General Biology I Fall 2022 Course Syllabus

COURSE INFORMATION AND POLICIES

Course: BSC 1010 Section 001 Reference number: 1462

Florida A&M University
College of Science and Technology
Biology Department
Fall 2022

Course Lectures:

Location: Room 205; Building: BLPC
Lecture Time: MWF 8:00 to 8:50 am
Credit Hours: 3.0

Instructor: Dr. Michael Anthony Thornton, Office: **Jones Hall Room 511**
Phone: 850-412-5059
e-mail: thornthor@gmail.com; micheal.thornton@famu.edu
Office hours: Mon Wed 1130 am-1:30 pm. Fri 12 am- 1:45pm Tues Thus 10:00-11:00am

Catalog Description:

BSC 1010 Biology for Science Majors.

Prerequisites: Satisfactory completion of College Preparatory English or appropriate placement score CHM1020. Recommended co-requisite: BSC 1010L. NOTE: Both BSC 1010 and BSC 1010L are prerequisites for BSC 1011. A sequence course designed to provide depth in biology for students planning to major in biologically related sciences, medicine, dentistry, veterinary medicine, etc. Includes the following topics: methods of science, structural and functional organization of life from chemical and physical to cellular levels, bioenergetics, membrane transport, enzyme kinetics, motility, cellular reproduction, and molecular and organismal genetics. Students will be required to work through computer simulations and do internet research related to lecture topics outside of class.

Technology Requirements

This course is being taught remotely in a synchronous manner. Students attend live class sessions via the internet. As such all students must have some form of computer, laptop, tablet to take this course. All students need a good wifi system with sufficient bandwidth. Chromebook computers and S-series computers are not recommended as they are not compatible with our tools used to administer exams. Your computer will need an up to date browser such as google chrome or mozilla firefox and will also need to be compatible with Respondus lockdown browser. Your computer will also need a functioning webcam and microphone system. If you do not think you are able to meet the latter technology requirements contact me immediately so we can try to resolve your issues.

You can also contact tech support here

General Education Requirement:

The state of Florida has the following areas of General Education that all students must take a preset number of hours 1. Communication (6 hours), 2. Humanities (6 hours), 3. Social Sciences (6 hours), 4. Mathematics and Statistics (6 hours), 5. Natural and Physical Sciences. (6 hours) Biology courses such as BSC 1010, BSC 1011, and BSC1005 Full fill the general education requirements for area 5 Natural and Physical Sciences

Course Objectives

The objective of the general biology I course is to introduce the student to the foundational principles of biology progressing from the molecular and cellular levels of living organisms towards an understanding of life at the organism level. Principles of heredity and the molecular controls of heredity are also emphasized.

Course Goals

In terms of emphasis the course endeavors in its goals to teach students

- Relationship between structure and function on different biological scales
- Flow of energy and matter through biological systems, from cells to ecosystems
- Flow of genetic information from storage to phenotype
- Mechanisms of inheritance
- Evolution and maintenance of biological diversity
- Connectivity and emergent properties of complex biological networks, from molecules to ecosystems

Learning Outcomes:

Students who successfully complete the BSC 1010 General Biology I course will possess certain abilities:

1. Students will be able to **evaluate/appraise** whether a description of a cell's structures and their functions is accurate and complete.
2. Students will be able to **summarize** and **explain** the significance of the three tenets of the "Central Dogma" of Molecular Biology.
3. Students will be able to **develop** an example scenario that **demonstrates** the process involved with the scientific method.
4. Students will be able to **compare and contrast** how energy is processed in plants versus how it is processed in animals at the cellular level and delineate the roles of enzymes in these events.
5. Students will be able to **apply** principles of Mendelian genetics to **solve** real-world problems involving the inheritance of disease.
6. Students will be able to **make connections (correlate)** between human actions and how those behaviors have impacted natural selection and biological diversity in ecosystems.
7. Students will be able to **explain** and **compare** how different types of cells reproduce.
8. Students will be able to **create** novel solutions to biological problems based on the application of knowledge of principles of inorganic and organic chemistry taught in the course

These **learning outcomes** correspond to **the University academic learning compacts** (ALC's)

ALCs for Biology are reposited here: Florida A&M University. http://www.famu.edu/assessment/assessment_ALC.php

Biology Education Requirements:

This course will cover the following Sunshine State Standards: Process of Life (F.1.) and the Nature of Science (H.1, H.3.)

Course Expectations

What do you expect from me as a student in this course?

Attendance:

I expect you to attend every class.

