

# Biology 1610

Spring 2018  
MWF 8:30 – 9:20

## Instructor

Erin Bobeck, Ph.D.  
Primary Contact: Please use Canvas Inbox  
BNR 149  
Office hours: F 9:30 – 10:30 or by appointment

## Teaching Assistant

George Waldren  
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BNR 240  
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## Course Description

Principles of cell biology, energetics, and genetics; plant structure, function, and development.

## **Course Objectives**

- Become competent in the nature of science
- Discover the chemical basis of life
- Understand the working cell model
- Recognize how life obtains and utilizes energy
- Gain knowledge of the function of genes and their inheritance
- Identify plant structure and function

## Course Materials

### **Textbook**

Campbell Biology by Reese et al. 11<sup>th</sup> edition with Mastering Biology online assignment system. You may purchase one of the following combinations:

1. Buy the package in the USU bookstore which contains a hard copy version of the textbook and an access code for Mastering Biology.
2. Modified Mastering Biology with eText and Learning Catalytics for Reece, Campbell Biology, 11/e Mastering Biology
3. Modified Mastering Biology without eText or Learning Catalytics for Reece, Campbell Biology, 11/e. This version does not contain an etext of the book.

If you wish to purchase the book and Mastering Biology separately, you must purchase Mastering Biology online through Canvas via the link on the MyLab and Mastering tab on the left menu or from the USU bookstore. Access codes obtained from sources other than the USU bookstore package or the Canvas link will not work.

### **iClicker**

iClickers will be used to answer questions in class and will allow you to earn up to 5 extra credit points in your final course score. iClickers can be rented or purchased new or used from

the bookstore or through other vendors. Any model of iClicker will work for this class, but it must be an iClicker, not another type of polling device.

## Grading

There will be 4 midterm exams during the semester, but you will be allowed to drop the lowest one. The comprehensive final exam must be taken. Your core course grade will therefore be based on 3 exams, a final exam, and 14 online assignments (2.5 pts each) in Mastering Biology. No individual extra credit opportunities are available. However, up to 5 points will be added to your course score for classroom participation assessed using your iClicker. Point allocations are as follows:

Exam 1	40
Exam 2	40
Exam 3	40
Final Exam	80
Mastering Biology Assignments	35
<b>Total</b>	<b>235</b>

Your final letter grade for the course will be determined by the total points you accumulate during the semester according to the scale below. Percentage scores are calculated to two significant figures and are not rounded up as follows:

A	A-	B+	B	B-	C+	C	C-	D+	D	F
>93.33%	90%	86.67%	83.33%	80%	76.67%	73.33%	70%	67.67%	60%	<60%

## Exam Information

All four midterm exams and the final exam will be administered online through Canvas in the USU Testing Center. All exams will be multiple choice, matching, and true/false questions. The content of exams will be from material covered during lecture, including iClicker questions, assigned readings, and from Mastering Biology questions that you have already answered as part of weekly Mastering Biology assignments. Material to be covered in each exam will be discussed in class prior to the exam. Portable electronic devices (iPods, iPads, laptops, cell phones, etc.), earbuds, or headphones may not be used during examinations. There will be no makeup exams. The four midterm exams are spaced evenly throughout the semester. Your lowest exam score will be dropped and your course score will be based on the remaining 3 hourly exam scores.

Exams will be given in the USU Logan Testing Center over a 2-day period. You will need to schedule a time to take the exam anytime during the 2-day period. Exams can be taken between 8:30AM on Monday and 8:30PM on Tuesday. If you are unable to take the exam during the scheduled 2-day period for a valid reason (university-related event, military service, job-related travel, an interview for graduate or professional school, sudden and incapacitating illness, death in the family) you should notify the instructor as soon as possible *before the end of the exam period* and we will arrange an alternate time. You must present documentation in order to reschedule. If you miss an exam for any other reason, that score will be dropped from your grade as your lowest score. You can only drop one hourly exam score. Failure to adhere to this policy will result in a zero for that exam. Exam periods are marked on the course schedule. Exam scores will be reported to you in Canvas as soon as you finish the exam in the testing center. You will be able to see your exam with the correct answers marked soon after the testing period for that exam expires. *You have one week from the time assignment or exam scores are posted to dispute grading.*

**Final Exam:** The final exam is comprehensive and will be two hours in length. It will be administered in the testing center over a 3-day period (Monday 8:30AM – Wednesday 10:30PM). Please **DO NOT SCHEDULE EARLY TRAVEL PLANS** because you will not be released from taking the final during the scheduled time.

