

BI 101 GENERAL BIOLOGY (30919) SYLLABUS

PORTLAND COMMUNITY COLLEGE, SE CAMPUS
2305 SE 82nd Ave, Portland, OR 97216

Instructor: **Xiana Smithhart, PhD**

Time of Recitation: TBD

Location of Lecture: **Online**

Webpage: <https://www.pcc.edu/staff/xiana-smithhart/>

E-mail: xiana.smithhart@pcc.edu

Day of Recitation: Fridays or Saturdays (optional)

Dates: June 22 – September 5, 2020

General Information

This course includes two components: a lecture and lab component. In response to the COVID-19 “Shelter in Place” ordinance set by Governor Kate Brown and PCC’s response to the COVID-19 pandemic, Bi101 will be held entirely online until at least December, 2020. Like with all online courses, you will need to be extremely self-motivated, organized, and check email/announcements/updates. This class is being taught using “**Flipped Classroom**” pedagogies where you learn the material on your own by watching screencasts, reading the book, doing the homework, following the lecture slides, etc... and the recitations are for asking questions and is totally student lead. Lab work includes hands-on investigations and activities that support concepts we learn in lecture. Out-of-class requirements include weekly assignments, textbook readings, and an environmental term project.

Course Description

A laboratory science course designed for non-biology majors. Introduction to the properties of life, morphology and physiology of cells, cell chemistry, energy transformation, and basic principles of ecology. Prerequisites: WR 115, RD 115 and MTH 20 or equivalent placement test scores.

To clarify the teaching of evolution and its place in the classroom, the Portland Community College Biology Department stand by the following statements about what is science and how the theory of evolution is the major organizing theory in the discipline of the biological sciences.

- Science is a fundamentally non-dogmatic and self-correcting investigatory process. In science, a theory is neither a guess, dogma, nor myth. The theories developed through scientific investigation are not decided in advance, but can be and often are modified and revised through observation and experimentation.
- The theory of evolution meets the criteria of a scientific theory. In contrast, creation "science" is neither self-examining nor investigatory. Creation "science" is not considered a legitimate science, but a form of religious advocacy. This position is established by legal precedence (*Webster v. New Lenox School District #122*, 917 F. 2d 1004).

Biology instructors of Portland Community College will teach the theory of evolution not as absolute truth but as the most widely accepted scientific theory on the diversity of life. We, the Biology Subject Area Curriculum Committee at Portland Community College, therefore stand with such organizations as the National Association of Biology Teachers in opposing the inclusion of pseudo-sciences in our science curricula.

Intended Outcomes for the Course

After successfully completing Bi 101, students should be able to:

- Differentiate between and appropriately use inductive and deductive reasoning in decision making
- Gather information, assess its validity, and differentiate factual information from opinion and pseudo-science by learning and practicing methods used by biological scientists
- Apply biological principles and generalizations to novel problems
- Practice the application of biological information in life (personal and professional)
- Develop informed positions or opinions on contemporary issues and communicate effectively using appropriate biological vocabulary

Technology: You will need: (1) a computer, (2) reliable access to the internet, (3) word processing software (you get free access to the Office suite as a PCC student and Google Docs is always free), (4) a way to convert photos and documents into a PDF file, (5) access to Zoom (for recitations). Recommended: (1) a printer, (2) something to take a picture and upload to the web, and (5) a headset with microphone.

Materials to Purchase: Please note that this term, since we are going online, you do not have to purchase the textbook. There are free books that will work but the chapters are not aligned. Also, during this time of uncertainty, we have not chosen a lab package yet so you may need to buy one from a publisher. This will be \$24-50 if we decide to go this route. This is why we are trying to keep the cost of the textbook down. A great alternative route to buying the custom PCC textbook is to buy an older edition of the full-text. The 10th edition is available online used for \$13 (includes shipping) and \$36.50 for the 11th edition.

Free Book: <https://openstax.org/details/books/concepts-biology>

Custom PCC Text Book. Audesirk (2017). *Biology: Life on Earth*. Pearson Publishing.

