

Biology 1610 2016 Syllabus

Instructors

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Course Materials

The textbook we will use is the 10th edition of Campbell Biology by Reese et al. In addition to the textbook, you will need an online assignment system called Mastering Biology, which is specific to the 10th edition of Campbell Biology. The easiest option to obtain both of these is to buy the package in the USU bookstore. We have negotiated a reduced price for this combination, so it's also one of the cheapest ways to get both items. We know that it's still not a low price, but it's important to realize that the materials purchased for Biology 1610 also work for Biology 1620. The purchase you make now is on the only one you'll need to make for both courses.

There are two alternatives to saving more money. You can purchase "Modified MasteringBiology with eText and Learning Catalytics for Reece, Campbell Biology, 10/e Mastering Biology" (\$113.95) and use the eText that's part of this package, or purchase "Modified MasteringBiology without eText or Learning Catalytics for Reece, Campbell Biology, 10/e" (\$65.95) and buy a text from any other source. If you follow either of these options, you must purchase Mastering Biology online through Canvas via the link on the *MyLab and Mastering* tab on the left menu. Access codes obtained from sources other than the USU bookstore package or the Canvas link will not work. More information about these options will be given on the first day of class.

Finally, we highly recommend that you purchase an iClicker. iClickers will be used to answer questions in class and will allow you to earn up to 2% extra credit points in your final course score. iClickers can be 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 any other polling device.

Schedule

Week	Date	Day	Activity	Topic	Instructor	Chapter(s)	EXAMS
1	29-Aug	Mon	Lecture	Introduction to the Course	Mott/Podgorski		
	31-Aug	Wed	Lecture	Introduction: Themes in the Study of Life The Chemical Context of Life	Mott	1, 2	
	1-Sep	Thurs	Mastering Biology	Intro to Mastering Biology/Practice Assignment			
	2-Sep	Friday	Lecture	Water and the Fitness of the Environment Carbon and the Molecular Diversity of	Mott	3,4	
2	5-Sep	Mon	LABOR DAY	NO CLASS			
	7-Sep	Wed	Lecture	Structure and Function of Macromolecules	Mott	5	
	8-Sep	Thurs	Mastering Biology	Assignment 1			
	9-Sep	Friday	Lecture	A Tour of the Cell	Mott	6	
3	12-Sep	Mon	Lecture	Membrane Structure and Function	Mott	7	
	14-Sep	Wed	Lecture	Introduction to Metabolism	Mott	8	
	15-Sep	Thurs	Mastering Biology	Assignment 2			
	16-Sep	Friday	Lecture	EXAM 1 --- IN CLASS			Exam 1
4	19-Sep	Mon	Lecture	Cellular Respiration: Harvesting Chemical Energy	Mott	9	
	21-Sep	Wed	Lecture	Photosynthesis	Mott	10	
	22-Sep	Thurs	Mastering Biology	Assignment 3			
	23-Sep	Friday	Lecture	Photosynthesis	Mott	10	
5	26-Sep	Mon	Lecture	Cell Communication	Podgorski	11	
	28-Sep	Wed	Lecture	Cell Communication	Podgorski	11	
	29-Sep	Thurs	Mastering Biology	Assignment 4			
	30-Sep	Friday	Lecture	The Cell Cycle	Podgorski	12	
6	3-Oct	Mon	Lecture	The Cell Cycle	Podgorski	13	
	5-Oct	Wed	Lecture	Meiosis and Sexual Life Cycles	Podgorski	14	
	6-Oct	Thurs	Mastering Biology	Assignment 5			Exam 2
	7-Oct	Friday	Lecture	Mendel and the Gene Idea	Podgorski	14	Exam 2
	8-Oct	Sat					Exam 2
7	10-Oct	Mon	Lecture	Mendel and the Gene Idea	Podgorski	15	
	12-Oct	Wed	Lecture	The Chromosomal Basis of Inheritance	Podgorski	15	
	13-Oct	Thurs	Mastering Biology	Assignment 6			
	14-Oct	Friday	Lecture	The Chromosomal Basis of Inheritance	Podgorski	16	

Schedule (cont)

Week	Date	Day	Activity	Topic	Instructor	Chapter(s)	Exam
8	17-Oct	Mon	Lecture	The Molecular Basis of Inheritance	Podgorski	16	
	19-Oct	Wed	Lecture	The Molecular Basis of Inheritance	Podgorski	17	
	20-Oct	Thurs	Mastering Biology	Assignment 7			
	20-Oct	Thurs	Lecture	From Gene to Protein	Podgorski	17	
9	24-Oct	Mon	Lecture	From Gene to Protein	Podgorski	18	
	26-Oct	Wed	Lecture	From Gene to Protein	Podgorski	18	
	27-Oct	Thurs	Mastering Biology	Assignment 8			Exam 3
	28-Oct	Friday	Lecture	Regulation of Gene Expression	Podgorski	19	Exam 3
	29-Oct	Sat					Exam 3
10	31-Oct	Mon	Lecture	Regulation of Gene Expression	Podgorski	20	
	2-Nov	Wed	Lecture	Viruses	Podgorski	20	
	3-Nov	Thurs	Mastering Biology	Assignment 9			
	4-Nov	Friday	Lecture	Genomes and their Evolution	Podgorski	21	
11	7-Nov	Mon	Lecture	Genomes and Their Evolution	Podgorski	21	
	9-Nov	Wed	Lecture	Phylogeny and the Tree of Life	Podgorski	26	
	10-Nov	Thurs	Mastering Biology	Assignment 10			
	11-Nov	Friday	Lecture	The History of Life on Earth/Bacteria and Archaea	Mott	25, 27	
12	14-Nov	Mon	Lecture	Bacteria and Archaea/Protists	Mott	27, 28	
	16-Nov	Wed	Lecture	Protists/Fungi	Mott	28, 31	
	17-Nov	Thurs	Mastering Biology	Assignment 11			Exam 4
	18-Nov	Friday	Lecture	Fungi/Plant Diversity I	Mott	31, 29	Exam 4
	19-Nov	Sat					Exam 4
13	21-Nov	Mon	Lecture	Plant Diversity I	Mott	29	
	13-Nov	Wed	Thanksgiving	NO CLASS			
	24-Nov	Thurs	Thanksgiving	NO Mastering Biology Assignment			
	25-Nov	Friday	Thanksgiving	NO CLASS			
14	28-Nov	Mon	Lecture	Plant Diversity II/ Plant Structure and Growth	Mott	30, 35	
	30-Nov	Wed	Lecture	Plant Structure, Growth and Development	Mott	35	
	1-Dec	Thurs	Mastering Biology	Assignment 12			
	2-Dec	Friday	Lecture	Resource Acquisition and Transport	Mott	36	
15	5-Dec	Mon	Lecture	Plant Nutrition	Mott	37	
	7-Dec	Wed	Lecture	Plant Responses to Internal and External Signals	Mott	39	
	8-Dec	Thurs	Mastering Biology	Assignment 13			
	9-Dec	Friday	Lecture	Review for the Final Exam			
	12-14 Dec	Mon - Wed	Final Exam				Final Exam