### **Mastering Biology Assignments**

Mastering Biology is an online homework and tutorial system that is designed to improve your learning of biology. The system can be accessed by clicking on the MyLab and Mastering tab on the menu to the left. The USU package for the course contains an access code for Mastering Biology, but if you did not purchase the USU package you will need purchase an access code through Canvas when you on the MyLab and Mastering tab. Codes purchased from other sources or with other versions of the textbook will not work.

There will be weekly Mastering Biology assignments that require you to complete exercises and activities and answer roughly 20 to 50 questions. Assignments are due at midnight on each Friday as indicated on the Schedule. 1% per hour is deducted from your score for questions answered after midnight on Thursday. Each weekly Mastering Biology assignment is designed to take about 1 hour, but there is no time limit and you don't have to complete the entire assignment in one session. There is a tutorial practice session, Introduction to Mastering Biology, that is due on Friday, January 12th. The practice assignment will not count for credit, but will allow you to become familiar with the Mastering Biology software and provide assurance that your later scores will be recorded correctly.

Mastering Biology is a powerful learning tool if used wisely. Working in groups is fine, as long as everyone in the group participates in answering each question. You will be given two chances to answer each question correctly. An incorrect first answer will not count against your score. There are many ways to use Mastering Biology ineffectively. Three popular abuses are blindly copying answers from friends, guessing on answers, or looking up the answers online. All these approaches may give you nearly the full Mastering Biology points, but you won't learn anything and you won't be able to correctly answer the Mastering Biology questions that will be part of every exam. Please use Mastering Biology to master biology, not simply to obtain full points that and then miss those questions on the exams because you don't know the material.

### **iClickers**

iClickers will be used to answer questions in class and will allow you to earn up to 5 extra credit points in your final course score added to your course score based on participation, regardless of whether you answered correctly or not. iClickers can be rented or purchased new or used from the bookstore or through other vendors. Any model of iClicker will work for this class, but it must be an iClicker, not another type of polling device. You must register your clicker using the iClicker registration link in Canvas to receive credit. There are many reasons for using clickers, including providing immediate feedback on your understanding of material presented in class, keeping you engaged in lecture, providing us with an idea of how we're doing as instructors and how you're doing as a student, and providing insight to the kinds of questions we might ask on exams. Some iClicker questions will be included on each exam. Because these are extra credit points, you need to be in class with a working iClicker to obtain them. If you miss class for any reason, forgot to bring your iClicker, or have technical problems with your iClicker, you also miss the points for that day. Since iClicker use is for extra credit, it is not required that you purchase one, but strongly recommend that you obtain a clicker and use it for this course. Using another student's clicker or allowing another student to use your

clicker is a violation of the University's Honor Code; it will result in loss of all extra credit points and will be reported to the Vice President for Student Services.

