

Biology 1010 Section 3: Biology and the Citizen - Fall 2016

Contact Information:

Instructor: Jennifer Burbank

Office: BNR 239

Office hours: by appointment

****Contact me via Canvas inbox feature**

Course Schedule and Location: Tuesdays/Thursdays, 12 - 1:15 p.m., Old Main 225

Course Description: This course provides an overview of a broad range of topics in biology. You will gain a better understanding of the world around you and how biology affects you. What causes cancer? How do our bodies use the food we eat to live? There should be something for everyone! You will gain factual knowledge as well as a broader understanding of biological concepts and the nature and process of science itself.

Course Website: canvas.usu.edu

You will use our Bio 1010 Canvas page to receive important course announcements, review weekly reading assignments, download lecture and study material, find assignment details and due dates, submit assignments, take reading quizzes, and view grades. **You will also communicate with me via the inbox feature in Canvas.** I am here to help you understand the material and do your best in this course, so please contact me with questions or problems!

Required Course Materials:

- Internet access for Canvas (see above). **Plan to login and check Canvas daily!**
- Text: *Campbell Essential Biology* 6th edition (2015) by Simon, Dickey, & Reece. There are a variety of choices for buying this text online either new or used, renting a copy, or buying an e-book. If you buy a new book, you should have access to Mastering Biology which is a helpful website that contains videos and review materials to accompany our text. Your new book should come with the access code and registration information. Access to this website is **not** required for the course.

Supplemental Instruction:

SI Leader: Jason Eldredge

SI Leader Email: jason.eldredge22@gmail.com

SI Session Times: Monday 6:00-6:50 WIDT 007; Wednesday 6:00-6:50 ENGR 101

Course Format:

This is a lecture-based course, but I will try to engage and involve you in what we are learning as much as possible. In order to make our class time more productive and enjoyable, I expect you to complete the required reading BEFORE coming to class so that you are able to ask questions and participate in discussion. Plan to be in attendance, give your full attention, and participate!

Course Requirements: Your grade in this course will be based on the items below.

- **Reading quizzes:** Please do the required reading BEFORE coming to class each day. You will take reading quizzes on Canvas to encourage you to keep up. These quizzes are open book/note, but they will be timed. They are worth 10 points each and your lowest score may be dropped. Reading quizzes will be available for a week - Monday through Friday. Check the schedule in the Canvas modules and plan accordingly. The purpose of these quizzes is to encourage you to read, which is key to your success in this course.
- **Assignments:** You will typically have one substantial assignment per unit outside of the reading quizzes. I will provide details and due dates in class and on Canvas. All work will be submitted via Canvas. We will also do several in-class activities throughout the semester. You will need to be present for in-class activities.
- **Quick Checks:** I will periodically post Quick Check assignments to Canvas. These are intended to be a quick review of material covered in class. They allow me to check for understanding. These will be done via Canvas and typically take 10-15 minutes of your time.
- **Unit Exams:** You will take three unit exams during regularly scheduled class time. See the schedule that follows for exam dates. (Exam 3 is a different format; we will discuss this in class as it approaches and class will be held - see schedule.)
- **Final Exam:** You will also take a final exam. This will primarily cover material from Unit 4, but it will contain approximately 33% review questions from Units 1-3.
- **Extra Credit:** I will occasionally provide extra credit questions and/or assignments. Take advantage of these opportunities. Additional extra credit will not be provided.
- **Summary:** Your grade will be based on exams (~50%), assignments (~40%), and quizzes (~10%).

Other Policies

- Cheating is not tolerated. Students who are caught cheating will receive a zero on that exam, an academic integrity violation report will be filed with the university, and there will be a notation on your transcripts indicating that you had an academic integrity violation. Refer to the university's academic honesty policy.
- **Please turn your cell phones off and put them away during class!** (There will be occasional exceptions where you will use your devices to participate during class.)
- Students with physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, 797-2444 voice, 797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.

