

Principles of Biology I (Biology 1107), Fall 2015

Instructor: Susan Burran Office: 230 Sequoya Hall

Phone: 706-272-2490 E-mail: sburran@daltonstate.edu

Office Hours: Mondays 12:05-3:05, Tuesdays 10:40-1:40, and Wednesdays 12:05-2:05; or by appointment

Textbook: *Biology* (OpenStax) <https://openstaxcollege.org/textbooks/biology>

Lab Manual: Principles of Biology I Lab Manual

<http://libguides.daltonstate.edu/PrinciplesofBiology/labmanual>

iClicker: Either iClicker or iClicker 2. You must register your iClicker either in class or online.

Course Prerequisite: READ 0098 unless exempt

Course Description: This course is designed to provide an introduction to the fundamentals of biological science. The focus is on the organization of life, the scientific method, the energy of life, genetics, and evolution.

Course Objectives: At the end of this course you should be able to:

1. Demonstrate an understanding of the scientific method and apply it to problem solving
2. Demonstrate an understanding of the basic molecules that are the building blocks of life
3. Identify and understand the functions of cellular structures
4. Demonstrate an understanding of the processes of cell reproduction
5. Summarize the processes of cellular respiration and photosynthesis
6. Solve genetics problems
7. Describe the structure of the DNA molecule and understand how it serves as the carrier of genetic information
8. Demonstrate an understanding of the processes of protein synthesis and gene regulation
9. State several applications of genetic engineering
10. Give a brief overview of the theory of evolution, evidence for evolution, and the theory of natural selection
11. Demonstrate effective use of the microscope

<u>Evaluation:</u>	5 Lecture Exams (80 points each)	400 (40%)
	Final exam	100 (10%)
	Online Participation	100 (10%)
	Class Attendance and Participation	200 (20%)
	Lab Participation	<u>200</u> (20%)
	TOTAL =	1000

<u>Final Grade Assignment:</u>	90 - 100%	A
	80 - 89%	B
	70 - 79%	C
	60 - 69%	D
	Less than 60%	F

- **Lecture Exams:** Exams will be composed of multiple choice, matching, true/false, and short answer questions. They will include questions pertaining to appropriate laboratory material.
- **Final Exam:** The exam will be comprehensive and will include questions about material from the most recent chapters covered in class (i.e. concepts that may not have been on a test before).
- **Online Participation:** Each chapter will be broken down into short modules. Each module will consist of a couple of videos to accompany that portion of the book. An online quiz will assess students' comprehension of the material.
- **Class Attendance and Participation:** You are expected to be present in class and knowledgeable about the subject matter BEFORE you come, by reading the assigned sections in your textbook. Your participation grade is based on attendance, iClicker quizzes, and, of course, your participation in class.
- **Lab Participation:** You must be present and prepared for each lab meeting. Your grade will be based on active participation, and performance on a weekly lab quiz that tests your understanding of the material covered.

Attendance Policy:

Class: Attendance is required for quizzes given in class. No make-ups are available. You are responsible for keeping up with any material you missed.

Lab: Attendance in labs is mandatory, and there will be no make-ups available. Failure to attend will result in the loss of participatory points. Please notify me prior to class if you will not be able to attend.

Exams: You must be present for exams. No make-up exams will be given. If you are absent for one exam, the score you earn on the final exam will be used in place of the missing exam grade. If you do not miss any exams, the percent correct you earn on the final exam will be used to replace your lowest exam score (assuming the final exam score is higher). All exam papers must be returned to the instructor after they are reviewed in class.

Academic Honesty:

Cheating and plagiarism are a part of the Dalton State Code of Student Conduct, which can be found in its most updated form at <http://daltoncampuslife.com/student-conduct/>. ANY assistance provided or given in any way toward work in a class constitutes cheating, unless such behavior is authorized by your instructor. Additionally, any use of the ideas or words of others should be noted, or this will constitute plagiarism. For more details on what Dalton State considers to be Academic Dishonesty, please review the Code of Student Conduct. Instructors will assign grades based on classroom performance. Additional sanctions may be provided as a learning experience from the Student Conduct process.

Classroom Behavior:

Dalton State is committed to respect via the Roadrunner Respect pledge. To learn more, please visit <http://daltoncampuslife.com/roadrunner-respect/>.

“I pledge to show my fellow Roadrunner students, faculty, staff, and administration respect by treating others the way they want to be treated and by thinking about others first before making decisions that might affect them.”

