BIOL 1306
Biology for Science Majors I Lecture
Fall 2025

LAMAR INSTITUTE OF TECHNOLOGY

INSTRUCTOR CONTACT INFORMATION

Instructor: Desiree Wilson
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Office Hours: See Starfish for available office hours
Click Here for Starfish

Credit: 3 semester credit hours (3 hours lecture)

Prerequisite/Co-requisite:
TSI Complete
Biology 1106 Corequisite

Course Description
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.

Course Objectives
Upon completion of this course, the student will be able to:

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, cell respiration, and photosynthesis.
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 of evolution through natural selection

Core Objectives

1. **Critical Thinking Skills:** To include creative thinking, innovation, inquiry, analysis, evaluation and synthesis of information
2. **Communication Skills:** To include effective development, interpretation, and expression of ideas through written, oral, and visual communication
3. **Empirical & Quantitative Skills:** To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
4. **Teamwork:** To include the ability to connect choices, actions, and consequences to ethical decision-making

TEXTBOOK AND MATERIALS:

- REQUIRED = Textbook **-** OpenStax Biology 2e **–** https://openstax.org/details/books/biology-2e?Book%20details
- Your textbook for this class is available for free online and a print copy, can be purchased online, or obtained through Eagle Learning Essentials. Click Here for Eagle Learning Essentials

ATTENDANCE POLICY

1. You must log into Blackboard and access this course a minimum of 3 times per week.
2. Late assignments will be accepted with a deduction as a late penalty. Students will receive a zero for assignments not completed.
3. If you wish to drop this course, you must drop it administratively. If you do not drop, you will receive an F for the course

Drop Policy

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the Academic Calendar. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

Student Expected Time Requirement

For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16- week session OR approximately twelve to eighteen hours in an 8-week session. Online/Hybrid students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

Course Evaluation

Final grades will be calculated according to the following criteria:

1. Discussion	10%
2. Quizzes	20%
3. Midterm & Final Exam	30%
4. Individual & Group Project	20%
5. Assignments (Video Quizzes, etc.)	20%
	100%

GRADING SCALE

90-100 = A
80-89 = B
70-79 = C
60-69 = D
0 – 59 = F

Academic Dishonesty

Students found to be committing academic dishonesty (cheating, plagiarism, or collusion) may receive disciplinary action. Students need to familiarize themselves with the institution's Academic Dishonesty Policy available in the Student Catalog & Handbook at http://catalog.lit.edu/content.php?catoid=3&navoid=80#academic-dishonesty.

AI STATEMENT

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignment appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own, original work, unless otherwise specified. Students should contact their instructor with any questions as to acceptable use of AI / ChatGPT in their courses.

Technical Requirements (for courses using Blackboard)

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at https://lit.edu/online-learning/online-learning-minimum-computer-requirements. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

Quizzes and Exams in this course are administered through Blackboard. Exams will be administered with Respondus **LockDown Browser + Respondus Monitor (webcam)**
Requirements to take exams include:

- A reliable computer, desktop or laptop (phones, chromebooks, tablets, and iPads are not allowed).
- Windows: 10, 8, 7
- Mac: OS X 10.10 or higher
- Adobe Flash Player (bundled with the LockDown Browser installation)
- Web camera (internal or external) & microphone
- A reliable internet service provider. A broadband internet connection.
- A room to take the exam where you are alone (other individuals in the room are not allowed)

Watch these overview videos to understand the tools your will be using to take the exam.
Respondus LockDown Browser: https://www.youtube.com/watch?v=XuX8WoeAycs#action=share
Respondus Monitor: https://www.youtube.com/watch?v=hv2L8Q2NpO4 - action=share

Respondus **LockDown Browser + Respondus Monitor (webcam)**
Download Instructions:

- Select the quiz in the course
- Under Quiz Requirements you will see "To take this quiz you must use the Respondus LockDown Browser"
- Below this will appear: "You can use the button below if you have not already downloaded LockDown Browser". Click the button to go to the download page and then follow the instructions
- Use the link to download Respondus LockDown Browser to your computer; follow the installation instructions
- Return to the Quiz page in Brightspace (it may still be open in another tab) and select the quiz
- Select "Launch LockDown Browser"
- The quiz will now start

Note: LockDown Browser only needs to be installed once on a computer or device. It will start automatically from that point forward when a quiz requires it.