## Schedule

Week	Date		Topic	Assignment	Exam
1	8-Jan	Mon	Introduction to course		
	10-Jan	Wed	Ch 1 - Study of life; Ch 2 - Chemical Context		
	12-Jan	Fri	Ch 3 - Water & Life	Practice	
2	15-Jan	Mon	<b>Martin Luther King Jr. Day - No class</b>		
	17-Jan	Wed	Ch 4 - Molecular Diversity		
	19-Jan	Fri	Ch 5 - Structure & Function of Macromolecules	1	
3	22-Jan	Mon	Ch 6 - A tour of the cell		
	24-Jan	Wed	Ch 7 - Membrane Structure & Function		
	26-Jan	Fri	Ch 8 - Intro to Metabolism	2	
4	29-Jan	Mon	Review		Exam 1 (due 1/30 @8:30pm)
	31-Jan	Wed	Ch 9 - Cellular Respiration & Fermentation		
	2-Feb	Fri	Ch 10 - Photosynthesis	3	
5	5-Feb	Mon	Ch 10 - Photosynthesis		
	7-Feb	Wed	Ch 11 - Cell Communication		
	9-Feb	Fri	Ch 11 - Cell Communication	4	
6	12-Feb	Mon	Ch 12 - Cell Cycle		
	14-Feb	Wed	Ch 12 - Cell Cycle		
	16-Feb	Fri	Ch 13 - Meiosis & Sexual Life Cycles	5	
7	19-Feb	Mon	<b>President's Day - No class</b>		
	21-Feb	Wed	Ch 14 - Mendel & the Gene Idea		
	23-Feb	Fri	Ch 14 - Mendel & the Gene Idea	6	
8	26-Feb	Mon	Review		Exam 2 (due 2/27 @8:30pm)
	28-Feb	Wed	Ch 15 - Chromosomal Basis of Inheritance		
	2-Mar	Fri	Ch 15 - Chromosomal Basis of Inheritance	7	
	5-Mar	Mon	<b>Spring Break - No Class</b>		
	7-Mar	Wed			
	9-Mar	Fri			
9	12-Mar	Mon	Ch 16 - Molecular Basis of Inheritance		
	14-Mar	Wed	Ch 16 - Molecular Basis of Inheritance		
	16-Mar	Fri	Ch 17 - From Gene to Protein	8	
10	19-Mar	Mon	Ch 17 - From Gene to Protein		
	21-Mar	Wed	Ch 18 - Regulation of Gene Expression		
	23-Mar	Fri	Ch 18 - Regulation of Gene Expression	9	
11	26-Mar	Mon	Review		Exam 3 (due 3/27 @8:30pm)
	28-Mar	Wed	Ch 19 - Viruses		
	30-Mar	Fri	Ch 21 - Genomes & their Evolution	10	
12	2-Apr	Mon	Ch 25 - History of Life on Earth		

	4-Apr	Wed	Ch 26 - Phylogeny & the Tree of Life		
	6-Apr	Fri	Ch 27 - Bacteria & Archaea	11	
13	9-Apr	Mon	Ch 28 - Protists		
	11-Apr	Wed	Ch 29 & 30- Plant Diversity 1, 2		
	13-Apr	Fri	Ch 31 - Fungi	12	
14	16-Apr	Mon	Review		Exam 4 (due 4/17 @8:30pm)
	18-Apr	Wed	Ch 35 - Plant Structure & Growth		
	20-Apr	Fri	Ch 36 - Resource Acquisition & Transport	13	
15	23-Apr	Mon	Ch 37 - Plant Nutrition		
	25-Apr	Wed	Ch 39 - Plant Responses to Signals		
	27-Apr	Fri	Review for Final	14	
16	30-Apr		Finals week		Final (due 5/2 @10:30pm)

## University Policies & Procedures

### Academic Freedom and Professional Responsibilities

Academic freedom is the right to teach, study, discuss, investigate, discover, create, and publish freely. Academic freedom protects the rights of faculty members in teaching and of students in learning. Freedom in research is fundamental to the advancement of truth. Faculty members are entitled to full freedom in teaching, research, and creative activities, subject to the limitations imposed by professional responsibility. [Faculty Code Policy #403](#) further defines academic freedom and professional responsibilities.

### Academic Integrity – "The Honor System"

Each student has the right and duty to pursue his or her academic experience free of dishonesty. The Honor System is designed to establish the higher level of conduct expected and required of all Utah State University students.

[The Honor Pledge](#): To enhance the learning environment at Utah State University and to develop student academic integrity, each student agrees to the following Honor Pledge:

*"I pledge, on my honor, to conduct myself with the foremost level of academic integrity."*

A student who lives by the Honor Pledge is a student who does more than not cheat, falsify, or plagiarize. A student who lives by the Honor Pledge:

- Espouses academic integrity as an underlying and essential principle of the Utah State University community;
- Understands that each act of academic dishonesty devalues every degree that is awarded by this institution; and
- Is a welcomed and valued member of Utah State University.