ISBN: 9781323757109

PCC Bookstore (\$73.05 Used and \$97.40 New)

***** You are welcome to use the old edition (10th or 11th) or rent the newest text. Keep in mind that you will be purchasing the “full text” which includes everything. It’s way cheaper.*****

11th Edition “Full Text” (Owl Cover) Audesirk (2016). *Biology: Life on Earth with Physiology*. Pearson Publishing.

ISBN-10: 0134168291

ISBN-13: 978-0134168296

10th Edition “Full Text” (Bear Cover) Audesirk (2013). *Biology: Life on Earth with Physiology*. Pearson Publishing.

ISBN-10: 0321794265

ISBN-13: 978-0321794260

Communication: If you have short questions please email me at the above email address. I have a very high security setting on my email so please email me from an account that gives your full name. Please use an appropriate and professional email (e.g. from your pcc account) and not an inappropriate one (e.g. fuzzybunnylover@noweb.com). **Access to pre-lecture presentation slide and handouts are in D2L.**

Readings: The schedule of readings from your text is included in this syllabus. Please read the chapters associated with the topic before or after you watch the screencasts. Please keep in mind that the content in the slides is for the Pearson book 11th edition and if you are using the 10th edition or free Openstax book, the chapters may not be aligned.

Expectations: Admission to Portland Community College carries with it the presumption that students will conduct themselves as responsible members of the College community. Students and instructors assume the obligation to observe standards of conduct appropriate to the pursuit of educational goals. For students, faculty, and staff alike, this includes treating each other with respect and consideration.

Your Time Commitment: Introductory science classes frequently require more time and effort than students realize. In many ways, the study of biology is like learning a new language. A successful understanding of the topics involves a considerable amount of time completing projects and studying outside of class. The amount of time you can expect to spend will depend on your science background and study habits and learning traits, but you should budget **at least 6 hours/week** of focused study time for this class. The homework assignments are substantial so please be aware of this.

Course Work Requirements for Lecture

Lectures: Lectures will be videos (screencasts). These will be organized on D2L under the content tab and each chapter will have the screencasts, lecture slides, and other learning materials that you may need. You will need to watch these videos before the recitation.

Recitation: Recitations will be a group meeting in Zoom. They are **not** required; you can choose to attend or not. I will post the meeting invitation in the announcements a day before the recitation. Recitations will be held at the same time as your lecture would have been (**Saturdays at 9:00 am**). Recitations are completely student lead. Please come with questions. These questions can be broad in scope, where it takes a considerable amount of time to cover to very short and specific questions. This is your time to learn and I am here to help you.

Homework: During the term, you will have three homework packets. These home works will include “active learning modules”. These modules are designed to be completed by watching the screencasts. Homework are to be turned in during exam week. For example, homework 1 is due the week you take exam 1. You can upload these files to D2L.

Extra Credit: A few extra credit activities will be assigned throughout the term. Please do not ask for special extra credit assignments just for yourself to leverage your grade. Extra credit will be offered to **everyone** and I can only assign a certain number of points according to the course policies. There is a hard due date for extra credit. No late assignments will be accepted.

Late Homework/ Extra Credit Policy: The homework packets and extra credit have a hard due date. Since homework packets are basically giving you credit to study/learn, no late assignments will be accepted; unless you have a documented reason that you were not able to attend exam and thus turn in your homework packet.

Uploaded Work: *Everything uploaded to D2L must be in a PDF format and in one file and must be in the right orientation.* This is extremely important because I can't grade it unless it is in this exact format. You can get an app on your phone where you take a picture and it turns it to a PDF. You can also work in google docs or Microsoft word and there you can “save as” or “print” as a PDF. You can also scan it with a scanner and save your work as a PDF.

https://documentation.brightspace.com/EN/le/assignments/learner/submit_assignments.htm

Quizzes: Lecture quizzes will be given on D2L. **Because good time managements and responsibility is essential to your success, there are no make-up quizzes available regardless of excuse.** However, your lowest quiz score will be dropped. If you miss a quiz, it will count as your dropped score. Quizzes include fill-in-the-blank, multiple choice, true/false, matching, and labeling diagram questions. Please see course schedule for quiz dates. I recommend putting these dates in your calendar and set a reminder. They are timed. **can be found under the tab ‘Quizzes’ in D2L.**

EXAMS: Three exams will be given over the course of the term as indicated on your lecture schedule. The exams may include any of the following: multiple choice, true-false, matching, fill in the blank, labeling diagrams, short answers, and essay questions. Exams will also be given online and will have an open and a due date. They are timed. **Exams can be found under the tab ‘Quizzes’ in D2L.**

Late Exam Policy: Make-up exams are only available to students with documented illnesses/emergencies and you must contact me via email or voicemail within 24 hours after the scheduled exam to tell me about your situation. Make-up exams must be taken within 48 hours of the missed exam unless provisions are made by your instructor; it is your responsibility to schedule your make-up exam by contacting your instructor.

