

I. BASIC COURSE INFORMATION

- A.** Course Description: This course will provide a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology.
- B.** Intended Audience: This is a laboratory-based course designed for non-science majors.
- C. Instructor:** David Hebert
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II. INTENDED STUDENT OUTCOMES:

A. Core Objectives

- **Critical Thinking Skills** - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Communication Skills** - to include effective development, interpretation and expression of ideas through written, oral and visual communication
- **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
- **Teamwork** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

B. Learning Outcomes: 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 with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
4. Describe basic animal physiology and homeostasis as maintained by organ systems.
5. Compare different sexual and asexual life cycles noting their adaptive advantages.
6. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.
7. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
8. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
9. Communicate effectively the results of scientific investigations.

III. ASSESSMENT MEASURES OF STUDENT LEARNING OUTCOMES

A. Assessments for Core Objectives

1. **Critical thinking** – Critical thinking skills will be assessed using laboratory assignments focusing on analysis, synthesis and evaluation of biological phenomena.
2. **Communication** – Communication skills will be assessed using assignments focusing on best practices in written, visual, and oral communication.
3. **Empirical and Quantitative Skills** – Empirical and quantitative skills will be introduced and assessed using laboratory assignments focusing on manipulation and analysis of numerical data.
4. **Teamwork** – Teamwork skills will be assessed using class interactions relating to Discussion assignments throughout the semester.

B. Learning Outcomes

1. Students will describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation with emphasis on evidence from extant taxa by answering multiple choice questions.
2. Students will distinguish between phylogenetic relationships and classification schemes and will develop and use cladograms.
3. Students will identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance by answering multiple choice questions.
4. Students will describe basic animal physiology and homeostasis as maintained by organ systems. Students will be able to relate the function of organs and organ systems to maintaining homeostasis. These will be assessed with multiple choice questions.
5. Students will compare different sexual and asexual life cycles noting their adaptive advantages. Students will compare and contrast reproduction and life cycles of the major groups of plants, animals, and fungi by answering multiple choice questions.
6. Students will illustrate the relationship between major geologic change, extinctions, and evolutionary trends and will be able to relate the development of key derived features in extant taxa to similar features in extinct organisms by answering multiple choice questions.
7. Students will apply scientific reasoning to investigate questions in the laboratory and in analysis of real-world issues. Students will utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data while performing lab experiments and exercises.

8. Students will use critical thinking and scientific problem-solving to make informed decisions in the laboratory as evidenced by developing appropriate, responsible research plans. These will be assessed with lab exams and reports.
9. Students will communicate effectively the results of scientific investigations in written reports, which will be assessed using a rubric.

IV. INSTRUCTIONAL PROCEDURES

A. Methodologies common to all sections

This course will be taught using a combination of learning modules and laboratory exercises. Audio-visual materials, models, and dissection of specimens will be employed to enhance modules and laboratory presentations.

V. COURSE REQUIREMENTS AND POLICIES

A. Required Textbooks and Equipment

1. Concepts of Biology (available from OpenStax College)
<https://openstaxcollege.org/textbooks/concepts-of-biology>
2. Access to Blackboard (<https://angelina.blackboard.com/webapps/login/>).
3. Access to www.saplinglearning.com (access code available in the bookstore), links to textbook
4. Access to www.latenitelabs.com (access code available in the bookstore)

B. Course Policies – (This course conforms to the policies of Angelina College as stated in the Angelina College Handbook.)

Educational Accommodations – If you have a disability (as cited in Section 504 of the Rehabilitation Act of 1973 or Title II of the Americans with Disabilities Act of 1990) that may affect your participation in this class, you may fill out the Educational Accommodations application within your AC Portal, under the “Student Services” tab. A Student Success team member will contact you once the application is received. At a post-secondary institution, you must self-identify as a person with a disability in order to receive services; for questions regarding the application process you can visit the Office of Student Success and Inclusion in the Student Center (Room 200) or email access@angelina.edu. To report any complaints related to accommodations, you should contact Annie Allen, Director of Student Success & Inclusion, in Room 200 of the Student Center. You may also contact Ms. Allen by calling (936) 633-4509 or by emailing aallen@anglina.edu. To report discrimination of any type, contact Steve Hudman, Dean of Student Affairs, at (936) 633-5292 or shudman@angelina.edu.

