



## **BIOL 1106**

**Biology for Science Majors Laboratory I Credit:** 1  
semester credit hour (2 Lab hours)

**Prerequisite:** Passed the reading and writing entrance exams for LIT.

**Co-requisite** This laboratory-based course accompanies Biology 1306, Biology for Science Majors I.

### **Course Description**

BIOL 1106 Biology for Science Majors Laboratory I (lab)  
Laboratory activities will reinforce the fundamental principles of living organisms, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Study and examination of the concepts of cytology, reproduction, genetics, and scientific reasoning are included.

### **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. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
3. Communicate effectively the results of scientific investigations.
4. Describe the characteristics of life.
5. Explain the methods of inquiry used by scientist.
6. Identify the basic properties of substances needed for life.
7. Compare and contrast the structures, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells.
8. Describe the structure of cell membranes and the movement of molecules across a membrane.
9. Identify the substrates, products, and important chemical pathways in metabolism.
10. Identify the principles of inheritance and solve classical genetic problems.

11. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
12. Describe the unity and diversity of life and the evidence for evolution through natural selection.

### 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:

22, 23, 24, 25, 28, 31, 35, 36, 32, 33, 34, 40, 48

Descent with Modification	
The Evolution of Populations	
Origin of Species	
Phylogeny and Systematics	
Protists	
Fungi	
Plant Structure, Growth, & Development	
Transport in Vascular plants	
Intro to Animal Diversity Vertebrates	

Invertebrates	
Animal Form and Function	
Nervous Systems	

### **Grade Scale**

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

### **Course Evaluation**

Final grades will be calculated according to the following criteria:

1. 3 Unit Tests	25%
2. Comprehensive Final Exam	35%
3. Course Assignments	20%

### **Course Requirements**

1. Written report. Due on 8/23/2014

### **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	Descent with Modification	Lab Manual
Week 2	The Evolution of Populations	Lab Manual
Week 3	Origin of Species	Lab Manual
Week 4	Phylogeny and Systematics	Lab Manual
Week 5	<b>Test 1</b>	Study guide
Week 6	Protists	Lab Manual
Week 7	Fungi	Lab Manual
Week 8	Plant Structure, Growth, & Development	Lab Manual
Week 9	Transport in Vascular plants	Lab Manual
Week 10	<b>Test II</b>	Study guide
Week 11	Intro to Animal Diversity Vertebrates	Lab Manual
Week 12	Invertebrates	Lab Manual
Week 13	Animal Form and Function	Lab Manual
Week 14	Nervous Systems	Lab Manual

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Week 15	<b>Test III</b>	Study Guide
Week 16	<b>Comprehensive final</b>	Study guide

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## Contact Information:

**Instructor:** Stephanie Lanoue

**Office:** MPC 237

**Telephone:** (409) 880-2935

**E-mail:** [slanoue@lit.edu](mailto:slanoue@lit.edu)

**Office Hours:** 10-11 a.m. MWF; 3-4 p.m. MW; 11-3 p.m. TR

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.