

BIOL 1406 (4:3:3)

Biology for Science Majors I
Online

Department of Biology

Division of Arts and Sciences

SOUTH PLAINS COLLEGE

Fall 2026

Dr. Megan Keith
Associate Professor of Biology

South Plains College
BIOL 1406.151- General Biology for Science Majors I
FALL 2026



Instructor: Dr. Megan Keith
Office: Science Building S88
Email: mkeith@southplainscollege.edu

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.

Student Learning Outcomes:

1. Describe the characteristics of life.
2. Explain the methods of inquiry used by scientists.
 - a. Use critical thinking and scientific problem solving to make informed decisions in the laboratory.
 - b. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
 - c. Effectively communicate the results of scientific investigations.
3. Identify the basic requirements of life and the properties of the major molecules needed for life.
4. Compare and contrast the structures, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells.
5. Describe the structure of cell membranes and the movement of molecules across a membrane.
6. Identify the substrates, products, and important chemical pathways in metabolism.
7. Identify the principles of inheritance and solve classical genetic problems.
8. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
9. Describe the unity and diversity of life and the evidence for evolution through natural selection.

TexBook Program: This course is part of your TexBook program, which means you don't need to purchase a textbook or access code for this course. TexBook is the required content (either an eBook or online Courseware) for your course, and is provided for you via the BibliU platform from Day 1 of class.

- Cost of TexBook: this required content is provided as part of a Program called 'Inclusive Access', which means that content is provided for you at the lowest price available from the publisher. The cost for this is included in your tuition.
- How to access your digital content: you can access your courseware through the links embedded in your Blackboard course or by signing in to McGraw-Hill Connect. **You must use your SPC email address to register your account and to be automatically enrolled in the courseware for this course.**
- Opting out: you can Opt-Out of the TexBook Program, up until the Opt-Out deadline, via the banner displayed when you open the BibliU platform. Remember that Opt-Out deadlines vary by term, and if you choose to Opt-Out you will lose access to this low price option, and will need to purchase the content through a different method. If you opt-Out, the fee will be refunded to your account.
- **Required class material:** McGraw-Hill Connect Online Access for Biology w/ Raven Biology 13th edition [e-book + virtual labs]
- **Other required materials:** A reliable internet connection and a webcam/phone with microphone for use with Blackboard Collaborate, Zoom and the exam proctor. This must be a camera that will allow for a side view during exams. **If you cannot meet the technology requirements for this course, SPC may be able to help. Contact your professor if you need more information.**

Online Course Content

- Blackboard is the primary source for course information. **Students need to access Blackboard regularly. Google Chrome is the preferred browser for use with Blackboard and will be REQUIRED when taking exams.**
- Specific course materials available include PowerPoint lecture slides, lecture videos, reading assignments, messages and announcements from the instructor, study aids, quizzes, exams, lab exercises, etc.

Communication

Email and course messages are the main methods that I have to communicate with you. Any announcements that I make via Blackboard will also be sent to your SPC email. Please check for messages frequently.

The course messages option in Blackboard is my preferred method of communication because it allows me to keep track of messages from students in individual sections. Please use this as your first option for communication.

NOTE: If you email me, include something in the subject line that gives me an idea of the contents of the message, including your course number.

I will check my messages and email throughout the day Monday – Friday. I typically respond to all messages within 24 hours or less except on weekends and holidays.

Copyright Notice

All material presented by the instructor in the course is copyright protected. The material presented by the instructor may not be modified or altered in any way. You have permission to download or print any material presented by the instructor in this course (ex. course information sheet, contact information, and learning module checklists). Copies must only be used for your personal educational use during this semester. The material may not be distributed in any way. If any course material is found on other websites, this is an act of academic misconduct and will be dealt with appropriately following the guidelines of the college concerning academic integrity.