Emergency Statement:

Inclement Weather/College Closure Emergency Instructional Plan

In the event the college is closed due to inclement weather or another unforeseen event, students will consult the schedule provided at the beginning of the semester to determine which chapters would be covered during the time the college is closed. Students will be responsible for anything in that chapter. Any homework assignments due during the closed interval will be due the first day class meets after the college reopens. Labs that are missed will either be made up at a later date or removed from the class schedule and not counted at the end of the semester in the final grade. Exams will be moved in the class schedule to accommodate the curtailed schedule. I may be available via e-mail on a limited basis when the college is closed.

A Few Odds and Ends:

- Please turn off cell phones in lecture and lab. This means NO TEXTING!
- Please don't leave class or lab early unless you have notified me of your need to do so. Leaving lab early may result in a loss of participatory points.
- Questions and discussion in class and lab are encouraged – this is *your* class and I want you to participate! On the other hand, private conversations are distracting to others, so please refrain.
- The last day to drop this class without penalty is **October 27, 2015**. You will be assigned a grade of W. After this date, withdrawal without penalty is permitted only in cases of extreme hardship as determined by the Vice President for Academic Affairs; otherwise a grade of WF will be issued. The proper form for withdrawing from all classes at the college after the official drop/add period but before the published withdrawal date is the Schedule Adjustment Form. Students who are assigned to the Academic Advising Center for advisement must meet with an advisor or staff member at the Academic Advising Center (107 Liberal Arts Building) to initiate the withdrawal process. All other students must meet with a staff member or advisor at the Office of Academic Resources in the Pope Student Center to initiate the withdrawal process. After meeting with the staff member or advisor, all students will then finalize the withdrawal process in the Financial Aid Office. Students who fail to complete the official drop/withdrawal procedure will receive the grade of F. Withdrawal from class is a student responsibility. The grade of W counts as hours attempted for the purposes of financial aid.
- If a student receiving aid administered by the DSC Workforce Development Department drops this class or completely withdraws from the College, the Schedule Adjustment Form must be taken to the Workforce Development Office located in Room 112 of the Technical Education Building. The Office is open on the following schedule: Monday/Tuesday/Thursday: 9:00 a.m.- 12:15 p.m. and 1:30 p.m. - 5:00 p.m. The office phone number is 272-2635.
- **IMPORTANT NOTICE:**
Students with disabilities or special needs are encouraged to contact Disability Support Services. In order to make an appointment or to obtain information on the process for qualifying for accommodations, the student should visit the Disability Support Services Library Guide at <http://www.libguides.daltonstate.edu/Disability> or contact the Coordinator of Disability Support Services: Andrea Roberson, Coordinator, Pope Student Center, lower level. 706/272-2524, aroberson@daltonstate.edu
- Use of proper grammar and correct spelling is expected for all written assignments.
- Let's try to be "green" by recycling all paper, plastic, and aluminum – at least while on campus (and hopefully away from campus as well!).

Tips for Succeeding in Biology 1107

1) **Keep up!!** One of the challenging aspects of the course is the sheer volume of material to be covered. If you fall behind, it will be difficult to catch up.

2) **Study Hints**

A) Always think big picture. Don't sit down to memorize facts as if the material is just a random list of items. Fit each detail into a larger frame work. You will remember things much better if they are placed in a "web" of associations rather than isolated tidbits.

B) Before Class: Read the chapter to be covered! Don't get bogged down in detail – just get the big picture, cover major points and become familiar with the terminology (the chapter summary at the end of the chapter will be helpful here). Carefully review notes from the previous lecture. What is unclear? What don't you understand? Ask a classmate for help, check the relevant section in the book, or ask me. Take care of problems as they arise or they may pile up and ambush you the night before an exam.

C) In Class: Be awake and aware! Many students become automatic writing machines during class - "I've got to get it down so I can learn it later." Don't fall into this trap – let your mind be as active as your pen. If you are falling asleep - get up and do some jumping jacks next to your seat. If you snooze, you lose.

D) Exams: My questions are designed to test three levels of learning. The most elemental kind of learning is **memorization**. In science, memory is important, not as an end in itself, but primarily in the sense that knowing vocabulary is important for learning a foreign language. A second level of learning is **comprehension**. Do you really understand the material and can you take information in one form and restate it in another form. Test your comprehension by trying to explain concepts to another person. A third level of learning is **application**. Can you solve problems using required skills or knowledge? Keep these levels of learning in mind as you study.

E) General advice on multiple choice questions:

- 1) Read the problem, read all answers.
- 2) The correct answer is both true and relevant.
- 3) Don't make mechanical mistakes. Check to see that if you chose answer A, answer A is what you marked.
- 4) Don't read more into the question than what is there. Some questions are easy, some are harder; you'll have to decide which is which. Feel free to ask questions about questions.