Preparation:

Come to class with an open mind, prepared to learn. Preparation means that you have completed the reading, video and homework assignments, and have brought the materials you need for the day including your questions and insights.

Courtesy & Respect:

Interact with the instructors, teaching assistants and your fellow students in a professional, courteous way (be on time, refrain from talking in class, contact us if an emergency arises, etc.)

Study Time:

To earn a C in this class, we expect you to spend at least 8 hours each week studying the material outside of class. This standard represents the official-university standard:3 hours of effort inside and outside of class to earn a C. For our3C credit course, we expect you to put in 8 hours of effort per week. Since you are in class 3+hours per week, you need to study at least 8 hours each week to earn a C. If you aim for a higher grade, you will need to devote more time to this course to earn that higher grade. Because you are taking, other classes, you will need to practice very good time management skills to ensure that you have enough time to do well academically, socially, and maintain your health.

Inquiry:

Ask questions whenever something isn't clear to you or you want to know more about it!

Collaboration:

We will be using Canvas's Discussion Board function to ask and answer questions about the course and content. Please check in and ANSWER any questions you know the answer to, post information about material or opportunities related to the concepts we are studying, study strategies, organize study sessions,etc. This will be our“Facebook”substitute for this class.

Honesty:

In accordance with university policy, a student who commits academic dishonesty (cheating, plagiarism,etc.) will receive appropriate penalties, including the possibility of receiving an F for the course.Instances of academic misconduct will be reported to the University administration and become a part of your permanent record, which can affect your acceptance to graduate or professional schools.

What can I expect from my instructor in this course?

Preparation:

I will prepare activities and assignments that will help you master the material and improve your skills.

Courtesy & respect:

I will treat you in a professional, courteous way in lecture, laboratory, and interactions outside of class.

Availability:

I will be accessible to you during office hours or by appointment to help you learn the material or answer other questions you have about the course and your performance.

Feedback:

I will give you timely feedback on your performance so you understand how you are doing and why. I will meet with you to help you analyze your performance and develop new strategies to learn this material if you are nt performing at the level you would like.

Enthusiasm:

I am a professional who has spent years learning many different facets of biology; I will share with you my love of biology.

Fairness:

I will prepare exams, quizzes, and assignments that fairly represent the material and that are fairly graded. (Fair does not mean “easy! You are likely to find this course will be one of the most challenging you will take at the University. I will meet with you to explain the grading so that you understand the
standards and can improve your performance. I will listen to and consider your concerns about any aspect of the course and, if appropriate, make adjustments or explain why I cannot do so.

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Required Texts and Online Resources:

Campbell "Biology": 12th edition, Reece, Urry, Cain, Wasserman, Minorsky & Jackson

Canvas: All students should be auto-enrolled in **Canvas** if you are not see **Mr. Bado** in the basement of **Coleman Library** to activate or repair your canvas account**.**

The Canvas Course Modules contain: lecture outlines, exam study guides, powerpoint files,video tape recordings of lectures and practice questions chapter assignments such as essays and discussions.

Open Educational Resources (OER) Textbook Alternative

Openstax Biology for Majors 2e

Mary Ann Clark, Texas Wesleyan University, Matthew Douglas, Grand Rapids Community College

Jung Choi, Georgia Institute of Technology

Openstax publishes high-quality, peer-reviewed, openly licensed college textbooks that are absolutely free online and low cost in print. PDF copies can be downloaded and pages of chapters can be printed using a standard printer --three hole punched-- and placed in a 3 ring binder.

Click on Link Below to preview the FREE "Biology for Majors" 2e Textbook;

https://openstax.org/details/books/biology-2e (Links to an external site.)

Socrative

All students must download the socrative app for students to their phone or optionally use a laptop or desktop to access the socrative webpage. Both the Apple Store and Google PlayStore have it.

This resources is free and it is mandatory in this course for students to download the app.

This app will be used to:

1) Take Attendance

2) Give Quizzes

3) Formative Assessments during every class (similar to clickers)

URL: https://b.socrative.com/student/login\ (Links to an external site.)