Course Requirements for Lab

BIO 101 Lab Description:

This laboratory course surveys biological principles from an ecologically-based perspective. It includes introductions to the properties of life, morphology and physiology of cells, cell chemistry, energy transformations, and the basic principles of ecology. **Prerequisites:** WR 115, RD 115 and MTH 20 or equivalent placement test scores. **Credits:** This course is in conjunction with Bi 101 lecture and carries no separate credit hours. Bi 101 lecture and lab combined are worth 4 credits.

Labs: The labs will be online. **Students missing more than 2 labs, without making a completion agreement with their instructor, will earn an “F” or “No Pass” for the entire course.** Your instructor may ask you questions about the lab procedures that you conducted during lab, so make certain that you understand each concept before moving on. If you do not complete all of the lab exercises, or if you provide incorrect answers in response to your lab questions, you will not earn full credit for your lab assignments.

Lab Packets: These are located for download and upload in the “assignments” folder. Remember, as with all documents uploaded to D2L, they must be in a PDF format, in the correct orientation, and in one document.

Required Laboratory Text:

Fong (2018). Biology 101 Lab Manual Fall 2018. Sylvania Campus. (\$19.05 used and \$25.35 new)

Please Note: The lab manual is *only* available at the SE Campus and the Sylvania Bookstores.

*****The instructor reserves the right to modify course content and/or substitute assignments and learning activities in response to institutional, weather or class situations.*****

Expectations, Group Work, & Lab Exercises: Admission to Portland Community College carries with it the presumption that students will conduct themselves as responsible members of the College community. Students and instructors assume the obligation to observe standards of conduct appropriate to the pursuit of educational goals. For students, faculty, and staff alike, this includes treating each other with respect and consideration.

Because lab is an integral portion of the Bi 101 course, you are expected to read the lab, do the lab packets, and be ready to learn. Students who have read the lab manual exercises prior to doing the lab, participate fully, and turn in their work are most likely to succeed.

Pre-Lab Homework: Every lab except the first one requires you to carefully read through the lab and complete a pre-lab homework set of questions. These are found in your lab manual. You must complete and turn in your pre-lab homework at the beginning of lab each week, to receive credit. Credit will not be given for homework completed during or after lab, once lab has begun.

Late Homework Policy: Lab packets from the previous week are due before the start of your normally scheduled lab which is **Saturdays at 9AM.**

https://documentation.brightspace.com/EN/le/assignments/learner/submit_assignments.htm

Lab Quizzes: Quizzes will be given on D2L and have a hard due date. **There are no make-up quizzes available, regardless of the excuse.** However, you will get to drop your lowest quiz score. Quizzes will cover the material that you learned in the previous lab. For example, “quiz 2” will cover the previous week’s material (lab 2). This will include: procedural material, overall concepts (“take home” messages), and other material. I will talk about what you expect during week 1. Quizzes are worth 20 points each. Lab quizzes will go live on the time of the scheduled lab and will close in 24 hours after the opening date. Please note that you have more time to complete lecture quizzes.

Uploaded Work: *Everything uploaded to D2L must be in a PDF format and in one file and must be in the right orientation.* This is extremely important because I can't grade it unless it is in this exact format. You can get an app on your phone where you take a picture and it turns it to a PDF. You can also work in google docs or Microsoft word and there you can "save as" or "print" as a PDF. You can also scan it with a scanner and save your work as a PDF.

https://documentation.brightspace.com/EN/le/assignments/learner/submit_assignments.htm

Environmental Issues Project: Students will choose an environmental topic to investigate. You will make a fact sheet or a brochure convincing your audience about your stance on an environmental issue. This needs to be well researched using only peer reviewed scientific papers. A separate handout with grading details is posted in the lab folder on D2L.