Sex Discrimination, Harassment, & Assault

Sexual harassment is unwelcome, gender-based verbal or physical conduct that is sufficiently severe, persistent or pervasive that it has the effect of interfering with, denying or limiting someone's ability to participate in or benefit from the college's educational program and/or activities, and is based on power differential (quid pro quo), the creation of a hostile environment, or retaliation.

Sexual misconduct is a form of sexual harassment prohibited by Title IX. Sexual misconduct refers to "physical sexual acts perpetrated against a person's will or where a person is incapable of giving consent due to the victim's use of drugs or alcohol. An individual also may be unable to give consent due to an intellectual or other disability." Sexual misconduct includes dating violence, domestic violence, rape, sexual assault, sexual battery, stalking, and sexual coercion.

Reporting Options

Call 911 if you are in an emergency situation

Dalton State Public Safety (this report is not confidential)

Tech Building- Upper Level - 706-272-4461

Online Sexual Assault Report -

<https://dynamicforms.ngwebsolutions.com/ShowForm.aspx?RequestedDynamicFormTemplate=3fe5724c-a8bd-4a31-9c25-1a3d35110a51>

If you would like to report to Dalton State Administration: (this report is not confidential)

Report Title IX complaint online - http://daltonstate.edu/campus_life/student-conduct-about.cms

Report Student-on-Student Title IX complaint in person:

Brittnie Lee, Office of Student Life

Coordinator for Student Responsibility & Service/ Deputy Title IX Coordinator

Pope 113

balee@daltonstate.edu, 706-272-2999

Report Title IX complaint involving Faculty or Staff in person:

Faith Miller, Human Resources

Director of Human Resource/ Title IX Coordinator

Memorial 122

fmiller@daltonstate.edu 706-272-2034

If you would like to talk with someone confidentially:

Dalton State Counseling & Career Services, Academic Resources

Lower Pope

706-272-4429

counseling@daltonstate.edu

<http://libguides.daltonstate.edu/Counseling>

Principles of Biology I (BIOL 1107)

Lecture M/W 10:50-12:05

Fall 2015 Tentative Lecture Schedule

Week	Topics Covered	Exam
8/17-8/21	Course Intro, Chapter 1: Intro	
8/24-8/28	Chapter 2: Chemistry	
8/31-9/4	Chapter 3 : Macromolecules	
9/7-9/11	9/7 IS LABOR DAY Chapter 4: Cells	1: Chapters 1-3
9/14-9/18	Chapter 4: Cells	
9/21-9/25	Chapter 5: Membranes	
9/28-10/2	Chapter 6: Metabolism	
10/5-10/9	Chapter 7: Cell Respiration	2: Chapters 4-6
10/12-10/16	10/12 IS FALL BREAK Chapter 7: Cell Respiration	
10/19-10/23	Chapter 8: Photosynthesis	
10/26-10/30	Chapter 10: Mitosis, Chapter 11: Meiosis	3: Chapters 7-8
11/2-11/6	Chapter 10: Mitosis, Chapter 11: Meiosis	
11/9-11/13	Chapter 12: Heredity	
11/16-11/20	Chapter 14: DNA	4: Chapters 10-12
11/23-11/27	Chapter 15, 16.1, 16.3-5: Genes and Gene Expression 11/25 THANKSGIVING HOLIDAY	
11/30-12/4	Chapter 18: Intro to Evolution	5: Chapters 14-16

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Lab M 8:30-10:20

Fall 2015 Lab Schedule

Exercise #	Date	Topics
Exercise 1	8/17/2015	Scientific Method
Exercise 2	8/24/2015	Taxonomy: Classification & Naming Organisms
Exercise 3	8/31/2015	Macromolecules & You
	9/7/2015	LABOR DAY!
Exercise 4	9/14/2015	Microscopy
Exercise 5	9/21/2015	Structure & Function of Living Cells
Exercise 6	9/28/2015	Diffusion, Osmosis, & Membranes
Exercise 7	10/5/2015	Cell Respiration & Photosynthesis
	10/12/2015	FALL BREAK!
Exercise 8	10/19/2015	Enzymes
Exercise 9	10/26/2015	Mitosis & Cytokinesis
Exercise 10	11/2/2015	Heredity
Exercise 11	11/9/2015	Nucleic Acids: Blueprints for Life
Exercise 12	11/16/2015	Biotechnology
	11/23/2015	THANKSGIVING!
Exercise 13	11/30/2015	Evidence of Evolution