Attendance Policy – Attendance/participation will be required as per Angelina College Policy. Records will be turned in to the academic dean at the end of the semester. Do not assume that non-attendance/non-participation in class will always result in an instructor drop. You must officially drop a class or risk receiving a failing grade. This is official Angelina College Policy. **The last day to drop the class or withdraw with a “W” is April 1st.**

Policies Established by the Instructor

Attendance

You must log into the Blackboard course at least two times per week to be considered present in the class.

Testing Procedures

1. All Module Exams and Lab Exams are password protected and will only be available through Blackboard on the dates shown in the syllabus Course Outline and within each Module Overview. Passwords will be sent to your secure Angelina College e-mail account shortly before the exam is scheduled to open.
2. All Exams have a 70-minute time limit and will be automatically submitted upon completion.
3. Exams must be completed once they have been started (cannot save and continue at a later time).

Discussions

1. Each of the four Modules includes a group discussion. Each student must post one initial response to the discussion prompt and reply to two other posts. The initial post is due within 3 days of the discussion start date in order to give group members time to respond/reply.
2. A peer evaluation form must be submitted on the final day of the Discussion assignment window.
3. All initial posts must be a minimum of 100 words.
4. Posts should be professional and respectful of other members of the class. This includes using proper grammar, being courteous of other points of view, responding to questions posed by other students and properly citing any utilized sources.
5. The instructor will monitor and may participate in the discussions.
6. Discussion grading will combine the instructor’s use of a grading rubric and the peer evaluation form provided.

Homework/Labs/Projects

All assignments must be submitted by the posted due dates in order to receive credit. This policy will be strictly and consistently enforced. In some instances, such as Late Nite Labs, assignments may remain available after the posted due date in order to allow review of the information for exam preparation. Submission of assignments after the due dates will not be credited and a grade of zero will be recorded.

VI. COURSE OUTLINE

Orientation

January 14-18

***** All Orientation assignments and the Orientation Quiz must be completed by 9pm on January 18th and before any Module 1 assignment is started. Any student who fails to complete all Orientation requirements by the deadline will be dropped from the course.**

MODULE 1 (Chapters 19-21)	January 14 – February 12
Discussion	January 23 – January 30
Project 1 due	February 1
Homework/Labs due	February 8
Module Exam 1	February 11 – February 12
MODULE 2 (Chapters 11-12)	February 12 – March 8
Project 2 due	February 15
Discussion	February 20 – February 27
Project 3 due	February 22
Homework/Labs due	March 1
Module Exam 2	March 4 - 5
Lab Exam 1	March 7 – March 8
MODULE 3 (Chapters 13-15)	March 8 – April 9
Discussion	March 27 – April 3
Homework/Labs due	April 5
Module Exam 3	April 8 – April 9
MODULE 4 (Chapters 16-18)	April 9 – May 3
Discussion	April 17 – April 24
Homework/Labs due	April 26
Module Exam 4	April 29 -April 30
Lab Exam 2 (not comprehensive)	May 2 – May 3
COMPREHENSIVE FINAL EXAM	May 6 - 7

VII. EVALUATION AND GRADING

Grading: Grades will be determined by the total number of points earned from the possible points available. The module portion of the course is worth 2/3 of the total course grade. The lab portion of the course is worth 1/3 of the total course grade. Course grades will be determined using the following guidelines:

The **module grade** will be calculated based on the percent of possible points shown below.

4 Module Exams	300 points*
Homework	100 points
Projects/Discussions	100 points
Final exam	100 points

(* the lowest of the 4 module exams will be dropped. There are NO make ups for missed module exams. The first missed module exam will count as your drop, subsequent missed module exams will result in a grade of zero.)

The **lab grade** will be calculated based on the percent of possible points shown below.

2 Lab exams	200 points
Lab assignments (avg)	100 points

(Lab exams can NOT be dropped or made up. Missed Lab exams will result in a grade of zero.)

To calculate your **course grade**, use the following:

Percentage of points from Modules x 0.67	= _____
Percentage of points from Lab x 0.33	= _____
Sum of above	= _____ = course grade

Letter grades will be assigned based on the course grade as calculated above.

(90 or above = A 80 – 89 = B 70 – 79 = C 60 – 69 = D 59 or below = F)

SYLLABUS MODIFICATION

The instructor may modify the provisions of the syllabus to meet individual class needs by informing the class in advance as to the changes being made.