Course Requirements:

Grades will be computed based on 5 examinations and course activities

Exam 1	15%
Exam 2	15%
Exam 3	15%
Exam 4	15%
Exam 5 (Final)	15%
Practice Questions	5%
Labster Activities	5%
Discussions	5%
Essays	5%
Attendance	5%
Total:	100%

Your final average is calculated by adding the five exam scores together and dividing by 5. This represents 75% of your course average, The other 25% is obtained as outlined above by completing essays, discussions, Labster activities etc... The final exam is 15% of your grade and is not droppable and due to time constraints at the end of the semester can not be made up. Don't miss it! All exams count none are dropped. These total to 100% for your final grade. as shown above

Suggested Grading Scale:

90-100 A

80-89 B

70-79 C

60-69 D

0 – 59 F

Exam and Assignment Policies

Exam Integrity

The Code of Academic Integrity will be observed. Any violation may result in failure in the course and potentially other punitive action set forth by the University. To maintain some degree of academic integrity during online examinations we will use *Respondus - Lockdown Browser*

Missed exams and assignments

You will be given a number of exams and also given assignments in and out of class as well as quizzes. It is very important that you complete these assignments in a timely manner. If you should run into some difficulty and find yourself in a situation where you may be unable to complete an assignment or you miss an exam or quiz be sure to communicate with the instructor in advance or very shortly after the missed event. Be able to provide a reasonable excuse as to why the event was missed. If your excuse is reasonable it is possible but not guaranteed that you might be allowed to make-up the assignment or quiz although in most cases this is not generally the policy. Missed exams must be made up also in a reasonable time period usually within 1-2 weeks. I post exams scores for each exam within one week of students taking the exam. If you miss an Exam and I post a zero, or no score after 1 week since the exam took place. I assume you missed the exam. It is your responsibility to go on Canvas within a week of me posting the scores and see that you have a zero or no score obtain your official excuse from the Dean's office and make arrangements (see below policy) to make up the missed exam within no later than 1 week of the posting.

Final Exams usually cannot be made up due to the fact that they are done at the very end of the semester and schedule opportunities are few. However if you miss the final exam contact your instructor for advisement on your particular situation. Examinations are electronic and are given on CANVAS. Make up of missed exams by univeristy policy require an official excuse from the Dean's office.

1) Making arrangements to make up missed is not done using email.

2) Making arrangements for a make up means: coming to the "virtual" class room and directly approaching me "in person" after class or alternatively in office hours about arranging a time and place for taking the make up. (For online classes this would involve staying on zoom after class and making arrangements for the make up)

Email is not acceptable for this intent, I may see that email or I might not or it might not get delivered or it might be put in my spam folder. Hence, see me in person, in class within one week to make arrangements for a make up. Since we meet 3 times a week MTR you should easily be able to see me directly in person to arrange a make up exam.

I will not give make ups at the end of the semester for assignments and exams taken or completed by everybody else at the beginning or middle of the semester. You have one week to make up the missed assignment or examination.

Access and review of exams and assignments

All paper or electronic exams and scantrons which you feel may have incorrect evaluation can be reviewed by you and your professor. A request to do this should be presented to me no later than 1 week after the day the exam grades are issued. Students may see their exam at any time by making a prior request to do so and setting a specific appointment date so that I may bring the requested documents to my office for a mutual review. (I will email you instructions for doing this through ZOOM if the class is online).

Late Work

Coursework not submitted by the deadline will receive a 10% penalty on the grade earned and will not be accepted more than 20 days late. It is the student’s responsibility to keep up with class assignments.

The schedule of assignments has clear due date for each assignment on it. If the schedule changes, a new schedule will be announced and distributed via email and Canvas.

Essay and other written assignment submissions

All work is to be typed and formatted according to APA style. Submitting work in the wrong format will result in deductions. I will not accept hand-written or printed-out hard-copies of work. Work must be submitted in the space provided for it on Canvas "Assignments". • Blog postings should be typed directly into the textboxes; no attachments • Discussion board postings should be typed directly into the text boxes; no attachments o • Papers and Case Studies must be submitted as attachments in Word (.docx) file format or PDF. Do not submit written documents using Apple PAGES app. Also for assignments requiring pictures be submitted do not submit .mov or .heic fromats only submit .jpeg .png or .gif

Plagiarism

Plagiarism or academic dishonesty of any kind is not acceptable. Students who plagiarize risk receiving a zero on any assignment completed in a manner that is not considered honest. Such behavior may be reported to the Office of Student Conduct if I deem it necessary. Your papers are submitted to plagiarism detection software ("turn it in'), as well, as are any suspect discussion board and blog postings. If you feel cheating is your only option, schedule an appointment to get help! I expect you to do your own work in this course—on discussions, blogs, papers, peer reviews—on all work!

Attendance Policy

In this class students should try to regularly attend the lecture sessions. You are an important part of class and your contributions are valued. Further, when you are not present it is very likely you are missing valuable information and activities that you will need to be successful and also missing opportunities to ask questions you might need answered to help you understand the material. The University has policies that require students attend class which are in place ultimately for your benefit.