### Academic Dishonesty

The instructor of this course will take appropriate actions in response to Academic Dishonesty, as defined the University's Student Code. Acts of academic dishonesty include but are not limited to:

- **Cheating:** using, attempting to use, or providing others with any unauthorized assistance in taking quizzes, tests, examinations, or in any other academic exercise or activity. Unauthorized assistance includes:
  - Working in a group when the instructor has designated that the quiz, test, examination, or any other academic exercise or activity be done “individually;”
  - Depending on the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments;
  - Substituting for another student, or permitting another student to substitute for oneself, in taking an examination or preparing academic work;
  - Acquiring tests or other academic material belonging to a faculty member, staff member, or another student without express permission;
  - Continuing to write after time has been called on a quiz, test, examination, or any other academic exercise or activity;
  - Submitting substantially the same work for credit in more than one class, except with prior approval of the instructor; or engaging in any form of research fraud.
- **Falsification:** altering or fabricating any information or citation in an academic exercise or activity.
- **Plagiarism:** representing, by paraphrase or direct quotation, the published or unpublished work of another person as one’s own in any academic exercise or activity without full and clear acknowledgment. It also includes using materials prepared by another person or by an agency engaged in the sale of term papers or other academic materials.

## Sexual Harassment

Sexual harassment is defined by the Affirmative Action/Equal Employment Opportunity Commission as any "unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature." If you feel you are a victim of sexual harassment, you may talk to or file a complaint with the Affirmative Action/Equal Employment Opportunity Office located in Old Main, Room 161, or call the AA/EEO Office at (435) 797-1266.

## Withdrawal Policy and "I" Grade Policy

Students are required to complete all courses for which they are registered by the end of the semester. In some cases, a student may be unable to complete all of the coursework because of extenuating circumstances, but not due to poor performance or to retain financial aid. The term ‘extenuating’ circumstances includes: (1) incapacitating illness which prevents a student from attending classes for a minimum period of two weeks, (2) a death in the immediate family, (3) financial responsibilities requiring a student to alter a work schedule to secure employment, (4) change in work schedule as required by an employer, or (5) other emergencies deemed appropriate by the instructor.

## Students with Disabilities

USU welcomes students with disabilities. If you have, or suspect you may have, a physical, mental health, or learning disability that may require accommodations in this course, please contact the [Disability Resource Center \(DRC\)](#) as early in the semester as possible (University Inn # 101, 435-797-2444, [drc@usu.edu](mailto:drc@usu.edu)). All disability related accommodations must be approved by the DRC. Once approved, the DRC will coordinate with faculty to provide accommodations.

## Diversity Statement



Regardless of intent, careless or ill-informed remarks can be offensive and hurtful to others and detract from the learning climate. If you feel uncomfortable in a classroom due to offensive language or actions by an instructor or student(s) regarding ethnicity, gender, or sexual orientation, contact:

- Student Services: <http://www.usu.edu/studentservices/>, 435.797.1712, [studentservices@usu.edu](mailto:studentservices@usu.edu), TSC 220
- Student Advocates: <https://ususa.usu.edu/resources/student-advocacy/legal-services>, 435.797.2912, TSC 326,
- Access and Diversity: <http://www.usu.edu/accesscenter/>, 435.797.1728, [access@usu.edu](mailto:access@usu.edu); TSC 315
- Multicultural Programs: <http://www.usu.edu/accesscenter/multiculture/>, 435-797-1728, TSC 315
- LGBTQA Programs: <http://www.usu.edu/accesscenter/lgbtqa/>, 435-797-GAYS, TSC 314
- Provost's Office Diversity Resources: <https://www.usu.edu/provost/diversity/>, (435) 797-8176

You can learn about your student rights by visiting:  
The Code of Policies and Procedures for Students at Utah State  
University: <http://www.usu.edu/studentservices/studentcode/>

### **Grievance Process**

Students who feel they have been unfairly treated may file a grievance through the channels and procedures described in the Student Code: [Article VII. Grievances](#).

Full details for USU Academic Policies and Procedures can be found at:

- [Student Conduct](#)
- [Student Code](#)
- [Academic Integrity](#)
- [USU Selected Academic Policies and Procedures](#)
- [USU Academic Policies and Procedures](#)
- [Academic Freedom and Professional Responsibility Policy](#)

### **Emergency Procedures**

In the case of a drill or real emergency, classes will be notified to evacuate the building by the sound of the fire/emergency alarm system or by a building representative. In the event of a disaster that may interfere with either notification, evacuate as the situation dictates (i.e., in an earthquake when shaking ceases or immediately when a fire is discovered). Turn off computers and take any personal items with you. Elevators should not be used; instead, use the closest stairs.