

BIO 1406 (4:3:3)

General Biology I

Department of Biology

Division of Arts and Sciences

SOUTH PLAINS COLLEGE

Levelland Campus

Spring 2022

Instructor

Dr. Eric Niederhauser

Course Information

Biology I for Science Majors (BIOL 1406) Spring 2022

Instructor: Dr. Eric Niederhauser

Office: S81; Phone: 806 716-2321; Email: eniederhauser@southplainscollege.edu

Office Hours: Monday: 9:30 – Noon, 2:30 – 3:30

Tuesday: 8:30 – Noon

Friday: 9:00 – 11:00

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*, 12th Ed. by Urry et.al. Others ARE acceptable.

REQUIRED LAB MANUAL: *Biology for Science Majors I & II, Lab Manual*, by South Plains College Biology Department. 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

Emails and Announcements: I may post announcements on Blackboard and/or send emails to your SPC email address periodically throughout the semester. You are responsible for any information that is in the announcements or sent to your SPC email by me or the college, so please check them 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, fill-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 your quiz grade will suffer. 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/or tardies (for any reason) will NOT have the lowest quiz grades dropped. Quizzes will use a remote clicker system.

LAB GRADES: Lab material is incorporated into Exams, Quizzes/Assignments. Credit will also be given for attendance (which is required). There are no lab makeups.

GRADING SUMMARY

Grade Type	Percentage of Grade
Exams	70 %
In-Class Quizzes	20 %
Lab Attendance/Assignments	10%

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: May 4, 2022

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

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 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 (to lecture and/or lab), or 4 consecutive absences will be withdrawn from the class.

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. If you intend to withdraw from the course, please see me and officially withdraw. Do not just stop coming to class. Please meet with the instructor should problems arise.

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

COVID 19: If you are experiencing any of the following symptoms, please do not attend class and either seek medical attention or get tested for COVID-19.

- Cough, shortness of breath, difficulty breathing
- Fever or chills
- Muscles or body aches
- Vomiting or diarrhea
- New loss of taste and smell

To be excused from attendance requirements, please also notify DeEtte Edens, BSN, RN, Associate Director of Health & Wellness, at dedens@southplainscollege.edu or 806-716-2376.

Tardy Policy: Arriving to class late is disruptive. If you are late, please come in quickly and quietly take your seat. A student who is consistently tardy will be withdrawn from the class. If you are late 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. Barring emergency, there is no excuse for being tardy to lab. If you are late for lab you will lose participation credit for the lab.

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 at any time.**
- 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.

You must use your own words on exams.

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>

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 - 3rd 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).

Bio 1406 Tentative Schedule Spring 2022

		Lecture		Thursday Laboratory	
Unit	Week	Date	Topic	Topic	Ex.
Organization and Chemistry of Life	1	Tue, Jan 18 Thur, Jan 20	Introduction: Life Defined and Organized Chemistry for Biology	Safety, Microscopes, Scientific Method (Daphnia)	LS,1, 5
	2	Tue, Jan 25 Thur, Jan 27	Water and Life, Carbon Organic Chemistry, Carbohydrates	Metric System, Data Analysis	2, 3
	3	Tue, Feb 1 Thur, Feb 3	Lipids, Nucleic Acids Proteins	Organic Molecules	4
	4	Tue, Feb 8 Thur, Feb 10	Cell Structure The Cell Cycle (On Exam 2)	Cells/Mitosis	6, 11
	5	Tue, Feb 15 Thur, Feb 17	EXAM 1 Membrane Structure and Function	Diffusion and Osmosis	7
	6	Tue, Feb 22 Thur, Feb 24	Introduction to Metabolism Enzymes	Enzymes	8
	7	Tue, Mar 1 Thur, Mar 3	Cellular Respiration Photosynthesis	Respiration/Photosynthesis	9
	8	Tue, Mar 8 Thur, Mar 10	Biomass, Energy in Ecosystems, Biogeochem cycles EXAM 2	TBA	11
Spring Break					
Genetics, DNA Structure and Function	9	Tue, Mar 22 Thur, Mar 24	Meiosis and Sexual Life Cycles Mendel and the Gene Idea	DNA Extraction, Start Files Genetic Problems	15
	10	Tue, Mar 29 Thur, Mar 31	Beyond Mendel - Complications and Exceptions DNA Replication	Karyotypes Genetic Problems Due	13, 14
	11	Tue, Apr 5 Thur, Apr 7	From Gene to Protein (Gene Expression) From Gene to Protein, Mutation, Viruses,	Fly Analysis, Mutation Protein Synth. Simulation	12, 16
	12	Tue, Apr 12 Thur, Apr 14	EXAM 3 Regulation of Gene Expression	PCR Day 1	17, 19
	13	Tue, Apr 19 Thur, Apr 21	DNA Technology DNA Tech Applications	Protein Fingerprinting	18
DNA Tech, Evolution	14	Tue, Apr 26 Thur, Apr 28	Descent With Modification The Evolution of Populations	PCR Day 2	19
	15	Tue, May 3 Thur, May 5	The Origin of Species Evolution wrap-up and Semester Review	Population Genetics Hardy Weinberg	
	Tue, May 10. 8:00 am. Final EXAM				