Guidelines while taking online quiz, follow these guidelines

- Ensure you're in a location where you won't be interrupted.
- Turn off all other devices (e.g. tablets, phones, second computers) and place them outside of your reach.
- Before starting the test, know how much time is available for it, and also that you've allotted sufficient time to complete it.
- Clear your desk or workspace of all external materials not permitted - books, papers, other devices.
- Remain at your computer for the duration of the test.
- If the computer, Wi-Fi, or location is different than what was used previously with the "Webcam Check" and "System & Network Check" in LockDown Browser, run the checks again prior to the exam.
- To produce a good webcam video, do the following:
    - Avoid wearing baseball caps or hats with brims.
    - Ensure your computer or device is on a firm surface (a desk or table). Do NOT have the computer on your lap, a bed, or other surface where the device (or you) are likely to move.
    - If using a built-in webcam, avoid readjusting the tilt of the screen after the webcam setup is complete.
    - Take the exam in a well-lit room, but avoid backlighting (such as sitting with your back to a window)
- Remember that LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted.

The following violations during testing will result in a grade of zero or reduction in points:

- Using technology or electronic devices including, but not limited to, iPads, phones, smart glasses, earbuds, smartwatches.
- Leaving the testing environment or face missing from frame or obscured.
- Noises that might indicate external help.
- Any other questionable activities indicating cheating.

Disabilities Statement

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link

to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT. https://lit.edu/student-success/starfish

Student Code of Conduct
It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

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Course Requirements

- A Midterm and Final is required with two attempts given per assessment and uses Respondus Lockdown Browser. The final score will be an ***average of attempts***.
- Five quizzes will be given using Respondus Lockdown Browser with two attempts given per assessment. The final score will be an ***average of attempts***.
- Students will complete video quizzes and discussion boards for each unit.
- Students will complete an individual project and a group project. A deduction in points will be given for completing group project without partners.
- Late assignments will be accepted with a deduction as a late penalty. Students will receive a zero for assignments not completed.

Tentative Weekly Schedule - Instructor reserves the right to modify as needed

Week:	To Do:	Due Date:
Week 1 **Aug 25th – 29th** Introduction Study of Life Chemistry of Life Total Video Time: 13 minutes	Discussion Board: Netiquette for Online Learners Discussion Board: Introduction Syllabus Quiz/Syllabus Acknowledgement	08.31.25
	Video Quiz: Characteristics of Life (Chap 1) [7minutes 57 seconds] Video Quiz: Levels of Organization in the Body (Chap1) [2m 45 s] Video Quiz: Elements of the Body (Chap 2) [1m52s] Look over instructions for Individual Project: Biology Careers Due 10.02.25 Join a group for Group Project: Genetic Disorders Due 11.12.25	09.03.25
Week 2 **Holiday Sep 1st** **Sep 2nd – 5th** Biological Molecules Total Video Time: 13 minutes	Video Quiz: The 5 Most Important Molecules in Your Body (Chap 2) [7m 55s] Video Quiz: Biological Molecules (Chap 3) [4m23s] Discussion Board: Chemistry of Life Get started on Individual Project: Biology Careers Due 10.02.25 Join a group for Group Project: Genetic Disorders Due 11.12.25	09.07.25
Week 3 **Sep 8th – 12th** Cell Structure & Function Total Video Time: 13 minutes	Video Quiz: Prokaryotes vs. Eukaryotes (Chapter 4) [4m 42s] Video Quiz: Cell Structure (Chapter 4) [7m 22s] Quiz 1: Chapters 1 – 3 *Opens 09.12.25* and *closes 09.13.25* Discussion Board: Cell Structure and Function Work on Individual Project: Biology Careers Due 10.02.25 Work on Group Project: Genetic Disorders Due 11.12.25	09.11.25
Week 4 **Sep 15th – 19th** Structure & Function of Plasma Membranes Total Video Time: 15 minutes	Video Quiz: Cell Membrane Structure & Function (Chap 5) [2m 9s] Video Quiz: Membranes & Transport (Chap 5) [11m 45s] Discussion Board: Plasma Membrane Structure and Function Work on Individual Project: Biology Careers Due 10.02.25 Work on Group Project: Genetic Disorders Due 11.12.25	09.21.25
Week 5 **Sep 22nd – 26th** Metabolism Total Video Time: 8 minutes	Quiz 2: Chapter 4 – 5 *Opens 09.22.25* and *closes 09.23.25* Video Quiz: Metabolism & ATP (Chap 6) [4m22s] Video Quiz: Enzymes & How they Work (Chap 6) [3m 9s] **DUE SOON →** Work on Individual Project: Biology Careers Due 10.02.25 Work on Group Project: Genetic Disorders Due 11.12.25	09.28.25
Week 6 **Sep 29th – Oct 3rd** Cell Respiration	Video Quiz: Cell Respiration (Chap 7) [14m 14s] Discussion Board 5: Metabolism **DUE** Individual Project: Biology Careers *Due 10.02.25*	10.05.25