Attendance Policy: Good grades and good attendance are strongly correlated. If you miss recitation or lab, then it is **your responsibility** to print out any handouts from MyPCC, learn the material covered, and know the assignments given. I strongly encourage you to make every effort to attend each course meeting because topics covered in recitation may contain details that are not easily available in your textbook, but that you will be expected to know. In addition, in-class quizzes or assignments will be given periodically throughout the term. **Students who miss recitation will not be able to make up in-class activities regardless of the excuse.**

Grades: Unless you specify otherwise, you will be awarded a letter grade for this class. If you prefer a pass/no pass option, you must select that option with registration services. You may switch to a pass/no pass option through the end of the eighth week of the term. I cannot select this option for you. See PCC's Grading Guidelines for more information – <http://www.pcc.edu/resources/student-records/grading/>. If you wish to audit the course, you must obtain permission from the instructor and notify registration services prior to the drop deadline.

Grade Distribution: Your grade for this course will be based on a combination of scores from lab work, assignments, and exams. Your lab grade will be combined with your lecture grade and you will earn one grade for the course. Grades for the course will be assigned on the following scale:

Letter grades for the course will be assigned on this scale:
 A: 90-100% B: 80-89% C: 70-79% D: 60-69% F: below 60%

See PCC's Grading Guidelines for more information - <http://www.pcc.edu/resources/student-records/grading/>

Important Notice – Biology department policy for this course: Students who miss more than 20% of the lab will receive a grade of F or No Pass for the course.

Note: for students who want to know their grade at some point in the term - it is your responsibility to save everything, track the points you earn for your assignments, quizzes, and exams and calculate your current grade.

Use to keep track of your grades:

| Lecture Assessment | Points Possible | Points Earned |
|--|-----------------|---------------|
| Lab activities (20 points each x 9 labs) | 180 | |
| Pre-lab homework (5 points each x 8 homeworks) (drop/miss one) | 35 | |
| Quizzes (10 points each x 9 quizzes) (drop/miss one) | 80 | |
| Term project (proposal, presentation) | 100 | |
| Exams (100 points each x 3 exams) | 300 | |
| Home-work Problem Set 1 | 30 | |
| Home-work Problem Set 2 | 30 | |
| Homework Problem Set 3 | 40 | |
| Class Activities | 5 | |
| Total points available | 800 | |

You can check your grade at any point by adding your total points earned and dividing it by the total possible points. For example, a student earns 95 points on exam #1 and 85 points on exam #2. The same student also earns 25 points on two homework assignments.

$95 + 85 + 25 + 30 = 240$ **points earned**

Total possible points:
 $100 + 100 + 30 + 30 = 260$ **total points possible points**

$240/260 = 0.92 \times 100 = 92\%$ This student is earning an "A" thus far in the class.

Incompletes: If you have finished 90% of the course and have a documented illnesses/emergencies, we can fill out paperwork for an incomplete. We will set a deadline and make arrangements for you to take the last exam and turn in homework assignments.. The exam will be different than the one that the other students took. It is up to you to contact your instructor and make arrangements for paperwork to be filled out and signed.

Withdrawal Policy: While I hope that every student is successful in Bi 101 and follows the course to its completion, I do understand that sometimes, students may need to withdraw from the course. Should this option become necessary, it is **your responsibility** to follow the established PCC policies and procedures for properly withdrawing from the course. Deadlines for dropping the course may be found at <http://www.pcc.edu/registration/dropping.html>. For those students who simply stop attending class and do not withdraw, I am required to assign the grade that they have earned at the end of the term (often a D or F since much of the class has not been completed). An incomplete grade may only be considered when a student has completed the majority of the course requirements (>90%), has a documented emergency, and makes written arrangements with the instructor to complete the requirements.

If you are having problems either inside or outside of class, please come and see me. Life happens to all of us on a regular basis and it may well affect your college performance. There are many well-qualified and caring people here at PCC who may be able to provide you with some advice or assistance or lead you to other services.

