Biology 1610 Syllabus

Instructors

Dr. Greg Podgorski  
greg.podgorski@usu.edu  
Office Hours (via Zoom):  
Tuesday 9 – 10 am  
Thursday 1:30 – 2:30 pm

Dr. Monica Borghi  
(Please email from Canvas)  
Office hours (via Zoom):  
Monday 7:30 - 9:30 am

Learning Objectives

• Gain biology content knowledge in biochemistry, cell biology, metabolism, energetics, genetics, genomics, biological diversity, and plant biology.
• Recognize unifying biological concepts.
• Strengthen biology problem-solving skills.

Course Format

This is a blended web broadcast course. What this means is that there will be a mix of online recorded lecture segments and once-a-week virtual meetings at the scheduled class meeting times. You will be assigned to meet via Zoom on either a Monday, Wednesday, or Friday. During these virtual meetings, you’ll work on a variety of activities that include ways to learn biology, practice test questions, solving problems in genetics, and explorations of current developments in biology. Assuming the technology works as planned, each of these meetings will involve some small group work using Zoom meeting rooms.

Biology 1610 is taught by a team of pair of instructors, with the course content divided according to instructor expertise. Dr. Borhi will teach biochemistry, metabolism, energetics, biological diversity, and plant biology. Dr. Podgorski will teach genetics, genomics, and areas of biochemistry and cell biology that are not covered by Dr. Borhi. Both instructors will rotate in and out of the lecture sequence frequently and work closely together in all aspects of the course.
Two Supplemental Instruction (SI) leaders and an Undergraduate Teaching Fellow (UTF) will assist the instructors in helping you learn biology.

Course Materials

You will need *Campbell Biology* (12th edition), Modified Mastering Biology (an online homework system), a subscription to iClicker Cloud (a polling system for answering questions posed in our class meetings), and a computer, tablet, or mobile phone with a strong internet connection. With the exception of the electronic device, instructions for purchasing these items are available from the Course Materials link found below the Canvas homepage welcome image. Please pay close attention to these instructions. DO NOT obtain Mastering Biology from any other source. Likewise, do not purchase a standard iClicker; it will not work for this course.

Grading

Your final score in Biology 1610 will come from a variety of sources which are listed in the following table. This distribution of points is designed to provide different ways to earn points and to take some of the emphasis away from high-stakes exams.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Meeting Participation</td>
<td>20%</td>
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<tr>
<td>(assessed by iClicker points)</td>
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</tr>
<tr>
<td>Weekly Reading Quizzes</td>
<td>20%</td>
</tr>
<tr>
<td>Hourly Exams (top 2 of 3 count)</td>
<td>40%</td>
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<tr>
<td>Final Exam (must be taken; score cannot be dropped)</td>
<td>20%</td>
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These are the only ways to earn credit in Biology 1610. No extra credit points will be available to individual students. Points may be added to exam scores if the class exam average is less than ~ 72 – 75%. Points will never be deducted from exams, no matter how high the class average.

The grading scale is:
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%

Please be aware that your final letter grade for the course will be determined by the total points you accumulate during the semester according to the scale above. Percentage scores are calculated to two significant figures and are not rounded up. Given that there are roughly 1000 students in Biology 1610, there will always be cases where a score is right on the threshold of obtaining a higher grade. The problem with setting a new cutoff to raise a grade is that it recreates exactly the same situation for the next lower score that now may be 0.01 – 0.02% below the new threshold. It’s sometimes tough, but this is why we have to maintain these firm cutoffs.

Exams

There will be three hourly exams, with only the top two scores counting toward your grade, and a comprehensive final. Exams will consist mostly of multiple-choice questions with some occasional true/false questions. Each hourly exam will be open for a 2-day period; you can
take the exam within a one-hour window anytime within the period the exam is open. The final will be open for three days and you’ll have 2 hours to complete this exam once you open it. **All exams must be taken during the scheduled exam periods.**

**Be careful!** A danger with a blended course format is that while exams must be taken at scheduled times, you can view the lectures any time you'd like, including the night before an exam. You know where we're going. You need to keep up with the recorded lectures. Be sure you've viewed all the lecture recordings that will be covered on an exam well before the exam.

Exams will be completed using Proctorio, an online proctoring system. You’ll need a computer with an active microphone and video camera to use Proctorio. You will take exams outside of class at a location of your choice. Instructions for using Proctorio are found at [https://www.usu.edu/testing/students/proctoring](https://www.usu.edu/testing/students/proctoring). The USU Student Honor Code, which forbids cheating, will be strictly enforced on all exams. Please don’t do anything which is or can be construed as cheating.

