

BIO 1406 (4:3:3)

General Biology I

Department of Biology

Division of Arts and Sciences

SOUTH PLAINS COLLEGE

Levelland Campus

Spring 2018

Instructor

Dr. Eric Niederhauser

## Course Information

### Biology I for Science Majors (BIOL 1406) Spring 2018

**Instructor:** Dr. Eric Niederhauser

Office: S131; Phone: 806 716-2321; Email: [eniederhauser@southplainscollege.edu](mailto:eniederhauser@southplainscollege.edu)

Office Hours: Monday: 9:30 – 12:00, 2:30 – 4:30

Tuesday: 9:30 – 12:00

Wednesday: None

Thursday: 1:00 – 2:00

**Course Description:** This course focuses on fundamental principles of living organisms including the chemistry of life, cell and molecular biology, genetics and evolution. This is the first semester of an integrated course for majors in biological sciences and related studies, including the medical disciplines.

#### Course Implementation:

PREREQUISITE: None. CREDIT: Four semester hours

RECOMMENDED TEXT: Campbell *Biology*, 11th Ed. by Urry et al. Others ARE acceptable.

REQUIRED LAB MANUAL: *General Biology I, Lab Manual*, by Etheredge and Bingham (Available only at the SPC bookstore)

**Blackboard:** Grades, course information, lectures, links etc. will be available on Blackboard, accessed through <https://southplainscollege.blackboard.com>. You are responsible for checking Blackboard regularly. You can always see your current grade on Blackboard. For help with Blackboard see me or email: [blackboard@southplainscollege.edu](mailto:blackboard@southplainscollege.edu).

**Email:** I may send emails to your SPC email address periodically throughout the semester. You are responsible for any information that is sent to your SPC email by me or the college, so please check it regularly.

#### Grading

**EXAMS:** There will be four exams given during the semester covering both lecture and lab. The exams will be multiple choice, true or false, fill310-in-the blank, short answer and essay questions. The final exam will be comprehensive.

Do not miss exams. If you know in advance that you will be absent on an exam date, notify the instructor ahead of time. It MAY be possible to take the exam at an alternate time. If you miss an exam and do not contact me within 24 hours, I will not consider a makeup exam. Failure to notify me will result in a zero for the exam.

**IN-CLASS QUIZZES:** There will be quizzes at the beginning of most classes that will address the previous lecture and lab. If you are late for class you will receive a zero for that day's quiz. There will be no in-class quiz makeups but at least three of the lowest in-class quiz grades will be dropped. Students with 4 or more absences AND tardies will NOT have the lowest quiz grades dropped. Quizzes will use a remote clicker system.

**ASSIGNMENTS:** Graded assignments may be assigned. I will not accept them late.

**LAB GRADES:** Lab material is incorporated into Exams, Quizzes/Assignments.

#### GRADING SUMMARY

Grade Type	Percentage of Grade
Exams	80 %
In-Class Quizzes/Assignments	20 %

*Grading scale:*

Final semester average 90-100 = A; 80-89 = B; 70-79 = C; 60-69 = D; < 60 = F.

*Last Day to Drop the Course:* April 26, 2018

**This course must be completed with a grade of C or better in order for the student to take General Biology II (Biology 1407) at South Plains College.**

**Resources for help:** My goal is your success. If you have any questions or concerns, ASK ME! Please! Anything that affects your performance as a student is important to me and South Plains College. We will do everything we can to support you and help you succeed.

Specific places to seek help depend on the factors that are affecting your performance:

ACADEMIC: Instructor, Tutors, Learning Center - 3<sup>rd</sup> floor library building.

PERSONAL: Health & Wellness Center (8 free counseling appointments per year).

HEALTH: Student Health Clinic (free for students with 6 or more credit hours).

### **Policies, Procedures and Rules**

This course will be conducted according to the policies and procedures of the South Plains College Student Handbook and General Catalog.

**General Attendance Policy:** Punctual and regular class attendance is mandatory. Students are responsible for all class work covered during absences from class, even in cases in which the absence was unavoidable. When situations such as illness, weather, an official college trip, or a death in the family causes one absence, it is polite but not necessary to let the instructor know.

When absences become excessive and, in the opinion of the instructor, minimum course objectives cannot be met, the student will be withdrawn from the course. Any student with 5 absences or tardies will be withdrawn from the class – with the grade of “F.” In addition, an instructor is required to initiate a student's administrative withdrawal when the student has missed every class during a fourteen consecutive calendar - day period (4 class meetings) excluding holidays. If you intend to withdraw from the course, please see me and officially withdraw. Do not just stop coming to class. To avoid an unexpected failing grade, meet with the instructor should problems arise.

Once a week, class meetings consist of lecture period AND a lab period; consequently, being absent from either class OR LAB will count as an absence.

If something extraordinary arises during the semester, I will certainly take this into consideration and some exception to the attendance policy may be made.

A student who does not attend a class by the 12th day of classes will automatically be deleted from the class rolls.

**Tardy Policy:** Arriving to class late is disruptive. If you are late, please come in quickly and quietly take your seat. You will not receive credit for the in-class quiz. A student who is consistently tardy will be withdrawn from the class. If you are tardy please see the instructor after class to ensure you were noted as present. See me if there is a problem or if you know you will be late.

**Classroom Conduct:** To create an effective learning environment, respect must be shown to your fellow students and to the instructor. Disruptive and disrespectful behavior will not be tolerated.