Academic Dishonesty: cheating or helping another to cheat including allowing someone to copy your answers on a test will at a minimum result in a zero on the test for ALL involved. Assignments such as homework, papers, and reports that are copied from another student, the internet, or any other source will at a minimum result in a zero on that assignment. **Be sure you know the definition of plagiarism.**

Policy on Mobile Communication Devices: You can use lab tops and mobile devices during recitation, however, disturbing other students is not permitted. Make sure that your devices are on silent during recitation. If you are not paying attention to lectures and are occupied using your mobile device during recitation, do not be shocked if you do not earn a good grade in the class.

Recording and Distribution of Course Sessions: Students who wish to make an auditory or visual recording of any portion of the lab must speak with the instructor and obtain permission ahead of time. You will not be able to record recitations because it violates FERPA laws.

Americans with Disabilities Act Notice: PCC is committed to supporting all students. Students who have a documented disability and require a classroom adjustment or accommodation should contact Disability Services. Accommodations are not retroactive; they begin when the instructor receives the "Approved Academic Accommodations" letter from you (submitted in person for courses on campus). To request academic accommodations for a disability, please contact a disability services counselor on any PCC campus. You can contact them at 971-722-4341 or <http://www.pcc.edu/resources/disability>.

Code Of Student Conduct & Academic Integrity Policy: Students are expected to be honest and ethical in their academic work. Cheating, plagiarism, falsifying, and working with others to cheat are all forms of academic dishonesty. Any of these will, at a minimum, result in a score of 0 for all students involved. If cheating should occur more than once, the Dean of Students will be contacted for further disciplinary action. Review the Code of Student Conduct at www.pcc.edu/about/policy/student-rights/student-rights.pdf#code-of-student-conduct and the Academic Integrity Policy at www.pcc.edu/about/policy/student-rights/student-rights.pdf#academic-integrity for more details.

TITLE IX: Portland Community College is committed to creating and fostering a learning and working environment based on open communication and mutual respect. If you believe you have encountered sexual harassment, sexual misconduct, sexual assault, or discrimination based on race, color, religion, age, national origin, veteran status, sex, sexual orientation, gender identity, or disability please contact the Office of Equity and Inclusion at (971) 722-5840 or equity.inclusion@pcc.edu.

Deferred Action for Childhood Arrivals (DACA) program: Demonstrating the College's support for and commitment to our DACA, DREAMers, and undocumented students is of paramount importance at this time. To reiterate, our Sanctuary status means: protection of student information, according to FERPA; a commitment to not allow our Public Safety personnel to be used for immigration enforcement purposes; not to allow Immigration and Customs Enforcement (ICE) on our campuses or properties—unless they carry a subpoena or arrest warrant. For more information and resources, please go to:

<https://www.pcc.edu/resources/undocumented-students/>

Pronouns and Name: This course will be conducted in an atmosphere of mutual respect and affirms people of all gender expressions and identities. Please address me as “Xiana” and my gender pronouns are “she, her, and hers”. I was provided with a class roster with your name as it appears in the PCC system. However, if you go by a different name than what is on the roster, please let me know.

Study Resources: The best way to study is to print out the lecture slides and take notes on the slides. Then go over the slides. Another great way to study is to do the homework assignments, as I lecture, to pick up main points and concepts. I have also posted study guides that covers material from the entire course. If you need additional help, there are tutors in the tutoring center, free online tutoring, and you can come to my office hours. Please come to my office hours if you are struggling, need to go over your grade, or need clarification. I can also be reached by email. Please reach out to me if you need help.

Important Links

Biology Study Skills:

<https://sites.google.com/a/pcc.edu/biology-student-skills/home>

Tutoring Center:

<https://www.pcc.edu/resources/tutoring/>

Free Online Tutoring:

<https://www.pcc.edu/resources/tutoring/etutor/>

Multicultural Center:

<https://www.pcc.edu/resources/culture/>

Queer Resource Center:

<https://www.pcc.edu/resources/qrc/southeast/>

Women's Resource Center:

<https://www.pcc.edu/resources/women/>

Veteran's Resource Center:

<https://www.pcc.edu/resources/veterans/>

Disability Services:

<https://www.pcc.edu/resources/disability/>

Testing Center PCC:

<https://www.pcc.edu/resources/testing/locations.html>

PCC Academic Advising:

<https://www.pcc.edu/resources/advising/>

PCC Counseling:

<https://www.pcc.edu/resources/counseling/>

Food Pantry:

<https://www.pcc.edu/resources/aspcc/southeast/FoodPantry.html>

Multnomah County Mental Health Crisis Intervention:

<https://multco.us/mhas/mental-health-crisis-intervention>

Test Taking Anxiety:

<http://student-tutor.com/blog/how-to-overcome-test-anxiety/>

<http://www.studygs.net/tstprp8.htm>

Test Taking Skills:

http://www.wiu.edu/advising/docs/mastering_test_taking.pdf

<https://www.stmarys-ca.edu/academics/academic-resources-support/student-academic-support-services/tutorial-academic-skills-8>

Note Taking and Studying for Biology Skills:

<https://www.stmarys-ca.edu/academics/academic-resources-support/student-academic-support-services/tutorial-academic-skills-4>

<https://theconversation.com/whats-the-best-most-effective-way-to-take-notes-41961>

<https://www.butte.edu/cas/tipsheets/studystrategies/studybio.html>

BI 101 –Summer 2020 Class Schedule

Please have the following screencasts watched by the date of the recitation. Recitation will be held the end of every week (Saturdays). Recitations are not required; you can choose to attend or not.

| Week | Date | Topic and text reading | Quizzes & Home-work | Textbook Chapters |
|------|------------|--|---|---|
| 1 | 6/22- 6/26 | Introduction to the class An Introduction to Life on Earth What is life? What is evolution? | | Read text sections 1.1 – 1.2 Complete class introduction worksheet |
| | 6/22- 6/26 | An Introduction to Life on Earth How do scientists study life? What is science? | Quiz # 1 on D2L Due by 6/26 @ 8pm Chapter 1 | Read text sections 1.3 – 1.4 |
| | 6/22- 6/26 | Lab 1: An Introduction to Scientific Investigations | | Read Lab 1 |
| 2 | 6/29- 7/03 | Atoms, Molecules, and Life What are atoms? How do atoms interact to form molecules? | | Read text sections 2.1 - 2.2 |
| | 6/29- 7/03 | Atoms, Molecules, and Life How do atoms interact to form molecules? Why is water so important to life? | Quiz # 2 on D2L Due by 7/03 @ 8pm Chapter 2 | Read text section 2.1 - 2.3 |
| | 6/29- 7/03 | Lab 2: Measurements, Observations and Classification | Prelab 1 and Lab # 1 Uploaded to D2L (follow guidelines) | |
| 3 | 7/6- 7/10 | Biological Molecules Why is carbon so important in biological molecules? How are large biological molecules synthesized? What are carbohydrates? | | Read text sections 3.1 – 3.3 |
| | 7/6- 7/10 | Biological Molecules What are proteins? What are nucleic acids? What are lipids? | Quiz # 3 on D2L Due by 7/10 @ 8pm Chapter 3 | Read text sections 3.4 – 3.6 |
| | 7/6- 7/10 | Lab 3: Atoms, molecules, water and pH | Prelab 2 and Lab # 2 Uploaded to D2L (follow guidelines) | |
| 4 | 7/13-7/17 | Cell Structure and Function What is the cell theory? How do Scientists visualize cells? What are the basic attributes of cells? | | Read text sections 4.1 – 4.3 |
| | 7/13-7/17 | Cell Structure and Function What are the major features of prokaryotic cells? What are the major features of eukaryotic cells? | Quiz # 4 on D2L Due by 7/17 @ 8pm Chapter 4 | Read text sections 4.4-4.5 |
| | 7/13-7/17 | Lab 4: Macromolecules | Prelab 3 and Lab # 3 Uploaded to D2L (follow guidelines) | |
| 5 | 7/20-7/24 | First exam Chapters 1 - 3 | Due by end of week: homework chapters 1-4 on D2L | |
| | 7/20-7/24 | Cell Membrane Structure and Function How is the structure of the cell membrane related to its function? How do substances move across membranes? | Quiz # 5 on D2L Due by 7/24 @ 8pm Chapter 5 | Read text sections 5.1 – 5.2 |
| | 7/20-7/24 | Lab 5: Microscopes | Prelab 4 and Lab 4 Due Uploaded to D2L (follow guidelines) | |

