

**Dixie State University
General Biology
Biology 1010-40, 41
(CRN #26722, 26723)
Spring 2015 Syllabus**

Lecture: Online

Instructor: Dr. Bonnie Bain

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Online office hours: 12:00 - 2:00 pm, T and Th

During online office hours, email and phone response times will be quicker, since I will be directly monitoring email/phone during those times. I check my email frequently at other times, but depending on the day, response times may be longer (up to 24 hour turnaround time).

Course Description: This is a rigorous course which will require an extensive time commitment from you!! Please be prepared to do this!!!!

Fulfills General Education Life Sciences requirement. Not for science majors, this course focuses on general principles of Biology, including cell theory, genetics, evolution, and interrelationships of living things, using a variety of teaching methods including lecture/discussion, powerpoints, videos, quizzes, and exams. **Lab course (BIOL1015) recommended but not required.** Recommended co-requisite: BIOL 1015. Satisfies prerequisites for BIOL 1200 and 2300.

Course Objectives:

Upon completion of the class, students will be able to:

- Understand how the scientific method is used to design and conduct experiments, gather and analyze data, and state proper conclusions.
- Understand concepts related to cell theory, the genetic basis of life, and diversity of life, evolution, and ecology.
- Identify and discuss important issues in biology, both past and present.
- Appreciate the natural world around them.
- Distinguish between true science and pseudoscience.

In order to meet Course Objectives, students will be required to:

1. Do weekly reading assignments and view powerpoints.
2. Do any assigned written assignments based on lecture and reading materials.
3. Take quizzes
4. Take 4 written exams, testing retention of course content and ability to read and interpret scientific data and graphs.
5. Participate in weekly online discussions in order to improve analytical skills.

6. For this course, students are expected to log on for a minimum of 9 hours each week (3 hours per course credit hour).

Textbooks (both are required):

*Essential Biology, 5th edition, 2012, by Simon, Reece, Dickey. ISBN-10: 0321772598 and ISBN-13: 978-0321772596. This also includes the Mastering Biology access card.

NOTE: the Mastering Biology website is NOT required for this class. It is a supplement which comes with the textbook. The course ID number (to access the Mastering Biology website) is the CRN# listed at the top of page 1 of this syllabus.

*Scientific American Current Issues in Biology, vol. 6. 2009. ISBN-13: 978-0321598493 or ISBN-10: 0321598490

***Note: If purchased from the Dixie State University Bookstore, the Essential Biology textbook and the Scientific American Current Issues in Biology, vol. 6 are bundled together under this ISBN: 9780134037080. If purchased separately elsewhere, they are much more expensive.**

Tentative Lecture Schedule
Spring 2015

Week 1 Jan. 12: MODULE 1
Welcome! Introduction and Syllabus
POWERPOINT: Introduction to Biology
REQUIRED READINGS: Simon, et al Chapter 1, Introduction to Biology (pp. 3-19).
DISCUSSION 1: Introduce Yourself and Discussion Etiquette (pdf)

January 19: Martin Luther King Jr. Holiday – No class

Week 2 Jan. 19: MODULE 2
POWERPOINT: Essential Chemistry
REQUIRED READINGS: Simon, et al Chapter 2, Essential Chemistry (pp. 23-33).
DISCUSSION 2: Water and Life (Simon, et al, pp. 23 and 33).

Week 3 Jan. 26: MODULE 3
POWERPOINTS: The Molecules of Life, parts 1 and 2
REQUIRED READINGS: Simon, et al Chapter 3, Molecules of Life (Organic Chemistry) (pp. 37-51).
DISCUSSION 3: Beetles so bright, you gotta wear shades

February 2 - Last Day to Drop without a grade of W!

Week 4 Feb. 2: MODULE 4
POWERPOINTS: A Tour of the Cell, parts 1 and 2
REQUIRED READINGS: Simon, et al Chapter 4, A Tour of the Cell (pp. 55-71).

