



BIOL 1307 Lecture

Biology for Science Majors II Credit: 3 semester credit hours

Prerequisite: Completion of Biol 1306 (lecture) and 1106 (lab).

Co-requisite: BIOL 1107 Biology for non-Science Majors II lab. Math 1314 completion or current enrollment.

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.

Required Textbook and Materials

1. Biology, Seventh Edition,

Publisher: Campbell, Reece, and Mitchell, The Benjamin/Cummings Publishing Company, Inc.,

Language: English

ISBN-20050-8053-7146-X

Objectives

Course Objectives

Upon successful completion of this course, students will:

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 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 geological change, extinctions and evolutionary trends.

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
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

Course Outline

List of topics that should be covered in this course:

Chapters in the book that SHOULD be covered either in whole or in part:

Chapters 13 – 28.

I. Origin of Life and Classification of Organisms A. Phylogeny B. Classification of Life	
II. Evolution A. Natural Selection B. Evolutionary Synthesis C. Population genetics D. Micro and macroevolution E. Speciation	
III. Major Phyla A. Animals B. Plants C. Protists D. Fungi E. Monerans	
IV. Animal Physiology and Homeostasis A. Maintaining a Stable Body Environment (i.e., body temperature, dissolved oxygen, heart rate, respiration, etc) B. Tissues (basic types, significance, working together to form organs) C. Physiology	
V. Reproduction A. Life Cycles 1. asexual	

2. sexual B. adaptive changes	
VI. Global Relationships Related to Geology and Evolution A. Geological changes over time B. Extinction patterns C. Evolutionary trends	

Grade Scale

900 – 1000	A
800 – 899	B
700 – 799	C
600 – 699	D
599 or below	F

Course Evaluation

Final grades will be calculated according to the following criteria:

1. Four Unit Tests	60%
2. Paper	10%
3. Presentation	20%
4. Course Assignments	10%

Course Requirements

1. Written report (paper). Due on 8/23/2014
2. Presentation. Due Nov 28, 2013.

Course Policies

1. No food, drinks, or use of tobacco products in class.
2. Beepers, telephones, headphones, and any other electronic devices must be turned off while in class.
3. Do not bring children to class.
4. No late assignments will be accepted.
5. Students that miss a test must make up the test the day they return to class. It is the student's responsibility to make arrangements to make up test.
6. Attendance Policy. Two absences are allowed. If a student is tardy to class or departs early three (3) times, it will be equal to one (1) absence. Each absence beyond two absences will result in a 5 point deduction from your final grade.
7. The student is responsible for initiating and completing the drop process. A student who stops coming to class and fails to drop the course, will earn an 'F' in the course.
8. Additional class policies as defined by the individual course instructor.

Disabilities Statement

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services, Cecil Beeson Building.

Course Schedule

Week	Topic	Reference
Week 1	Evolution and Natural Selection	Textbook
Week 2	Population genetics and speciation	Textbook
Week 3	Micro evolution and macro evolution	Textbook
Week 4	Classification of Living Things	Textbook
Week 5	Test 1	Class Handout
Week 6	Major Phyla of Life	Textbook
Week 7	Physiological adaptations	Textbook
Week 8	Evolutionary history and significance	Textbook
Week 9	Test II	Class Handout
Week 10	Homeostasis	Textbook
Week 11	Animal Physiology and Life Cycles	Textbook
Week 12	Organs and organ systems	Textbook
Week 13	Geological changes extinctions, and evolutionary trends	Textbook
Week 14	Test III	Class Handout
Week 15	Presentations	In Class Participation
Week 16	Comprehensive final	Class Handout

Contact Information:

Instructor: Stephanie Lanoue

Office: MPC 237

Telephone: (409) 880-2935

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Office Hours: 10-11 a.m. MW; 3-4 p.m. MW; 11-3 p.m. TR; Fri 1 – 2 pm

This course will be web enhanced
utilizing the Black Board platform

The 'base' syllabi plus additional
pages will be linked to the faculty
member's webpage.