All students enrolled in the College are expected to attend all classes.

Attendance and participation are two of the most significant factors that promote student success.

Students are responsible for completion of all work assigned in class whether they are present or not.

Students reporting to class late or leaving early may be considered by their instructor to be absent. In case of absence, it is the student’s responsibility to contact the instructor.

Six valid reasons for absences:

1 required military duty,

2 court-mandated appearances including jury duty,

3 college-sponsored activities approved by the President,

4 religious holidays.

5. severe Illness (with proper medical documentation)

6. Death of an Immediate Family Member (with verifiable documentation

Students are expected to be on time, as tardiness interrupts class proceedings. A student who needs to be excused from class early should consult with the instructor in advance. Otherwise, the student is expected to remain in the class the length of the class session. If you are late, please try to seat in the first row closest to the door, but please feel free to attend class.

Getting Help

If you are having trouble with the course material please contact the biology tutoring center or visit tutor.com as FAMU has a license with them. You can also see me during "Zoom" office hours for assistance but as there are many students coming to see me at this time and I must also assist them with various issues, the time spent on your issue may not be sufficient to fully address that and other issues. The time range we spend may only be up to 30 minutes depending on the needs of other students present. If this occurs an appointment with the tutoring lab will be made at the conclusion of our meeting.

Sometimes students have trouble with course material because they have not determined their learning style. Take the survey below and find out what your learning style is. Then try to adjust your process to more directly fit with how you specifically learn the best.

Strategies for Success

A great deal of material will be covered in this course; thus it is important to keep up with the work on a regular basis. A few recommendations:

Visit my office to get help and to discuss your grade status.
Read the chapter before coming to class. Define all unfamiliar words.
Attend all class sessions and participate in the class activities and discussions.
Maintain a notebook with all class papers to submit when asked for.
Complete questions at the end of each chapter for better understanding of the concepts.
Consider forming a study group.

Course Pacing Schedule

The syllabus pace schedule (see below) is a tentative lecture and exam schedule; actual topics covered and reading assignments and exam dates may differ and will be announced in class and via e-mail Reading assignments indicate chapters (or page numbers) to be read before each lecture.

SYLLABUS

Date		Lecture Topic	Chapters	Lab Topics
Aug.	M22 (MT) W24 (MT) F26 (MT)	Intro, Properties of Life Properties of life, Taxonomy Properties of life, Evolution, SciMet	Ch. 1 Ch. 1 Ch. 1	Introduction
	M29 (MT) W31 (MT) F02 (MT)	Chemistry-Atomic structure Chemistry-Atomic structure Chemistry-Covalent Bonding	Ch. 2 Ch. 2 Ch. 2	Intermolecular Forces
Sep.	M05 (MT) W07 (MT) F09 (MT)	**No class-labor day** BondingWater/Carbon Compounds Carbon Compounds	Holiday Ch. 3/4 Ch. 4	**No class**
	M12 (MT) W14 (MT) F16 (MT)	The Structure and f_x of Macromolec The Structure & f_x of Macromolec The Structure & f_x of Macro/Cell	Ch. 5 Ch. 5 Ch. 5/6	Chemistry of Life
	M19 (MT) **W21(MT)** F23 (MT)	A Tour of the Cell **Exam 1 (Chapters 1-5)** Cell Structure/Membranes	Ch. 6 **Exam 1** Ch. 6/9	Cell/Microscope
	M26 (MT) W28 (MT) F30 (MT)	Cell Structure/Membranes Membrane Structure and Function Membranes	Ch. 6/7 Ch. 7 Ch. 7	Practical Exam I
Oct.	M02 (MT) W04 (MT) F06 (MT)	Cell Communication Cell Com./An Intro to Metabolism Metabolism	Ch. 11 Ch. 8 Ch.8	Cell Membrane
	M09 (MT) **W11 (MT)** F13 (MT)	An Intro to Metabolism/Respiration **Exam 2 (Chapters 6,7 and 11)** Cell Respiration	Ch. 8/9 (Columbus Day) **Exam 2** Ch. 9	Enzymes
	M16 (MT) W18 (MT) F20 (MT)	Cell Respiration Cell Respiration Cell Respiration/Photosynthesis	Ch. 9 Ch. 9 Ch. 9/10	
Nov.	M28 (MT) W30 (MT) R31 F01 (MT)	Plant Photosynthesis Cell Cycle- Mitosis Halloween Cell Cycle/ Mitosis	Ch. 10 Ch. 12 Ch. 12	Energy Transformations
	M04 (GH) **W06 MT)** F08 (MT)	Mito/Meiosis and Sexual Life Cycle **Exam 3 (Ch. 8,9, 10)** Meiosis	Ch. 13 (Daylight Savings) **Exam 3** Ch 13/14	**Class Withdraw Date**
	M11 (MT) W13 (MT) F15 (MT)	**Veterans Day-No Class** Mendel/The Chromos. Basis of Inh Mendel Dihybrid: Codominance	Ch. 14 Holiday Ch. 14	Mitosis and Meiosis
	M18 (MT) W20 (MT) R23 F24	**Exam 4 (Chaps. 12-13)** The Chromosomal Basis of Inherit **Thanksgiving-No Class**	**Exam 4** Ch. 14/15 **Thanksgiving** **Thanksgiving**	Mitosis and Meiosis
	M25 (MT) W27 (MT) F29 (MT)	The Molecular Basis of Inherit The Molecular Basis of Inherit DNA Replication	Ch.15 Ch.16 Ch.16	Genetics Lab
Dec	M02 (MT) W04 (MT)	From Gene to Protein- Translation From Gene to Protein- Translation	Ch. 17 Ch. 17	Genetics Problems