**Weekly Reading Quizzes**

Reading the text will be an important part of your learning. There will be focused reading assignments almost every week of the course, with all but one reading quiz due Mondays at 8 am. These quizzes will be taken using Mastering Biology and will be a mix of questions from the Mastering Biology question bank and questions written by the instructors. Reading quizzes are open-book and, with caveats, may be worked on in small groups. You will be given two chances to answer each question correctly, with no points deducted for an initial incorrect answer.

Here’s a dirty secret and a few tips. Answers to Mastering Biology questions are only a few keystrokes away through the magic of Google. You can look up answers and ace all your reading quizzes. Why wouldn’t you want to look up the answers? It’s because you won’t learn any biology, and the biology you can learn by using the reading quizzes correctly will come in very handy on exams. Take our word for this. Related to Googling answers, if you work as a team on the quizzes, be sure that everyone knows how to correctly answer each question. Without this knowledge, you’ll see the same disastrous effect on exams as looking up all the answers.

Finally, while small group work on these quizzes is fine, we don’t want to see answers shared across the class. This will be considered a violation of the Student Honor Code. We will search for the offending individual and will file an Academic Integrity Violation Report once this individual is identified. Play nice please.

“**In-Class**” (read Zoom) Activities
Most of these sessions will be used to reinforce difficult concepts from the previous week’s lecture content. This coverage will be done with a bit of review by the instructors but mostly through sets of exam-like questions and problems that you’ll work on in small groups in Zoom Meeting Rooms. You’ll share your answers using iClicker Cloud and obtain points through a mix of participation points and points for correct answers. In addition to sessions spent reviewing challenging concepts, the first session will be devoted to becoming familiar with the Zoom-based meetings and using iClicker Cloud, and the second sessions will cover ways to learn biology (and other difficult subjects) effectively. At least one session will explore new developments in biology.

There will be 13 meetings during the semester. We’ll count points from your top-scoring 10 sessions. This means you can come to all sessions, which we strongly encourage, or miss up to 3 sessions without penalty. A missed session covers both an actual absence and technical problems with iClicker Cloud. We’re sorry, but given the size of the class and the difficulty of running the Zoom sessions, we cannot make exceptions for individual problems with iClicker Cloud use.

"Netiquette" Here are some etiquette guidelines in the age of virtual meetings: netiquette principles (Links to an external site.). Please follow these common-sense guidelines when participating in Zoom meetings. We’ll have all mics muted in the general meetings, but when you’re in Zoom meeting rooms, but sure to mute your mic unless you’re speaking. We don’t anticipate sharing video feeds of students in the general meetings, but would like you to share video in your small-group meetings. Please dress as you would if you were attending face-to-face class. Finally, we’ll plan to use the Chat feature of Zoom in the general meeting for you to ask us any questions you have.

### Lecture, Reading Quiz, and Exam Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Chapters/Topics</th>
<th>Instructor</th>
<th>Activities</th>
<th>Exams/Reading Quizzes (RQ)*</th>
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</thead>
<tbody>
<tr>
<td>1 8/31 − 9/4</td>
<td>Introduction to course</td>
<td>Podgorski/Borghi</td>
<td>Practice MB (no due date)</td>
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<tr>
<td></td>
<td>Ch. 1 Themes in Biology Ch. 2 Chemical Context of Life</td>
<td>Podgorski/Borghi</td>
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<tr>
<td>2 9/9 − 9/11 (No meeting for</td>
<td>Ch. 3 Water &amp; Life Ch. 4 Carbon &amp; Life</td>
<td>Podgorski</td>
<td>Introduction to the course and</td>
<td>RQ 1 (8 am 9/9)</td>
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<td>Monday Group</td>
<td>Ch. 5 Large Biological Molecules</td>
<td>technology of Zoom meetings</td>
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<td></td>
<td>Ch. 6 Tour of the Cell</td>
<td>How to succeed in Biology 1610 (and many other courses) and learn biology along the way.</td>
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<td>3 9/14 – 9/18</td>
<td>Ch. 7 Membranes Borghi</td>
<td>RQ.2</td>
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<td>Ch. 8 Metabolism</td>
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<td>Ch. 9 Respiration</td>
<td>RQ.3</td>
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<tr>
<td>4 9/21 – 9/25</td>
<td>Ch. 10 Photosynthesis Borghi</td>
<td>Concepts Cruise</td>
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<td></td>
<td>Ch. 11 Cell Communication</td>
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<tr>
<td>5 9/28 – 10/2</td>
<td>Ch. 12 Cell Cycle Podgorski</td>
<td>Concepts Cruise RQ.4</td>
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<td></td>
<td>Ch. 13 Meiosis &amp; Life Cycles</td>
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<tr>
<td>6 10/5 – 10/9</td>
<td>Ch. 14 Mendelian Genetics Podgorski</td>
<td>Concepts Cruise RQ.5</td>
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<tr>
<td></td>
<td>Ch. 14 Mendelian Genetics Podgorski</td>
<td>Concepts Cruise RQ.5</td>
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<tr>
<td>7 10/12 – 10/16</td>
<td>Ch. 15 Chromosomal Basis of Inheritance Podgorski</td>
<td>Concepts Cruise RQ.5</td>
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<tr>
<td></td>
<td>Ch. 16 Molecular Basis of Inheritance Podgorski</td>
<td>Concepts Cruise RQ.5</td>
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<td>8 10/19 – 10/23</td>
<td>Ch. 17 Gene Expression Podgorski</td>
<td>Concepts Cruise RQ.8</td>
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<tr>
<td></td>
<td>Ch. 17 Gene Expression Podgorski</td>
<td>Concepts Cruise RQ.8</td>
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Ch. 18 Regulation of Gene Expression