DISCUSSION 4: Evolution of antibiotic resistance

EXAM 1: Feb. 3 – Feb. 10 (Proctored, in DSU Testing Center)

Exam 1 will be over the required readings in Simon, et al Chapters 1 - 4

Week 5 Feb. 9: MODULE 5
POWERPOINT: The Working Cell
REQUIRED READINGS: Simon, et al Chapter 5, The Working Cell (pp. 75-87).
DISCUSSION 5: Nanotechnology

February 16: President's Day Holiday – No Class

Week 6 Feb. 16: MODULE 6
POWERPOINT: Cell Respiration
REQUIRED READINGS: Simon, et al Chapter 6, Cell Respiration (pp. 91-103).
DISCUSSION 6: Electric life forms that live on pure energy

Week 7 Feb. 23: MODULE 7
POWERPOINT: Cell Reproduction, parts 1 and 2
REQUIRED READINGS: Simon, et al Chapter 8, Cell Reproduction (pp. 121-140).
DISCUSSION 7: Your Cells are My Cells (Scientific American Current Issues in Biology, vol. 6, pp. 33-39).

EXAM 2: Feb. 24 – March 3 (Proctored, in DSU Testing Center)

Exam 2 will be over the required readings in Simon, et al Chapters 5, 6, and 8

Week 8 March 2: MODULE 8
POWERPOINT: Inheritance, Parts 1 and 2
REQUIRED READINGS: Simon, et al Chapter 9, Patterns of Inheritance (pp. 145-167).
GENETICS PRACTICE PROBLEMS:
<http://www.biology.clc.uc.edu/courses/bio105/geneprob.htm>
DISCUSSION 8: Nature vs Nurture

Spring Break – March 9-13 – no class

Week 9 March 16: MODULE 9
POWERPOINT: Structure and Function of DNA, part 1
REQUIRED READINGS: Simon, et al Chapter 10, Structure and Function of DNA (pp. 173-178).
DISCUSSION 9: DNA Profiling and Forensic Science (Simon et al, Chapter 12, p. 219 and pp. 226-227)

Week 10 March 23: MODULE 10
POWERPOINT: Structure and Function of DNA, part 2
REQUIRED READINGS: Simon, et al Chapter 10, Structure and

Function of DNA, part 2 (pp. 179-187); .

DNA SEQUENCING PRACTICE:

<http://learn.genetics.utah.edu/content/begin/dna/transcribe/>

PRACTICE WORKSHEET: Transcription and Translation

DISCUSSION 10: Traces of a Distant Past (Scientific American, Current Issues, Vol. 6, p. 2-9)

Week 11 March 30: MODULE 11
POWERPOINTS: Gene Regulation, parts 1 - 4
REQUIRED READINGS: Simon, et al Chapter 11, Gene Regulation (pp. 199 - 214); Genomics/Human Genome Project (Simon et al, Chapter 12, pp. 230-233)
DISCUSSION 11: Diet Advice From DNA? Scientific American, Current Issues, Vol. 6, p. 52-57

EXAM 3: March 31 – April 7 (Proctored, in DSU Testing Center)

Exam 3 will be over the required readings in

Simon, et al Chapters 9 – 10; Chapter 11, pp. 199-214; Chapter 12, pp. 230-233.

Week 12 April 6: MODULE 12
POWERPOINT: Evolution, parts 1-3
REQUIRED READINGS: Simon, et al Chapter 13, How Populations Evolve (pp. 243-251).
DISCUSSION 12: The African eel that travels light

Week 13 April 13: MODULE 13
POWERPOINT: Evolution parts 4-5
POWERPOINT: Sexual Selection
REQUIRED READINGS: Simon, et al Chapter 13, How Populations Evolve, part 2 (pp. 252-265).
DISCUSSION 13: Sexual Selection
EXTRA CREDIT ASSIGNMENT: Global Warming

Week 14 April 20: MODULE 14
POWERPOINTS: Evolution of Biodiversity, parts 1-2
REQUIRED READINGS: Simon, et al Chapter 14, How Biological Diversity Evolves (pp. 269-276); Simon, et al, Chapter 20, Biodiversity (pp. 425-428).
DISCUSSION 14: Conservation for the People

Week 15 April 27: MODULE 15
EXAM 4 (Proctored, in DSU Testing Center)
This is the last exam for this class
Exam 4 will be over the required readings in Simon, et al chapters 11 (pp. 205-214) and 13, 14, 20. Also, there will be questions from Scientific American article: "Conservation for the People."

