

Biology for Science Major 2 (BIOL 1307) - Lecture



**LAMAR INSTITUTE
OF TECHNOLOGY**

INSTRUCTOR CONTACT INFORMATION

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Office Location: MPC 213
Office Hours: Monday-Thursday 12:00 PM– 3:00 PM

CREDIT

3 Semester Credit Hours

MODE OF INSTRUCTION

Online

PREREQUISITE/CO-REQUISITE:

BIOL 1107 Biology for Science Majors II Laboratory

COURSE DESCRIPTION

BIOL 1307 Biology for Science Majors II (lecture)

This lecture-based course accompanies BIOL 1107, Biology Science Majors II lab. This lecture course provides a survey of diversity and classification of life including animals, plants, protists, fungi, evolution of plants and animals.

COURSE OBJECTIVES

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

1. Describe modern evolutionary synthesis, natural selection, and speciation.
2. Explain phylogenetic relationships and classification schemes.
3. Identify the major phyla of life based on plants and animals structure, classification, evolution, and ecology significance.
4. Determine animal physiology and hemostasis as maintained by organ system.
5. Compare and contrast the structures, reproduction (sexual and asexual) life cycle with regard to their adaptive advantages.
6. Identify the relationship between major geologic changes, extinctions and evolutionary trend.

Core Objectives

1. Critical Thinking Skills: To include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
2. Communication Skills: To include effective development, interpretation and expression of ideas through written, oral, and visual communication

Approved: **Initials/date**

3. Empirical & Quantitative Skills: To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusion
4. Teamwork: To include the ability to connect choices, actions, and consequences to ethical decision-making
5. Personal Responsibility: To include ability to connect choices, actions and consequences to ethical decision-making

REQUIRED TEXTBOOK AND MATERIALS

. Openstax ISBN-10: 1-947172-51-4
<https://openstax.org/details/books/biology-2e>

COURSE POLICIES:

1. You must log onto Blackboard and access this course everyday Monday -Friday.
2. Cheating of any type will not be tolerated.
3. Late assignments will not be accepted.
4. 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.
5. Internet usage- students are to use proper netiquette when participating in course email, assignment submissions and online discussions
6. I am available M-F to respond to your email. It may take up to 48hrs to respond on the weekend email

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an “F” in the course.

Course Schedule			
Date	Topic	READINGS	ASSIGNMENTS Due date
WEEK 1			
08/26	Course Overview understanding evolution Discussion post Introduction Netiquette Discussion Video quiz Evolution: It's a Thing - Quiz (11:44)	Chp 18	08/30 Video quiz Discussion post
WEEK 2			
09/02	The Evolution of Population	Chp 19	09/6 Quiz 1

	<p>Discussion 3: Evolution</p> <p>Video quiz</p> <p>Mechanisms of Evolution (5 Fingers of Evolution) - Quiz (05:24)</p>		<p>Video quiz</p> <p>Discussion post</p>
WEEK 3			
09/09	<p>Phylogenies and the History of life</p> <p>Video Quiz</p> <p>Phylogenetic trees Evolution Khan Academy - Quiz (10:57)</p> <p>Taxonomy: Life's Filing System - Quiz (12:16)</p>	Chp 20	<p>09/13</p> <p>Video quiz</p>
WEEK 4			
09/16	<p>Viruses</p> <p>Discussion 4: Viruses & Bacteria</p> <p>Video quiz</p> <p>Viruses - Quiz (08:06)</p>	Chp 21	<p>09/20</p> <p>Video quiz</p> <p>Discussion post</p>
WEEK 5			
09/23	<p>Prokaryotes</p> <p>Video quiz</p> <p>Bacteria - Quiz (11:04)</p>	Chp 22	<p>09/27</p> <p>Video quiz</p>
WEEK 6			
09/30	<p>Protists</p> <p>Discussion 5: Protists & Fungi</p> <p>Video quiz</p> <p>Protists - Quiz (05:07)</p> <p>Parasites: Protozoa (classification, structure, life cycle) - Quiz (07:23)</p>	Chp 23	<p>10/04</p> <p>Video quiz</p> <p>Discussion post</p> <p>Exam I</p>
WEEK 7			

