

BIOL 1307-2A2
Biology for Science Majors II Lecture
Summer II 2026

Credit: 3 semester credit hours (3 hours lecture)

Prerequisite/Co-requisite:

TSI Complete

Biology 1106 Corequisite



***PLEASE NOTE**

Summer courses are six weeks long but cover the *same amount of material* as courses offered during the regular semester. Because the timeline is significantly condensed, you should expect to devote substantial time each week to keeping up with readings, assignments, and assessments. Consistent engagement is essential for success in this accelerated format.

Course Description

The diversity and classification of life will be studied, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals.

Course Objectives

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

1. Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
2. Describe phylogenetic relationships and classification schemes.
3. Identify the major phyla of life, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
4. Discuss the structure and function of microorganisms, and how they interact with human and nonhuman hosts in beneficial, neutral, or detrimental ways.
5. Describe basic animal physiology and homeostasis as maintained by organ systems.
6. Compare different sexual and asexual life cycles noting their adaptive advantages.
7. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.
8. Explain the link between natural selection and reproductive success, how natural selection can affect allele frequencies, and the role of sexual selection in trait inheritance.
9. Use the Hardy-Weinberg equation to identify allele frequencies.

10. Compare and contrast how mutation, genetic drift, non-random mating, and gene flow contribute to evolution.
11. Describe how behavior can improve survival and improve reproductive success.
12. Understanding of the concepts and principles that act upon populations, communities, and ecosystems.
13. Discuss the biotic and abiotic factors that affect ecosystems.
14. Detail different species interactions.
15. Explain the factors influencing the structure of communities.
Understand energy fluxes in an ecosystem.

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

INSTRUCTOR CONTACT INFORMATION

Instructor: **Leah Alsibaa**
Email: **lalsibaa@lit.edu**
Office Phone: **409-247-5069**
Office Location: **N/A**
Office Hours: See Starfish for available office hours -
[Click Here for Starfish](#)

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.

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

Week:	To Do:	Due Dates
Week 1 July 8th - 12th Introduction Evolution (Module 4)	☒ Syllabus Quiz ☒ Discussion Board 1: Introduction ☒ Discussion Board 2: Netiquette ☒ Video Quiz: Evidence of Evolution (Chapter 18) [11m 44s] ☒ VQ: Mechanisms of Evolution (Chapter 19) [5m 24s] ☒ VQ: Sexual Selection (Chapter 19) [11m 54s] ☒ VQ: Phylogenies & Cladistics (Chapter 20) [10m 57s] ☒ Discussion Board 3: Evolution ☒ Read over Individual Project: Kingdoms Social Media Project due 07.31.26 ☒ Sign up & start working on Group Project: Biomes due 08.09.26	07.13.26

Week 2 July 13th - 19th Biological Diversity: `~Bacteria & Viruses~ (Module 5)	☒ QUIZ 1: Evolution (Chapters 18-20) opens 07.14.26 and closes 07.15.26 ☒ VQ: Taxonomy (Module 5) [12m 16s] ☒ VQ: Viruses (Chapter 21) [8 m 6s] ☒ Discussion Board 4: Bacteria & Viruses ☒ VQ: Viral Replication (Chapter 21) [10 m 30s] ☒ VQ: Bacteria (Chapter 22) [11m 4s] ☒ Work on Individual Project: Kingdoms due 07.31.26 ☒ Work on Group Project: Biomes due 08.09.26	07.19.26
Week 3 July 20th - 26th Biological Diversity: `~Fungi & Protists~ (Module 5)	☒ VQ: Protists (Chapter 23) [5m 7s] ☒ VQ: Parasites – Protozoa (Chapter 23) (7m 22 s) ☒ Discussion Board 5: Protists & Fungi ☒ VQ: Fungi (Chap 24) [11m 52s] ☒ VQ: 10 Fantastic Fungi Superpowers (Chap 24) [9m 47s] ☒ DUE SOON ● Individual Project: Kingdoms due 07.31.26 ☒ Work on Group Project: Biomes due 08.09.26	07.26.26
Week 4 July 27th - Aug 2nd Biological Diversity: `~Plant Diversity, Structure & Function</p> <p>`~Animal Structure & Function (Module 5 – Chp 25 & 26) (Module 6) (Module 7)	☒ VQ: Plants (Module 5) [7m 47s] ☒ VQ: Plant Structure (Chapter 30) [13m 37s] ☒ VQ: Plant Control (Chapter 30) [7m 54s] ☒ VQ: Plant Nutrition & Transport (Chapter 31) [14m 7s] ☒ VQ: Plant Reproduction (Chapter 32) [10m 24s] ☒ VQ: Animals (Module 5) [8m 8s] ☒ VQ: What Makes Us Animals? (Chapter 27) [8m 51s] ☒ VQ: Simple Animals (Chapter 28) [11m 31s] ☒ VQ: Complex Animals (Chapter 28) [13m 15s] ☒ Discussion Board 6: Plant Structure & Function ☒ DUE: Individual Project: Kingdoms due 07.31.26 ☒ DUE SOON: Work on Group Project: Biomes due 08.09.26	08.02.26
Week 5 Aug 3rd - 9th Biological Diversity - (Module 5 - Chp 27-29)	☒ VQ: Chordates (Chapter 29) [12m 9s] ☒ VQ: Animal Development (Chapter 33) [11m 32s] ☒ VQ: Animal Body Systems (Module 7) [25m 17s] ☒ Discussion Board 7: Animal Structure & Function ☒ QUIZ 2: Biological Diversity opens 08.05.26 and closes 08.06.26 ☒ VQ: Introduction to Ecology (Chapter 44) [4m 47s] ☒ VQ: Population Ecology (Chapter 45) [12m 10s] ☒ VQ: Community Ecology 1 (Chap 45) [11m 30 s] ☒ VQ: Community Ecology 2 (Chapter 45) [10m 23s]	08.05.26 08.09.26

	☒ DUE → Work on Group Project: Biomes due 08.09.26	
Week 6 Aug 10th - 14th Ecology (Module 8)	• VQ: Symbiosis in the Sea (Chap 45) [10m 17s] • VQ: Hydrologic & Carbon Cycles (Chap 46) [10m 04 s] • VQ: Pollution (Chap 47) [9m 22s] • VQ: Conservation & Restoration (Chap 47) [10m 13s] • Discussion Board 9: Ecology • VQ: Nitrogen & Phosphorus Cycles (Chap 46) [9m 22s] • VQ: Human Impacts on the Environment (Chap 47) [10m 38s] • • FINAL EXAM (Chapters 25 – 47) opens 08.15.26 and closes 08.16.26 YOU MADE IT!! CONGRATULATIONS ☑	08.14.26

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 on 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. <u>Assignments (Video Quizzes, etc.)</u>	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 Final is required, with two attempts per assessment, and it 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 the group project without partners.
- Late assignments will be accepted with a late penalty. Students will receive a zero for assignments not completed.