible for knowing when exams are scheduled.**
3. A grade of “I” can only be issued to a student who on the last day he/she attends class, has a passing grade in the class on work already attempted and has a legitimate excuse for missing the remaining work! I can't give an 'I' on failing work to save you from having to register again for this class.
4. The student is responsible for officially withdrawing from the course. Students who simply stop attending will receive a grade based on the work attempted. **LAST DAY TO WITHDRAW FROM THIS CLASS → 11/04/22**
5. **DO NOT wait till the last weeks of the semester to discuss your grade.** If you are having a problem, then see me before then, otherwise there will be little I can do to help you.
6. **DO NOT request that you be allowed to do extra credit work to pull up your grade →No special consideration will be given to individuals that have not been granted to the rest of the class.**

### Policy Statement on Non-Discrimination

It is the policy of Florida Agricultural and Mechanical University to assure that each member of the University community be permitted to work or attend classes in an environment free from any form of discrimination including race, religion, color, age, disability, sex, marital status, national origin, veteran status and sexual harassment as prohibited by state and federal statutes. This shall include applicants for admission to the University and employment.

## Academic Honor Policy Statement

Florida A&M University is committed to academic honesty and its core values, which include scholarship, excellence, accountability, integrity, fairness, respect, and ethics. These core values are integrated into this academic honesty policy. Being unaware of the Academic Honesty Policy is not a defense for violations of academic honesty. Additional detail on FAMU Academic Honesty Violations are provided in University Policy 2.012 (10.)(s). If you have any questions, please see your Academic Advisor.

(From [The FAMU Student Code of Conduct - Regulation 2.012](#))

- An academic honesty violation shall include a student who gives or takes information or material and wrongfully uses it to aid himself/herself or another student in academic endeavors.
- It shall further include receiving unauthorized written or oral information from a fellow student. Additionally, it shall include stealing, buying, selling, or referring to a copy of an examination before it is administered.
- In the instance of papers written outside of the class, academic honesty violations shall include plagiarism.
  - Plagiarism may be specifically defined for the purposes of any course by the instructor involved. Unless otherwise defined, plagiarism shall include failure to use quotation marks or other conventional markings around material quoted from any source.
  - Plagiarism shall also include paraphrasing a specific passage from a specific source without indicating accurately what that source is.
  - Plagiarism shall further include letting another person compose or rewrite a written assignment.
  - **ALL students involved in any incident of plagiarism will automatically receive a ZERO for that assignment!**
- A student who assists in any of the academic honesty violations mentioned above shall be considered equally as responsible as the student actively engaged in and benefitting from the cheating;
- **Respondus records your test activity on video and I will review the videos to see if students have been “flagged” by the application as at “High Risk” for cheating. If the behavior is “suspect” I can and will either penalize you (take points off) or give a zero (some students leave no doubt that they are cheating).**

## University Americans with Disabilities Act (ADA) Statement

The Florida A&M University Americans with Disabilities Act (ADA) Policy Statement states that “Individuals who need a reasonable accommodation must notify the Office of Equal Opportunity Programs at 599-3076.” It is the responsibility of the FAMU Equal Opportunity Programs (EOP) Office, through the ADA Coordinator, to ensure the Florida A&M University is in compliance with the Americans with Disabilities Act. If you have any questions, please contact your Academic Advisor or the University EOP Officer, Equal Opportunity Programs, 674 Gamble Street, Tallahassee, FL 32307, (850) 599-3076.

### **Special Needs**

If you have special needs as addressed by the Americans with Disabilities Act (ADA) and need assistance please do not hesitate to contact me. Additionally, if you have special needs regarding exams and other accommodations, you may contact:

**Center for Disability Access and Resources (CeDAR):** <http://www.famu.edu/index.cfm?cedar&THECeDARTEAM>

Address: 640 Gamble Street, Tallahassee, FL 32307

Email: cedar@famu.edu Phone: 850.599-3180 Fax: 850.561-2513

*Disclaimer: This syllabus is intended to provide student guidance on the type of content and activities that will be covered in this course throughout the semester. It will be followed to the extent possible. However, modifications may be made to supplement and/or enhance student learning*