Grading

There will be 4 one-hour exams during the semester, but you will be allowed to drop the lowest one. However, *only one hourly exam score can be dropped*. Your core course grade will therefore be based on 3 one-hour exams, a final exam, and 13 online assignments in *Mastering Biology*. As described below, extra credit points are possible from using clickers in class. Point allocations are as follows

Exam 1	40 pts
Exam 2	40 pts
Exam 3	40 pts
Final Exam	80 pts
Mastering Biology	20 pts
Total	220 pts

No individual extra credit opportunities are available. However, up to 2% (4.4 course points) will be added to your course score for classroom participation assessed using your iClicker. (You must be present in class with a working iClicker to receive clicker for that day. There are no excused absences for any reason.) Use of another student's iClicker in class is considered to be cheating and a violation of the University Honor Code. Please do not do this. 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.

Grade minimum percentage

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

Exam Information

The first 1-hour exam will be administered in class and graded by scantron. The remaining three 1-hour exams and the final exam will be administered online through Canvas in the new USU Testing Center. All exams will be multiple choice, and the content of exams will be from material covered during lecture, including iClicker questions that have been presented and discussed in class, assigned readings that will be indicated with highlights or comment balloons in the online version of the textbook, 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.) earphones, or headphones may not be used during examinations. There will be no makeup exams.

There will be four 1-hour exams spaced evenly throughout the semester. We will drop your lowest exam score and calculate your course score based on the remaining 3 hourly exam scores (see the *Grading* page for more details).

Exams will be given in the Testing Center over a 3-day period; you will be able to take the exam anytime during the 3-day period. Instructions on how to sign up to schedule your exam will be given in class. If you are unable to take the exam during the scheduled 3-day period for a valid reason (university-related event, military service, job-related travel, etc) you should notify one of us as soon as possible and we will arrange an alternate time. Be prepared to document your event. If you miss an exam for any other reason, we will drop that score from your grade as your lowest score (see above). If you must miss an exam because of an emergency (*e.g.*, sudden and incapacitating illness, death in the family), you must notify us as soon as possible and preferably before the exam period. Be prepared to prove your emergency. Failure to adhere to this policy will result in a zero for that exam. You can only drop one hourly exam score. Exam periods are marked on the course schedule.

For the first hourly exam (in class), your score will be reported to you through your preferred email account, which you set in Banner. For exam taken in the testing center, your exam score will be reported to you in Canvas as soon as you finish the exam. 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 scores are posted to ask questions about the exam. If you think there has been a mistake in assigning points on an exam, assignment or homework in lecture or lab, please bring it to the attention of the appropriate instructor within one week of the time that *answers* for that exam or assignment *are issued*.

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. Please **DO NOT SCHEDULE EARLY TRAVEL PLANS** because you will not be released from taking the final during the scheduled time.

Mastering Biology

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 multiple choice questions. Assignments are due at midnight on each Thursday as indicated on the Schedule. 1% per hour is deducted from your score for questions answered after midnight on Thursday; questions answered before midnight are not penalized. 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 session, *Introduction to MasteringBiology*, which is optional and can be completed at any time, and a practice assignment that is due on Thursday, September 1. 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.

Your score in Mastering Biology counts for 20 points (9.1%) of your course score. Mastering Biology is a powerful learning tool if used wisely. Working in groups 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. It shouldn't be too difficult to do well and learn from the experience.**

There are many ways to use Mastering Biology *ineffectively*. Three popular abuses are blindly copying answers from friends, guessing an answer, or looking up the answers online. All these **approaches may give you nearly the full 20 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. Trust us - we often see Mastering Biology questions with a 90% or higher correct response rate in assignments, with the same questions on exams giving a correct response rate of less than 30%. Please use Mastering Biology to master biology, not simply to obtain 20 points that **you'll more than lose on exams because you don't know the material.**

Clickers

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. Use of clickers will provide up to of 4.4 extra credit points (2% of 220 maximum possible points) added to your course score based on participation, regardless of whether you answered correctly or not. 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. Be aware that each class session provides roughly 0.08% extra credit points, so if you did forget your iClicker or had technical problems, you're not losing a substantial number of extra credit points. Since iClicker use is for extra credit, we can't require you to 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.