	F06 MT)	Eukaryotic Genomes and Proteomes	Ch.18	
	M9 (MT) W11 (MT) F13 (MT) M 16 (MT) W 18 (MT F 20 (MT) Wed 25	**Finals Week** **EXAM 5-FINAL 50 questions** (Chapters 2, 5,6, 10[10%] And 14, 15,16. and 17 [90%] Grades are due Christmas		

The actual FINAL EXAM schedule will be determined later in the semester by the registrar's office. Circa Dec, 1st, go to: http://www.famu.edu/admreg/registrar/exams.html to get more info.

Florida A&M University Grading Policy; Grade Change Policy; I Grade Policy (Office of the Registrar):

(F.S. 1001.74(4) Florida A&M University Rule 4.101
The University supports its grading system which is based upon the integrity of a grade earned in a course. The University Registrar is the official custodian of student grades and is responsible for recording approved grade change requests.

(A) Assignment of Grades

1. Grades are assigned at the end of the term in which the student was registered for the course.

2. Due to extenuating circumstances beyond the control of the student, a grade of "I" may only be assigned if the student is passing the course, but has not completed all of the required work by the end of the term. Grades of "I" may not be assigned in any course that a student withdraws from, has excessive absences in, or fails to attend.

3. A grade of "PN" will be assigned when a student is passing a course, but is not proficient. The use of the "PN" grade is only approved for courses in the Physical Therapy Graduate Program.

4. A student receiving an "I" or "PN" grade should not re-enroll in the course until after the "I" or "PN" grade has been permanently changed to a letter grade.

(B) Change of Grade

Changes of grades may only be accomplished under special circumstances and are governed by the following guidelines:

1. Grade changes pertaining to a grade of "I" or "PN" must be submitted by the end of the next term in which the student is enrolled. An "I" grade that is not changed by the specified time will revert to an

"F." A "PN" grade that is not changed by the specified time will revert to the grade earned by the student at the time the "PN" was assigned.

2. All grade changes resulting from a grade appeal must be submitted within one semester of the issuance of the grade.

3. Any other grade changes must be made within one semester of when the grade was initially assigned.

(C) Procedure Governing the Process of Changing Recorded Grades

Grade changes can only be made for the following reasons:

1. When it is determined that a grade was recorded in error;

2. When removing "I" or "PN" grades; or

3. As a result of a student's successful appeal of a grade.

Academic units wishing to request grade changes must submit a "Grade Change and Academic Record Update Form" to the Registrar's Office for processing. The form must contain the signature of the respective academic Dean in order to be processed.

Specific Authority: Article IX, Section 7(c), Florida Constitution, BOG Regulation 1.001. History: New— 12-07-06; Amended 05 -09 -12

Dress Code:

The University has an obligation to create a living and learning environment where all members of the community are comfortable and not offended by inappropriate dress The dress code for this course is designed to provide appropriate guidelines so that all students may dress in a manner that is respectful of themselves and their classmates.
The code is:

- Dress attire should be neat, modest and casual at all times while participating in course activities.
- Hats, caps, do-rags, and other headgear must be removed when in classrooms.
- "Baggy" pants or sloppy dress will not be permitted at anytime_
- Clothing that is provocative or contains obscene messages or messages that are contrary to the mission of the college will not be permitted in the classroom setting.

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.

(ADA) Statement (University Americans with Disabilities Act)

The Florida A&M University Americans with Disabilities Act (ADA) Policy Statement sates 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