Exam 4 will be available from Wed. April 22 – Wed. April 29

April 29 is the last day of class

Lecture Evaluation:

Four exams (100 points each)

Weekly Discussions (10 points each)

Additional assignments may be added, as needed.

Please check the course modules each week for any additions/changes.

You are responsible for keeping up with any additions/changes

EXAMS (required):

This is an online course which requires verification of your identity through the use of proctored assignments and/or tests. In this course, there are four exams that meet this criterion. The student will receive an F in the course if these proctored assignments are not completed or are not compatible with coursework submitted throughout the semester. Go to DSU Testing Center for information on test proctoring:

DSU Testing Center: <http://www.dixie.edu/testing/>

and

DSU Testing Center Proctoring Information:

http://www.dixie.edu/testing/need_a_test_proctor.php

If you live close enough to go to the DSU Testing Center for each exam, then you DO NOT need to obtain a Proctor and fill out the proctoring form. If you live too far away to do this, then you NEED TO set up a Proctor and fill out the required form WITHIN THE FIRST WEEK OF CLASS. Go to the DSU Testing Center website (above) for more information.

WEEKLY DISCUSSIONS (required):

10 points total (per discussion) each week for an original post (OP) and two replies (2R).

Every week, there will be one or two Discussion questions. You are required to participate in these by responding to the question with an original posting (OP) and then adding 2 replies (2R) to other students' original posts. See Discussion Etiquette pdf for details. Each OP + 2R is worth 10 points. Other assignments may be added throughout the semester. It is your responsibility to make sure that you are aware of, and complete on time, any additional assignments.

There may be more than one Discussion question each week. Please check to make sure you don't miss any! **Since this is a 3-credit course, you are required to be online/doing the readings and discussions for this course a minimum of 3 hours per credit hour per week.**

GRADING RUBRIC FOR DISCUSSIONS:

Each Discussion is worth 10 points. I will take points off for the following:

1-2 points taken off for not meeting minimum word requirements in the OP (original post)

1-2 points taken off for not meeting minimum word requirements in the 2R (2 required replies)

5 points taken off for only doing part of the assignment

1 point taken off for a missing reply

1-2 (or more) points taken off for missing parts of the assignment. Please be sure to answer all of the questions being asked each time

1-2 (or more) points taken off for excessive typos, misspellings, etc. If I can't understand what you are writing, you will lose points also. Please write your answers as clearly as possible and proofread thoroughly before submitting.

Late assignments:

2 - 4 points off for being late with all 3 parts (OP, 2R)

1 point off for each late reply

Grading Criteria	Points	Percent
Exams (4)	100 each	73%
Discussions (15 minimum)	10 each	27%
Total	550	100%

Grading Scale

93-100%	A	80-82.9%	B-	70-72.9%	C-	60-62.9%	D-
90-92.9%	A-	77-79.9%	C+	67-69.9%	D+	<60%	F
87-89.9%	B+	73-76.9%	C				
83-86.9%	B			63-66.9%	D		

DSU POLICIES, PROCEDURES, AND SEMESTER DATES

Click on this link - <http://www.dixie.edu/reg/syllabus/> - for comprehensive information on the Semester Dates, the Final Exam Schedule, University resources such as the Library, Disability Resource Center, IT Student Help Desk, Online Writing Lab, Testing Center, Tutoring Center, and Writing Center. In addition, please review DSU policies and statements with regards to Academic Integrity, Disruptive Behavior, and Absences related to university functions.

If you are a student with a medical, psychological, or learning disability or think you might have a disability and would like accommodations, contact the Disability Resource Center (652-7516) in the North Plaza. The Disability Resource Center (<http://dixie.edu/drcenter/>) will determine eligibility of the student requesting special services and determine the appropriate accommodations related to their disability.

INFORMATION CONTAINED IN THIS SYLLABUS, OTHER THAN THE GRADING, LATE ASSIGNMENTS, MAKE-UP WORK, AND ATTENDANCE POLICIES, MAY BE SUBJECT TO CHANGE WITH ADVANCE NOTICE, AS DEEMED APPROPRIATE BY THE INSTRUCTOR.