Assessment

Final grades for the course will be calculated on a weighted scale: four exams (65%), quizzes (25%) and assignments (10%). I follow a traditional grading scale:

90 – 100% = A 80 – 89% = B 70 – 79% = C 60 – 69% = D ≤ 59% = F

***Course Average:** Calculated by the weighted average of the three grade categories indicated. If a student's final average is *less than* one half a percentage point away from the next higher letter grade, the instructor will consider giving the higher letter grade. For example, a student with an 89.51 would receive a letter grade of "A" for the course.

I do not curve final grades, however, we have resources available to you if you feel you need help in improving your grades. I also offer the opportunity for optional bonus points on SOME exams.

Exams

- Each major exam will cover material from BOTH lecture and lab material. The exam format may include multiple-choice questions, definitions, matching, short answer questions, and essay questions.
- Exam dates are listed in the course schedule. All exams open on a Friday at 8:00AM and close that Monday at 11:59PM, except the final exam. See your course schedule for more details.
- The final exam will be a comprehensive exam. This class lays a foundational knowledge of biology that you will need to build on as you continue your education.
- Students should **NOT** miss exams! Any student who misses an exam will have a 0 score entered for that exam. To avoid any technical issues during your exam, I suggest taking it as early as possible and within normal business hours. If you have problems at 2AM, I and other services will not be available to help you.

Exam testing procedures- Students must follow all exam conduct requirements listed below. These requirements are strictly enforced. Failure to comply will result in a grade of zero. By beginning an exam, students acknowledge that they understand and agree to comply with all exam conduct policies. An exam begins as soon as the student clicks the exam link and will be assessed for testing violations from that point.

NOTE: Students will be informed of policies and requirements at the beginning of the course, and penalties will be minimally applied on an assignment of the professor's choosing. After this assignment, penalties will be applied in full.

Exam Conduct Requirement	Clarification of Requirement
A valid photo ID must be shown at the start of the exam.	A government-issued ID is not required. Acceptable forms include SPC student IDs or photo IDs from other academic institutions. The name on the ID must match the name used to register for the course.
The microphone must be turned on and recording for the entire duration of the exam.	Audio must remain on and clear for the entire exam to verify exam integrity. Students are responsible for minimizing background noise. Fans blowing directly on the microphone, television audio, music, or excessive computer noise are not permitted.
Webcam placement must provide a continuous side-angle view of the student. Cell phones may be used as a side-view camera.	The webcam must be positioned to clearly show the student's face, both hands, and testing surface from a side angle. The camera may not be moved once the exam begins. A 25% penalty will be applied the first time a student uses a front-facing camera, all subsequent violations will result in a zero grade.
Students must complete a room and environment scan as instructed.	A complete environment scan must be performed following the instructor's posted instructions prior to beginning the exam. The scan must clearly show the testing area, desk surface, surrounding space, and absence of unauthorized materials.
A clear camera image must be maintained at all times. Both hands and your face must be visible the entire time.	A zero will be given for any obstruction of the camera's view or of the student's face or eyes. Hats, sunglasses, excessive hand movements, or accessories that block the eyes are not permitted. Students may not lean out of the camera frame.
The testing environment must be well lit and fully visible.	Lighting must be sufficient for the instructor to clearly see the student's face, hands, and testing surface for the duration of the exam. Lighting conditions may not be altered once the exam has started.
The exam must be taken in a private, approved testing environment at a desk or table.	<u>The student must be alone in a quiet, private space and seated at a desk or table.</u> Exams may not be taken in bedrooms while seated on beds, couches, or floors. A functioning camera and microphone are required.
No unauthorized materials may be present or within reach during the exam.	<u>Unauthorized materials include, but are not limited to, books, notes, phones, smart devices, Meta glasses, additional computers, papers, or writing not explicitly permitted.</u> Only materials approved by the instructor may be present.
No talking, music, or audio of any kind is permitted during the exam.	The student may not listen to music or interact with any person during the exam. Communication with any adult for any reason is prohibited. <u>Students may not use the reader function in Blackboard or other assistive technology unless they have provided formal documentation indicating the need for accommodation prior to the exam.</u>
Professional and respectful conduct is required at all times.	Students must maintain professional language and behavior throughout the exam. Vulgar, inappropriate, or disrespectful language or gestures are not permitted.
Appropriate clothing is required during the exam.	Clothing must be consistent with standard classroom attire. Hoodies, hats, or blankets are not permitted, as they may obstruct visibility or compromise exam integrity.