Total Video Time: 15 minutes	☐ Work on Group Project: Genetic Disorders Due 11.12.25	
Week 7 **Oct 6th – 10th** Photosynthesis Total Video Time: 13 minutes	☐ Discussion Board: Photosynthesis & Cell Respiration ☐ Video Quiz: Photosynthesis (Chap 8) [12m27s] ☐ Quiz 3: Chapter 6 – 8 *Opens 10.10.25* and *closes 10.11.25* ☐ Work on Group Project: Genetic Disorders Due 11.12.25	☐ 10.09.25
Week 8 **Oct 13th – 17th** Midterm Exam	☐ Midterm Exam *Opens 10.15.25 and Closes 10.17.25 (Chapters 1 - 8)* ☐ Work on Group Project: Genetic Disorders Due 11.12.25	
Week 9 **Oct 20th – 24th** Cell Communication Cell Reproduction Total Video Time: 24 minutes	☐ Discussion Board: Cell Reproduction and Cancer ☐ Video Quiz: Cell Communication (Chap 9) [8m59s] ☐ Video Quiz: Cell Reproduction (Chap 10) [10m48s] ☐ Video Quiz: How do Cancer cells behave differently than Normal ones? (Chap 10) [3m 51s] ☐ Work on Group Project: Genetic Disorders Due 11.12.25	☐ 10.26.25
Week 10 **Oct 27th – 31st** Meiosis & Sexual Reproduction Total Video Time: 12 minutes	☐ Video Quiz: Meiosis (Chap 11) [11m43s] ☐ Discussion Board: Biology Poster Project Gallery Walk ☐ Group Project: Genetic Disorders Due 11.12.25	☐ 11.02.25
Week 11 **Nov 3rd – 7th** Mendel & Heredity Modern Inheritance Total Video Time: 24 minutes	☐ Video Quiz: Mendel & Heredity (Chapter 12) [16m4s] ☐ Video Quiz: Non-Mendelian Inheritance (Chapter 13) [7m 12s] ☐ Quiz 4: Chapter 9 – 13 *Opens 11.07.25* and *closes 11.08.25* ☐ **DUE SOON:** Group Project: Genetic Disorders *Due 11.12.25*	☐ 11.06.25
Week 12 **Nov 10th – 14th** DNA Structure & Function DNA Replication Total Video Time: 12 minutes	☐ Discussion: DNA & Heredity ☐ Video Quiz: DNA Structure (Chap 14) [3m 52s] ☐ Video Quiz: DNA-Book of You (Chap 14) [4m28s] ☐ Video Quiz: DNA Replication (Chap 14) [3m 28s] ☐ **DUE:** Genetic Disorders Project	☐ 11.16.25

Week 13 **Nov 17th – 21st** Genes & Proteins Total Video Time: 8 minutes	☐ Video Quiz: DNA to Protein (Chapter 15) [2m 42s] ☐ Video Quiz: Protein Synthesis (Chapter 15) [4m55s]	☐ 11.23.25
Week 14 **Nov 24th – 25th** Thanksgiving Break **Nov 26th – 28th**	☐ *Work on missing assignments* ☐ Sleep, rest, relax ☐ Enjoy time with family and friends ☐ Netflix, etc. ☐ Exercise ☐ Read a good book ☐ Do something nice for someone	
Week 15 **Dec 1st – 5th** Gene Expression Biotechnology & Genomics Total Video Time: 30 minutes	☐ Video Quiz: Epigenetics (Chapter 16) [9m 29s] ☐ Video Quiz: Molecular Biology (Chapter 17) [14m32s] ☐ Video Quiz: CRISPR (Chapter 17) [5m 29s] ☐ Discussion: Biotechnology and Genomics ☐ Quiz 5: Chapter 14 – 17 *Opens 12.04.25 and closes 12.05.25*	☐ 12.03.25
Week 16 **Dec 8th – 10th** Final Exam	☐ FINAL EXAM Opens 12.06.25 and Closes 12.08.25 (Chapters 9 – 17) ☐ Congratulations!! You made it!! Celebrate ☺	