



**BSC 1406 - Biology I for Science Majors
Syllabus Fall 2023**

Instructor: Angela Rouse

Office Hours:by appointment

Office Location: CCA 313 at RCHS

Office Phone: 972-636-9991 ext. 2863

University Email Address: Angela.Rouse@tamuc.edu

COURSE INFORMATION

Textbook Required:

Campbell's Biology; Benjamin Cummings, 2020. ISBN 9780135188743

Course Description

BSC 1406 - Biology for Science Majors I (lecture + lab) - Four semester hours (3 lec/1 lab). This course is the first half of the Introductory Biology series. It is designed for the following majors: Broadfield Biology, Pre-Med, Pre-Allied Health, and Pre-Vet. Topics covered include biological evolution, biochemistry, cellular and molecular biology, genetics, and microbiology.

Course Objectives:

Fundamental principles of living organisms will be studied, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of cytology, reproduction, genetics, and scientific reasoning are included. 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.

Student Learning Outcomes

1. Describe the characteristics of life.
2. Explain the methods of inquiry used by scientists.
3. Identify the basic requirements of life and the properties of the major molecules needed for life.
4. Compare and contrast the structures, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells.
5. Describe the structure of cell membranes and the movement of molecules across a membrane.
6. Identify the substrates, products, and important chemical pathways in metabolism.
7. Identify the principles of inheritance and solve classical genetic problems.
8. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
9. Describe the unity and diversity of life and the evidence for evolution through natural selection.
10. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
11. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
12. Communicate effectively the results of scientific investigations.

COURSE REQUIREMENTS

Student Responsibilities or Tips for Success in the Course

NOTE THAT You are expected to read all textbook chapters corresponding to topics covered in lecture. We will not use every chapter of the textbook in lecture, and we may discuss some aspects in more detail than your text goes into- so be sure to keep up with lecture notes too! If you miss a lecture, you are still responsible for that day's material- read the chapter, get notes from someone in class and see me for any clarification. If you have difficulty with the material, feel free to see me as soon as you can for advice on how best to improve. The syllabus/schedule are subject to change.

Instructional Methods

This course meets daily and includes multiple types of instruction—lecture, texts, videos, and student-led activities. Students are expected to engage in all parts of the lesson and provide feedback on their learning needs. Content quizzes will be given weekly in order to assess the topics and activities. Content quizzes build the exams. You may use your notes on the content quizzes but not on the exams. There will be 4 content exams and an additional comprehensive final exam.

Lab work and Project/Presentation

In addition to lab activities, students will search and review journal articles as we reinforce the importance of empirical data in biology.

GRADING

Students will be given the following opportunities to demonstrate knowledge of class material. The course has a total of 1000 points.

Lecture Grades: 75% of total grade

Exams:	= 360 points (4 exams; each exam is worth 90 points)
Comprehensive Final:	= 90 points (1)
Quizzes:	= 200 points (11 quizzes; 20 points each, lowest quiz grade will be dropped)
Journal Article Reviews:	= 100 (4 articles, 25 points each)

Lab Work: 25% of the total grade

Participation	= 125 points (5 labs; 25 points each)
Reports & Conclusion	= 125 points (5 labs; 25 points each)

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by Texas A&M University-Commerce have a corresponding

course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

Zoom

Requirements: <https://support.zoom.us/hc/en-us/articles/201362023-Zoom-system-requirements>

[Windows-macOS-Linux](#)

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

Interaction with Instructor Statement

I will be available during the posted office hours in person. Please reach out anytime you feel the need to confer, and I can arrange a virtual meeting at other times as well. I am always ready to answer any questions via email also.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

It is the student's responsibility to contact the instructor if an absence occurs. If prior arrangements are not made, students will not be allowed to make up missed assignments. In the event of a school activity on an exam date, students must pre-plan with the instructor. Arrangements must be made prior to the missed exam. It is the student's responsibility to contact the instructor if an absence occurs. Any absence not pre-planned, or a missed appointment, will result in a zero for the exam.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#) .

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: <https://www.britannica.com/topic/netiquette>

TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedure/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty

<https://inside.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

13.99.99.R0.10 Graduate Student Academic Dishonesty

<https://inside.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/13students/graduate/13.99.99.R0.10.pdf>

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an

accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

A&M-Commerce Supports Students' Mental Health

The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

Department or Accrediting Agency Required Content

COURSE OUTLINE / CALENDAR

Course Schedule: class begins August 28 and ends December 15, 2023

Week of	Week #	Chapter	Content	Weekly grades
8/15	0		Measurement, Biometrics	Lab 1
8/21	0	Ch 2-4	Chemistry, Water & Carbon	Quiz 1
8/28	1	Ch. 5	Macromolecules	Quiz 2
9/4	2	Ch. 6	Cell Structure & Function	Quiz 3
9/11	3		Article analysis, Biomolecule lab	Exam 1, Lab 2, Article 1
9/18	4	Ch. 8-9	Metabolism & Cellular Respiration (Cell Resp)	Quiz 4
9/25	5	Ch. 8-9	Metabolism & Cellular Respiration (Cell Resp)	Quiz 5
10/2	6	Ch. 10	Photosynthesis (Chromatography)	Quiz 6, Lab 3
10/9	7			Article 2
10/16	8	Ch 12	Cell Cycle (Observe Mitosis)	Exam 2,
10/23	9	Ch 13-14	Meiosis & Mendal	Quiz 7
10/30	10	Ch 15	Patterns of Inheritance	Quiz 8
11/16	11	Ch 16-17	DNA and Gene to Protein	Quiz 9
11/13	12	Ch 18	Biotech, Electrophoresis	Exam 3, Article 3, Lab 4
11/20	13	Ch 19	Gene Regulation	Quiz 10,
11/27	14	Ch 20	Viruses	Quiz 11, Article 4
12/4	15	Ch 21	Transformation	Exam 4, Lab 5
12/11	16		Finals	Final
12/18				Applications

Last day to drop with a "W" - Nov 16, 2023