- Technical readiness is the responsibility of the student. Students must ensure a stable internet connection, a fully charged device, and functional audio and video equipment before beginning the exam. Technical issues caused by lack of preparation are not grounds for exam resets, extensions, or retakes.
- The instructor reserves the right to assign penalties, including a zero, for any behavior that violates academic honesty, exam security, or the spirit of these policies, even if the behavior is not explicitly listed. A 25% penalty will be applied for violations of testing requirements, unless stated otherwise in the table above.
- Any student who is concerned that a penalty was misapplied can request that the penalty be reviewed according to the grievance procedure listed below.

Quizzes

- Quizzes will be administered weekly. Dates are listed on the course schedule and will be posted on your calendar in Blackboard as they become available.
- Quizzes will cover lecture AND lab material. Read instructions carefully before beginning each quiz.
- Students will be given a set amount of time to finish the quiz.
- **Always review your quizzes as I may leave feedback. This can be done by going to My Grades and clicking on the grade you received for that quiz after the due date has passed.**
- Missed quizzes CANNOT be made up unless proper documentation is provided for an excused absence.
- The lowest quiz grade (1) will be dropped at the end of the semester.

Assignments

- Assignments include concept checks, EdPuzzle assignments, as well as additional exercises to reinforce concepts. All assignments will be posted with clear instructions.

Assignments are low stakes exercises that are meant to challenge you to **apply** course content to various situations. This skill is needed in your upper-level biology courses. It is my goal to help you develop this skill early.

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.

1. **Attendance-** Regular and consistent interaction with online lessons and textbook materials is necessary for satisfactory achievement.
 - Attendance will be measured by a student's ability to consistently log on to Blackboard and COMPLETE the assigned work. Failure to turn in assignments will be recorded as an "absence." The instructor will monitor student statistics throughout the duration of the course and will contact you if your personal statistics deviate from what is "normal" for the rest of the class.
 - The student may be administratively withdrawn from the course when they have **failed to turn in a total of four (4) graded assignments, quizzes, etc. (at any time; for any reason) or failed to complete one exam, AND the minimum course objectives cannot be met.**
 - Students who enroll in a course but have "Never Attended" by the official census date, as reported by the faculty member, will be administratively dropped by the Office of Admissions and Records. A student who does not meet the attendance requirements of a class as stated in the course syllabus and does not officially withdraw from that course by the official census date of the semester, may be administratively withdrawn from that course and receive a grade of "X."
 - If a student decides to stop attending class, submitting assignments, or that they want to drop the course for any reason, it is the student's responsibility to drop the course. After the second exam, I will not perform administrative drops. If you fail to drop the course, you will receive a failing grade at the end of the semester.

Students who miss multiple assignments typically fall so far behind that they are unable to catch up and their grades suffer on that section of material. Set yourself up for success; manage your time wisely so that you can spend the time required to do well on your work and study effectively.

2. **Technical difficulties-** If you experience technical difficulties please refer to the list of offices/personnel to call for help with your unique issue(s). Please send an email immediately to notify the instructor of these difficulties. **You will be allowed one and only one reset on any assignment/exam for the semester.**

Should issues arise that are out of your control (i.e., Blackboard shuts down indefinitely) then the instructor will adjust assignment availability and due dates as appropriate.

3. **Make-up policy-** If you experience computer problems or miss assignments, you will not be able to make up or retake the assignment. **DO NOT WAIT UNTIL THE LAST MINUTE TO SUBMIT YOUR ONLINE WORK.** All SPC campuses will have internet and computer access for students. A missed assignment will result in a zero on that assignment, no exceptions. I provide a checklist of tasks that need to be completed with each learning module in addition to the course schedule, therefore, there should be no confusion about what needs to be turned in and when it is due. Make-up work will only be given in circumstances where students experience events that would qualify as an excused absence. All assigned make-up work is due within one week of the assignment date.