Disruptive and disrespectful behavior includes:

- Cell phone use. **All cell phones and other electronic devices should be turned OFF inside the classrooms - both lecture and lab. Cell phones should not be in view (including in the cubbyhole of the lab desks!) at any time. If your cell phone rings or buzzes, is being used during class for text messaging, or if you get up from class to answer a phone call, a zero will be given for the day's quiz.**
- Use of other electronic devices including laptops. Research shows that taking notes by hand is more effective. I reserve the right to allow laptop use on an individual basis.
- Leaving class during lecture. **If you will need to leave early let me know.**
- Sleeping in class or lab.
- Eating in lab. Discrete food consumption in lecture is tolerated.
- Failure to follow general instructions.
- Talking out of turn, cursing, etc.

**You will receive a zero for the day's quiz for disruptive behavior** and may be asked to leave the classroom. If the poor behavior is deemed excessive the student may be withdrawn from the course.

**Academic Integrity:** The attempt of any student to cheat or present as her/his own any work, which she/he has not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offender liable to serious consequences, possibly suspension.

Examples of cheating and dishonesty include (but are not limited to): plagiarism, illegal possession of examinations, the use of unauthorized notes during an examination or quiz, obtaining information during an exam from the textbook or from the exam paper of another student, assisting others to cheat, alteration of grade records, illegal entry or unauthorized presence in an office.

**Students with disabilities,** including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

**Privacy:** The federal law guaranteeing student privacy is the policy of this professor as well as that of SPC. This means that I will not discuss your grade with anyone other than you. I will NOT discuss your grade with your parents, guardians, friends, etc.

**Lab Safety:** Each student will be informed/trained on the “Chemical Hygiene Plan (CHP) for Laboratories at South Plains College” during the first week of the semester. Each student will be required to acknowledge receipt of this information and be required to follow all procedures outlined by the instructor and/or staff of South Plains College.

**Material Safety Data Sheets (MSDS):** These data sheets detail any potential hazards which may be incurred while utilizing various chemicals in the laboratory. The MSDS notebook is located in room 146 of the science building. All students are encouraged to read about the chemicals used in the lab in the MSDS notebook. Please ask the instructor if you need assistance.

**Non-Discrimination Statement:** South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.

**Campus Concealed Carry** - South Plains College permits the lawful carry of concealed handguns in accordance with Texas state law, and Texas Senate Bill 11. Individuals possessing a valid License to Carry permit, or the formerly issued Concealed Handgun License, may carry a concealed handgun at all campus locations except for the following.

- Natatorium

For a complete list of campus carry exclusions zones by event, please visit <http://www.southplainscollege.edu/campuscarry.php>

**Bio 1406 Tentative Schedule Spring 2018**

Lecture				Laboratory			
Unit	Meeting	Date	Topic	Chapter	Week	Topic	Ex.
Organization and Chemistry of Life	1	Tue, Jan 16	Introduction. Life Defined and Organized	1	1	Safety/ The Nature of Science	LS-3
	2	Thur, Jan 18	Chemistry for Biology	2			
	3	Tue, Jan 23	Water and Life, Carbon	3	2	Microscopes/Scientific Method (Daphnia)	5
	4	Thur, Jan 25	Organic Chemistry, Carbohydrates	4			
	5	Tue, Jan 30	Lipids, Nucleic Acids	5	3	Organic Molecules	4
	6	Thur, Feb 1	Proteins				
	7	Tue, Feb 6	Cell Structure		4	Cells, Mitosis	6, 11
	8	Thur, Feb 8	The Cell Cycle (On exam 2)	12			
	9	Tue, Feb 13		EXAM 1	5	Diffusion and Osmosis	7
	10	Thur, Feb 15	Membrane Structure and Function	7			
	11	Tue, Feb 20	Introduction to Metabolism	8	6	Enzymes	8
	12	Thur, Feb 22	Enzymes				
	13	Tue, Feb 27	Cellular Respiration	9	7	Respiration/ Photosynthesis	9
	14	Thur, Mar 1	Photosynthesis	10			
	15	Tue, Mar 6	Biomass, Energy in Ecosystems (Pgs. 1236-50)	55	8	TBA	
	16	Thur, Mar 8		EXAM 2			
Spring Break							
Genetics, DNA	17	Tue, Mar 20	Meiosis and Sexual Life Cycles	13	9	DNA Extraction, Drosophila Start	15
	18	Thur, Mar 22	Mendel and the Gene Idea	14			
	19	Tue, Mar 27	Beyond Mendel. DNA Structure and Replication	15	10	Remove Flies, Genetic Problems	13, 14
	20	Thur, Mar 29	DNA Replication 2, Gene Expression 1	16			
	21	Tue, Apr 3	From Gene to Protein	17	11	Fly Analysis, Protein Simulation, Karyotypes, Genetic Problems	12, 16
	22	Thur, Apr 5	From Gene to Protein, Mutation, Viruses, Regulation of Gene Expression	18	12	TBA	
	23	Tue, Apr 10					
	24	Thur, Apr 12		EXAM 3			
	25	Tue, Apr 17	DNA Technology	20/21	13	PCR Day 1	17, 19
	26	Thur, Apr 19	DNA Tech Applications				
Evolution	27	Tue, Apr 24	Descent With Modification	22	14	Protein Fingerprinting	18
	28	Thur, Apr 26	The Evolution of Populations	23			
	29	Tue, May 1	The Origin of Species	24	15	PCR Day 2	19
	30	Thur, May 3	Evolution Wrap up and Semester Review				
Final EXAM							