| Week | Date | Topic and text reading | Quizzes & Home-work | Textbook Chapters |
|------|-----------|--|---|--------------------------------------|
| 6 | 7/27-7/31 | Energy Flow in the Life of a Cell What is energy? How is energy transformed during chemical reactions? How is energy transported within cells? | | Read text sections 6.1 – 6.3 |
| | 7/27-7/31 | Energy Flow in the Life of a Cell How do enzymes promote biochemical reactions? How are enzymes regulated? | Quiz # 6 on D2L Due by 7/31 @ 8pm Chapter 6 | Read text sections 6.4 – 6.5 |
| | 7/27-7/31 | Quiz on Lab 4, exercises –1,2,3 Lab 6: Osmosis and Enzymes | Prelab 5 and Lab # 5 Due Uploaded to D2L (follow guidelines) | |
| 7 | 8/3-8/7 | Capturing Solar Energy: Photosynthesis What is photosynthesis? The light reactions | | Read text sections 7.1 – 7.2 |
| | 8/3-8/7 | Capturing Solar Energy: Photosynthesis The Calvin cycle Harvesting Energy: Glycolysis and Cellular Respiration How do cells obtain energy? | Quiz # 7 on D2L Due by 8/7 @ 8pm Chapters 7 & 8 | Read text section 7.3-8.1 |
| | 8/3-8/7 | Lab 7: Diffusion, osmosis and enzymes | Prelab 6 and Lab # 6 Due Uploaded to D2L (follow guidelines) | Prelab Lab 6 Due |
| 8 | | Second exam Chapters 4-8 | DUE at noon: homework chapters 5 – 7 on D2L | |
| | 8/10-8/14 | Population Growth and Regulation What is a population and how does population size change? How is population growth regulated? How is the human population changing? | | Read text sections 27.1 – 27.2, 27.5 |
| | 8/10-8/14 | Lab 8: Photosynthesis and Respiration | Prelab 7 and Lab # 7 Due Uploaded to D2L (follow guidelines) | Prelab Lab 7 Due |
| | 8/10-8/14 | Community Interactions Why are community interactions important? How does the ecological niche influence competition? How do consumer-prey interactions shape evolutionary adaptations? | | Read text sections 28.1 – 28.3 |
| | 8/10-8/14 | Community Interactions How do mutualisms benefit different species? How do keystone species influence community structure? How do species interactions change community structure over time? | Quiz # 8 on D2L Due by 8/14 @ 8pm Chapters 27 & 28 | Read text sections 28.4 – 28.6 |
| | 8/10-8/14 | Lab 9: Food webs | Prelab 8 and Lab # 8 Due Uploaded to D2L (follow guidelines) | Prelab 8 Due |

| Week | Date | Topic and text reading | Quizzes & Home-work | Textbook Chapters |
|-------------|-------------|--|---|--------------------------------------|
| 9 | 8/24-8/28 | <i>Energy Flow and Nutrient Cycling</i> How do nutrients and energy move through ecosystems? How does energy flow through ecosystems? How do nutrients cycle within and among ecosystems? | | Read text sections 29.1 – 29.3 |
| | 8/24-8/28 | What happens when humans disrupt nutrient cycles? What determines the distribution of life on earth? What factors influence earth's climate? | Prelab 9 and Lab # 9 Due Uploaded to D2L (follow guidelines) | Read text sections 29.4 – 30.2 |
| | 8/24-8/28 | Population and community ecology | Quiz # 9 on D2L Due by 8/28 @ 8pm Chapter 29 | Prelab 9 Due |
| 10 | | <i>Earth's Diverse Ecosystems</i> What is conservation biology? Why is biodiversity important? Is Earth's biodiversity diminishing? | | Read text sections 30.3, 31.1 – 31.3 |
| | | <i>Conserving Earth's Biodiversity</i> What are the major threats to biodiversity? Why is habitat protection necessary to preserve biodiversity? Why is sustainability essential for a healthy future? | | Read text sections 31.4 – 31.6 |
| 11 | 8/31-9/4 | Final exam Chapter 27-31 | DUE at noon: homework chapters 27 – 31 on D2L | |

The content of this course and these dates are subject to change in response unforeseen events.