10 11/2 – 11/6
Ch. 18 Regulation of Gene Expression
Ch. 19. Viruses

11 11/9 – 11-13
Ch. 20 Biotechnology (Podgorski/Borghi)
Ch. 21 Genomes

Ch. 25 History of Life

12 11/16 – 11/20
Ch. 27 Bacteria & Archaea (Borghi)
Ch. 28 Protists

13 11/23
(No meeting W or F groups)
Ch. 31. Fungi (Borghi)

Ch. 29 Plant Colonization of Land

14 11/30 – 12/4
Ch. 30 Evolution of Seed Plants (Borghi)
Ch. 35 Plant Structure, Growth & Development

15 12/7 – 12/11
Ch. 36 Resource Acquisition & Transport (Borghi)
Ch. 37 Plant Nutrition
* All reading quizzes will be taken using Mastering Biology. With one exception, reading quizzes are due 8 am on Mondays. The exception is Reading Quiz 1, which is due 8 am, Wednesday, September 9.

**Course Policies**

**Academic Integrity - "The Honor System"**

The University expects that students and faculty alike maintain the highest standards of academic honesty. The Code of Policies and Procedures for Students at Utah State University ([Student Conduct (Links to an external site.)](#)) addresses academic integrity and honesty and notes the following:

**Academic Integrity:** Students have a responsibility to promote academic integrity at the University by not participating in or facilitating others' participation in any act of academic dishonesty and by reporting all violations or suspected violations of the Academic Integrity Standard to their instructors.

**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". Violations of the Academic Integrity Standard (academic violations) include, but are not limited to cheating, falsification, and plagiarism.

**Sexual Harassment**

Utah State University is committed to creating and maintaining an environment free from acts of sexual misconduct and discrimination and to fostering respect and dignity for all members of the USU community. Title IX and [USU Policy 339 (Links to an external site.)](#) address sexual harassment in the workplace and academic setting. The university responds promptly upon learning of any form of possible discrimination or sexual misconduct. Any individual may contact [USU's Affirmative Action/Equal Opportunity (AA/EO) Office (Links to an external site.)](#) for available options and resources or clarification. The university has established a complaint procedure to handle all types of discrimination complaints, including sexual harassment ([USU Policy 305](#)) (Links to an
external site), and has designated the AA/EO Director/Title IX Coordinator as the official responsible for receiving and investigating complaints of sexual harassment.

**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). All disability related accommodations must be approved by the DRC. Once approved, the DRC will coordinate with faculty to provide accommodations.

**Withdrawal Policy, "I" Grade Policy and Dropping Courses**

If a student does not attend a class during the first week of the term or by the second class meeting, whichever comes first, the instructor may submit a request to have the student dropped from the course. (This does not remove responsibility from the student to drop courses which they do not plan to attend.) Students who are dropped from courses will be notified by the Registrar’s Office through their preferred e-mail account.

Students may drop courses without notation on the permanent record through the first 20 percent of the class. If a student drops a course following the first 20 percent of the class, a W will be permanently affixed to the student’s record (check General Catalog (Links to an external site.) for exact dates).

Students with extenuating circumstances should refer to the policy regarding Complete Withdrawal from the University and the Incomplete (I) Grade policy in the General Catalog. Be aware that incomplete grades cannot be issued for poor performance in a course.