4. **Academic Integrity-** *It is the aim of the faculty of South Plains College to foster a spirit of complete honesty and a high standard of integrity.* The attempt of any student to present any work as their own which he or she has not honestly performed is regarded at SPC as a most serious offense and renders the offender liable to serious consequences, possibly suspension. Each student is expected to abide by absolute honesty. Infractions will result in penalties subject to an assignment of a grade of “F” for the course or expulsion from the college. Students should also regard civility online as a requirement to remain on the roll in class.
- Plagiarism violations include, but are not limited to, the following:
 1. Turning in a paper that has been purchased, borrowed, or downloaded from another student, an online term paper site, or a mail order term paper mill;
 2. Cutting and pasting together information from books, articles, other papers, or online sites without providing proper documentation;
 3. Using direct quotations (three or more words) from a source without showing them to be direct quotations and citing them; or
 4. Missing in-text citations.
 - Cheating violations include, but are not limited to, the following:
 1. Knowingly using, buying, selling, stealing, or soliciting, in whole or in part, an administered test’s content;
 2. Discovering the content of an examination before it is given, including bribing another person to obtain an unadministered test or information about an unadministered test;
 3. Using an unauthorized source of information (notes, textbook, text messaging, internet, apps) during an examination, quiz, or homework assignment;
 4. Entering an office or building to obtain unfair advantage;
 5. Taking an examination for another;
 6. Altering grade records;
 7. Copying another’s work during an examination or on a homework assignment;
 8. Collaborating with or seeking aid from another person during a test;
 9. Rewriting another student’s work in Peer Editing so that the writing is no longer the original student’s; or
 10. Taking pictures of a test, test answers, or someone else’s paper.
5. **South Plains College policies concerning Disabilities, Non-discrimination, Title IX Pregnancy and Parenting Accommodations, CARE (Campus Assessment, Response, and Evaluation), Intellectual Exchange, Campus Concealed Carry, COVID-19, and AI (Artificial Intelligence) can be found here:**
<https://www.southplainscollege.edu/syllabusstatements/>
6. **Privacy-** The federal law guaranteeing student privacy is the policy of this instructor as well as that of SPC. This means that I will not discuss your grade with anyone other than YOU.
7. **Grievance procedure:** If a student is having a problem with the course policies or the instructor, he or she should ***first*** try and resolve any such problems with the instructor. If the problem is not resolved, the student may proceed to the Biology Department Chair, who can advise the student on how to resolve the problem or direct them to the appropriate office.
8. **Student Code of Conduct Policy:** Any successful learning experience requires mutual respect on the part of the student and the instructor. Neither instructor nor student should be subject to others’ behavior that is rude, disruptive, intimidating, aggressive, or demeaning. Student conduct that disrupts the learning process or is deemed disrespectful or threatening shall not be tolerated and may lead to disciplinary action and/or removal from class (see the Student Guide for more information: <http://catalog.southplainscollege.edu/content.php?catoid=58&navoid=1931>).

Note: The instructor reserves the right to modify the course syllabus and policies, as well as notify students of any changes, at any point during the semester.

Breakdown of Course Topics

Unit 1

- Week 1: The Science of Biology
The Nature of Molecules
- Week 2: Properties of Water
Chemical Building Blocks of Life
- Week 3: The Structure and Function of Macromolecules
- Week 4: Exam 1**

Unit 2

- Week 5: Cells
Membrane Structure & Function
- Week 6: Intro to Metabolism
Enzymes
- Week 7: Cellular Respiration
Photosynthesis
- Week 8: Exam 2**

Unit 3

- Week 9: The Cell Cycle
Meiosis
- Week 10: Genetics
Chromosomal Basis of Inheritance
- Week 11: Molecular Basis of Inheritance
- Week 12: Exam 3**

Unit 4

- Week 13: From Gene to Protein
- Week 14: DNA Technology
Descent with Modification
- Week 15: Evolution of Populations
The Origin of Species
- Week 16: Comprehensive Final Exam**