Grades:

Your grade will be determined based on the total points you earn and using the following grading scale. The breakdown is as follows:

A	100% to 94%	B+	<90% to 87%	C+	< 80% to 77%	D+	< 70% to 67%
A-	< 94% to 90%	B	<87% to 84%	C	< 77% to 74%	D	< 67% to 64%
		B-	<84% to 80%	C-	< 74% to 70%	D-	< 64% to 61%
						F	< 61% to 0%

Tips:

- Read the assigned material BEFORE class as often as possible. This text is very readable, and you will get much more out of the course by both reading the text and participating in class. I will not cover every reading topic in class, but you are responsible for that information. I will explain the reading, provide additional examples and material, and answer questions.
- Attend class and participate! It is very important that you are in class each day with a willingness to ask questions and learn.
- Communicate with me! I am here to help. If you are struggling with a concept or particular assignment, please contact me for help. **Use the "inbox" feature in Canvas.**

Tentative Reading Schedule: This is subject to slight change, but Canvas will contain detailed modules. Exam days will stay the same, but if the course pace changes they will only cover what has been discussed in class up to that point. Please remember to make your best effort to complete the reading BEFORE class that day, so you can participate in discussion.

Day	Date	Topics	Reading Assignment
T	8/30	Introduction Nature & Process of Science Begin Basic Chemistry for Biologists	Ch. 1 pp. 3-19 Ch. 2 pp. 23-26
Th	9/1	Basic Chemistry for Biologists Introduction to Organic Chemistry	Ch. 2 pp. 27-32 Ch. 3 pp. 37-39
T	9/6	Molecules of Life	Ch. 3 pp. 39-50
Th	9/8	Cells, Cells, Cells	Ch. 4 pp. 55-70
T	9/13	Energy, ATP, Enzymes	Ch. 5 pp. 75-82
Th	9/15	In N Out: Cell Membranes Introduction to Cell Respiration	Ch. 5 pp. 83-87 Ch. 6 pp. 91-94
T	9/20	Staying Alive: Cell Respiration	Ch. 6 pp. 95-103
Th	9/22	Plants: Green Machines	Ch. 7 pp. 107-116
T	9/27	Canvas EXAM 1: Chapters 2-7 No Class	
Th	9/29	Mitosis: Ready, Set, Divide! Cancer: When Cells go Crazy	Ch. 8 pp. 121-129 Ch. 11 pp. 209-213
T	10/4	Meiosis (not to be confused with mitosis)	Ch. 8 pp. 130-140
Th	10/6	Mendel and Genetics Part I	Ch. 9 pp. 145-157

T	10/11	Genetics Part II DNA: the double helix	Ch. 9 pp. 158-165 Ch. 10 pp. 172-175
Th	10/13	DNA→RNA→protein	Ch. 10 pp. 176-183
T	10/18	Mutation Viruses Gene Regulation (selected material)	Ch. 10 pp. 184-185 Ch. 10 pp. 186-192 Ch. 11 pp. 197-204
Th	10/20	No Class (Friday Class Schedule)	
T	10/25	Genetic Engineering, CSI stuff (selected material)	Ch. 12 pp. 217-228
Th	10/27	Hot Topics: Cloning & Stem Cells Bioinformatics (selected material), GMOs, Ethics	Ch. 11 pp. 205-208 Ch. 12 pp. 229-237
T	11/1	Canvas EXAM 2: Chapters 8-12 No Class	
Th	11/3	Diversity, Darwin, & Evidence of Evolution, Natural Selection, Evolution of Populations	Ch. 13 pp. 243-265
T	11/8	What is a species? Macroevolution	Ch. 14 pp. 269-282
Th	11/10	Macroevolution & Classification Origin of Life	Ch. 14 pp. 283-289 Ch. 15 pp. 293-298
T	11/15	Prokaryotes - not just bacteria; Protists	Ch. 16 pp. 299-311
Th	11/17	Plants and the Fungus Among Us	Ch. 16 pp. 314-332
T	11/22	Origins of Animal Diversity, Invertebrates	Ch. 17 pp. 337-353
Th	11/24	No Class - Thanksgiving Break	
T	11/29	Vertebrates, Human Ancestry, review **Take Exam 3 (covers Chapters 13-15 partial) in Canvas; FT sections due today	Ch. 17 pp. 354-367 Yes, Class today!
Th	12/1	Ecology & the Biosphere Highlights Population Ecology and Growth	Ch. 18 pp. 373-399 Ch. 19 pp. 402-416
T	12/6	Human Population Growth Communities & Ecosystems Highlights Part I	Ch. 19 pp. 417-421 Ch. 20 pp. 424-436
Th	12/8	Communities & Ecosystems Highlights Part II	Ch. 20 pp. 437-449
Th	12/15	FINAL EXAM: Chapters 18-20 + ~33% older material	