10/07	<p>Fungi</p> <p>Video quiz</p> <p>Fungi: Death Becomes Them - Quiz (11:52)</p> <p>10 Fantastic Fungi Superpowers - Quiz (09:47)</p>	Chp 24	<p>10/11</p> <p>Quiz II</p> <p>Video quiz</p>
WEEK 8			
10/14	<p>Seedless plants</p> <p>Individual project</p> <p>Discussion 6: Plants</p> <p>Discussion 9: Gallery Walk</p>	Chp 25	<p>10/18</p> <p>Discussion post</p> <p>Individual project</p>
WEEK 9			
10/21	<p>Seed plants</p> <p>Video quiz</p> <p>Plants - Quiz (07:47)</p>	Chp 26	<p>10/25</p> <p>Video quiz</p>
WEEK 10			
10/28	<p>Animal Diversity & Invertebrates</p> <p>Discussion 7: Animals</p> <p>Video quiz</p> <p>Animals - Quiz (08:08)</p> <p>Simple Animals: Sponges, Jellies, & Octopuses - Quiz (11:31)</p>	<p>Chap 27 & Chp 28</p>	<p>11/1</p> <p>Video quiz</p> <p>Discussion post</p> <p>Exam II</p>
WEEK 11			
11/04	<p>Vertebrates</p> <p>Video quiz</p> <p>Complex Animals: Annelids & Arthropods - Quiz (13:15)</p> <p>Chordates - Quiz (12:09)</p> <p>Animal Development: We're Just Tubes - Quiz (11:32)</p>	Chp 29	<p>11/08</p> <p>Quiz III</p> <p>Video quiz</p>

	Introduction to Animal Systems - Quiz (25:17)		
WEEK 12			
11/11	Ecology and the Biosphere Discussion 8: Ecology Video quiz Introduction to Ecology - Quiz (04:47)	Chp 44	11/15 Video quiz Discussion post II
WEEK 13			
11/18	Population and Community Ecology Video quiz Population Ecology - Quiz (12:10) Community Ecology: Feel the Love - Quiz (11:30) Community Ecology II: Predators - Quiz (10:23)	Chp 45	11/22 Video quiz
WEEK 14			
11/25	Ecosystem Video quiz The Hydrologic and Carbon Cycles: Always Recycle! - Quiz (10:04) Symbiosis in The Sea - Quiz (10:17) Nitrogen & Phosphorus Cycles: Always Recycle! - Quiz (09:22) Human Impacts on the Environment Quiz (10:38) Pollution - Quiz (09:22) Conservation and Restoration Ecology - Quiz (10:13)	Chp 46	11/29 Video quiz Exam III
WEEK 15			
12/02	Group Presentations begin		12/06 Quiz IV

	Discussion 10: Gallery Walk - Biomes Project		Discussion post Group Presentations
12/09	FINAL EXAM		12/11

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

Discussion Participation	10%
Video Quizzes	20%
Chapter Quizzes	20%
Exams -	30%
Projects	20%

Course Requirements

1. Student will participate in discussion boards for each of the chapters.
2. Exams are required with 3 attempts given per exam. Final score will be an average of all attempts.
3. Student will complete an individual assignment and a group assignment.
4. Five quizzes will be given. Each quiz can be taken twice with the highest attempt being used for the final score

GRADE SCALE

- 89.5-100 A
- 79.5-89.4 B
- 69.5-79.4 C
- 59.5-69.4 D
- 0 - 59.4 F

TECHNICAL REQUIREMENTS

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.

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 assignments 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.

DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#).

STUDENT CODE OF CONDUCT STATEMENT

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.

STARFISH

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.