

# BIOL 2107: PRINCIPLES OF BIOLOGY I (Fall 2014) COURSE SYLLABUS

**Instructor:** Dr. Marcia Hesser  
Biology Lecturer

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**Office Hours:** MWF 9:00-10:00am  
Th 10:00am-Noon, or by appointment

*Feel free to stop by my office at any time. If I am not busy, I will be happy to speak with you!*

**Course Web Page (Desire2Learn):** <https://spsu2.view.usg.edu/>  
**Student D2L Support:** <http://spsu.edu/d2l/student/index.htm>

## Course Description & Learning Outcomes:

This course will expose students to the basic principles of biology within the unifying theory of evolution. Lectures will examine topics such as prokaryotic & eukaryotic cells, respiration & photosynthesis, mitosis & meiosis, structure & replication of DNA, genetics, and the basic principles of evolution.

*Student learning outcomes will be:*

- (1) to understand and describe the fundamental biology of the cell, including cellular anatomy, cellular metabolism, cellular respiration, photosynthesis, cell growth and cellular reproduction;
- (2) to understand and describe the fundamental principles of Mendelian genetics;
- (3) to understand and describe the molecular basis for heredity, DNA structure and replication, and protein synthesis;
- (4) to understand and describe the principles of evolution, from both Darwinian and modern perspectives.

**Co-requisite course:** BIOL 2107L

**Required Textbook:** *Biology: the dynamic science (3rd ed.)* by Russell, Hertz, & McMillan (ISBN: 978-1-133-58755-2)

**Credit Hours:** 3

**Meeting Times:** G235: 8:00-8:50 am MWF (Section 002)  
J161: 1:00-2:15 pm TR (Section 005)

## Evaluation:

Evaluation for the class will be based on the following criteria:

- Four lecture exams 80 %
  - Online quizzes/homework 20 %
- = 100 %**

## Grading Scale: *out of 100 %*

- A = 90 – 100%
- B = 80 – 89.4%
- C = 70 – 79.4%
- D = 60 – 69.4%
- F = below 60%

## LECTURE

### Exams:

- Exams (including the final) are not comprehensive; however, each will assume that previous material has been learned. There will be 4 exams, each worth 100 points. The format of each exam will be a combination of multiple choice, matching, true/false, and short answer.

### Homework

- There will be an online homework assignment associated with most textbook chapters. These assignments will be completed through the Quiz tool found on D2L. Online homework is open-book/open-notes and should be used as a tool to focus your studying. The due date for each homework assignment will be provided during class as well as in the Calendar tool on D2L. Your lowest homework grade will be dropped.

### Attendance:

- In order to receive maximum benefit from the course, students must attend lecture. Attendance **WILL** be taken, but your lecture grade will not be directly affected by absences.
- I reserve the right to mark chronically tardy students as absent for the purposes of attendance.
- **You are also responsible for all announcements made in class about exams and changes in the syllabus.**

### Late Work & Makeup Work:

- Late online assignments can be turned in no later than 24 hours after the original deadline. The maximum score possible at that time will be 75.
- Make-up lecture examinations **WILL NOT** be given, except for **SERIOUS** medical conditions and games for SPSU sports teams. **A physician MUST provide written documentation of the illness, and must include a contact telephone number.** Documentation is also required for sports-related absences, and is required **1 week in advance**. Failure to provide adequate confirmation will result in a zero for the exam. The makeup exam will be in the format of my choosing (oral exams & essay exams are likely formats).

### Honesty:

- SPSU has an Honor Code and a procedure for handling cases when academic misconduct is alleged. All students should be aware of them. Information about

the Honor Code and the misconduct procedure may be found at <http://www.spsu.edu/honorcode/>.

- All work must be your own! If you are caught cheating on any graded assignment you will receive an F for the **entire course**. An F grade issued for academic dishonesty cannot be converted to a W.

### **Learning Disabilities:**

- If you have a documented disability as described by the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) that may require you to need assistance attaining accessibility to instructional content to meet course requirements, we recommend that you contact the ATTIC at (678) 915-7361 as soon as possible. It is then your responsibility to contact and meet with your instructor. The ATTIC can assist you and the instructor in formulating a reasonable accommodation plan and provide support in developing appropriate accommodations for your disability. Course requirements will not be waived but accommodations will be made, when appropriate, to assist you to meet the requirements.
- I **MUST** receive a copy of the completed 'Faculty Accommodation Form' from the ATTIC before I provide any class accommodations.

### **TIPS FOR SUCCESS FROM SOMEONE WHO'S BEEN THERE**

#### *General Advice*

- **Keep up with the material!** One way to insure poor performance in this class is to put off studying the material until the day before the test. We will simply be covering too much material in too much detail for you to get away with cramming the day before an exam. It is essential that you study the material within a reasonable period of time after lecture. *Trust me...*you'll be glad you did!
- **Ask questions!** Regardless of whether you are in lecture or lab, it is essential that you ask questions if you don't understand a concept. The longer you are confused about a given topic, the harder it may be for you to eventually understand it. In addition, your confusion could impede your understanding of related topics. *Please...*don't be afraid to raise your hand in class or to talk to me one-on-one; I promise I won't bite!
- **Read the book!** Make sure you read the appropriate chapter(s) either before or soon after my lecture on a given topic. The descriptions, tables, figures, and diagrams of concepts in the book will be most helpful in helping you learn the material.
- **Use the review sheets!** It is my custom to hand out fairly detailed review sheets about 1 week before an exam. I have found that if students treat the review sheet like a mock-exam (i.e., they quiz themselves using the review sheet), they perform *much* better on exams.

### TENTATIVE LECTURE SCHEDULE\*

WEEK #	WEEK OF	TOPIC	CHAPTER(S)
1	8/13	Introduction to Biological Concepts	1
2	8/18	Life, Chemistry, and Water Biological Molecules	2 3
3	8/25	Biological Molecules continued Energy, Enzymes, and Biological Reactions	3 4
4	9/1	<b>Labor Day (no Monday class)</b> The Cell Membranes and Transport	5 6
5	9/8	Membranes and Transport continued Cellular Respiration	6 8
6	<b>9/15</b>	<b>EXAM 1 (Chap 1-6; Exam date 9/15 or 9/16)</b> Cellular Respiration continued	8
7	9/22	Photosynthesis	9
8	9/29	Cell Division and Mitosis Meiosis	10 11
9	<b>10/6</b>	Mendel, Genes, and Inheritance <b>EXAM 2 (Chap 4; 8-11; Exam date 10/8 or 10/9)</b>	12
10	10/13	Mendel, Genes, and Inheritance continued	12
11	10/20	Genes, Chromosomes, and Human Genetics	13
12	10/27	DNA Structure, Replication, and Organization	14
13	11/3	From DNA to Protein <b>EXAM 3 (Chap 12-14; Exam date 11/5 or 11/6)</b>	15
14	11/10	Biotechnology	18
15	11/17	Development of Evolutionary Thought Microevolution	20 21
16	11/24	Microevolution Speciation/Paleobiology <b>Thanksgiving Break</b>	21 22-23
17	12/1	Speciation/Paleobiology	22-23
	<b>TBA</b>	<b>FINAL EXAM (Chap 15; 18; 20-23)</b>	

\*lecture and exam schedules are subject to change

#### IMPORTANT DATES TO REMEMBER:

August 18: Last Day to Add/Drop  
 September 1: Labor Day Holiday (No Classes)  
 September 3: Engagement Reports Due  
 September 29: Midterm Grades Due  
 October 2: Last Day to Withdraw with a "W"  
 November 26-28: Thanksgiving Holiday  
 December 1: Last Day of Classes