

BIOL 1406 (4:3:3)

Biology for Science Majors I

Department of Biology

Division of Arts and Sciences

SOUTH PLAINS COLLEGE

Levelland Campus

Fall 2021

Dr. Megan Keith

Associate Professor of Biology



**COURSE INFORMATION SHEET**  
**BIOL 1406.005- GENERAL BIOLOGY FOR SCIENCE MAJORS I**  
**FALL 2021**

Instructor: Dr. Megan Keith  
Office: Science Building S88  
Email: [mkeith@southplainscollege.edu](mailto:mkeith@southplainscollege.edu)

Lecture: TR 9:30AM – 10:45AM (S83)  
Lab: T 11:00AM – 1:30PM (S197)

Office Hours: Mon. 8:00AM – 9:00AM (V)  
Tues. 2:00PM – 3:00PM (F2F- S88)  
Wed. 8:00AM – 9:00AM (V)  
Thurs. 11:00AM – 12:00PM (F2F- S88)  
1:00PM – 2:00PM (F2F- S88)  
Fri. 8:30AM – 11:30AM (F2F- S88)

Virtual meetings outside of the designated virtual office hours must be scheduled via the link on Blackboard.

**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. To introduce basic biological principles through an integrated approach.
2. To investigate the cellular processes of living organisms with an emphasis on biological chemistry applications.
3. To investigate the mechanisms of genetics and inheritance.
4. To introduce the role and mechanisms of evolution in biology.

**TexBook Program:** *This course is in the SPC TexBook program.*

- **What is TexBook?** The fee for the textbook/digital content is the lowest price available from the publisher and bookstore and is included in your tuition/fee payment.
- **How do I access my TexBook?** Your course material is in your Blackboard course from the first day of class. Access to your course material is provided either by RedShelf or other links inside your Blackboard course. RedShelf (and many publisher's) ebook features include the ability to hear the text read aloud, highlight, take notes, create flash cards, see word definitions, build study guides, print select pages, and download up to 20% of the book for offline access.
- **Help with TexBook issues and support:** check with your professor and/or contact <https://solve.redshelf.com/hc/en-us/requests/new>
- **Opting out of TexBook:** Participating in TexBook is not mandatory, and you can choose to opt-out. However; by opting-out you will lose access to the course [textbook/digital content] and competitive pricing, and you will need to purchase the required course material on your own. If you drop the class or opt-out before the opt-out deadline, the TexBook charge will be automatically refunded to your SPC account. The opt-out deadline for Fall 2021 (16-week) is September 15<sup>th</sup>. *\*Please consult with your professor before deciding to opt-out.*

If you still feel that you should purchase the course textbook/materials on your own, send an opt-out email to [tfewell4texasbookcompany@gmail.com](mailto:tfewell4texasbookcompany@gmail.com). Include your first name, last name, student ID number, and the course you are opting out of. Once you have been opted-out, you will receive a confirmation email. If you need assistance with the process, contact the SPC Bookstore:

Email: [tfewell@texasbook.com](mailto:tfewell@texasbook.com) / Phone: 806-716-2399

Email: [agamble@texasbook.com](mailto:agamble@texasbook.com) / Phone: 806-716-4610

- **Required textbook:** Campbell BIOLOGY, 12<sup>th</sup> edition by Urry et al. **NOTE: This is an e-text, see options for ordering a hard copy in course information; older editions (10<sup>th</sup> and 11<sup>th</sup>) are fine.**
- **Required Laboratory Manual:** Biology for Science Majors I & II Lab Manual (3<sup>rd</sup> edition). Only available at the Levelland Bookstore.

I require a textbook for the following reasons:

- 1) It is a great reference for upper level courses, comprehensive graduate exams, MCAT/PCAT prep, etc. (I used mine throughout both my undergraduate and graduate programs.)
- 2) It contains additional questions at the end of each chapter to help challenge you and assess your knowledge of the material.
- 3) I include some questions from the book on the exams.
- 4) Reading the chapter before we cover it in class is beneficial for learning and retention of information.

- **Other required materials:** A reliable internet connection and a webcam with microphone for use with Blackboard Collaborate, Zoom, etc. and the exam proctor should it need to be implemented. This can be a USB or internal webcam. **Mobile devices should not be used for quizzes or exams (if moved online).**

### ***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.**
- 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 is the main method that I have to communicate with you. Any announcements that I make via Blackboard will also be sent to your SPC email. Please check your email regularly.

I will check my 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 print out any material presented by the instructor in this course (ex. course information sheet, contact information, and learning module checklists). Any printed copies must be for your personal educational use during this semester. The material may not be altered or modified in any way. The material may not be distributed in any way. You have permission to download the same material to your computer hard drive or other medium in order to print out the material needed. Any material downloaded may not be altered or modified in any way. The downloaded material may not be distributed in any way. If any course material is found on other websites, this becomes 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 (70%), quizzes (20%) and assignments and lab (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.
- ALWAYS read instructions carefully before beginning an exam.

- Each exam score is recorded as a percent score (number correct out of the total possible) with 100% being the maximum score.
- The final exam will be a comprehensive exam.
- Students should **NOT** miss exams! Any student who misses an exam for any reason that does not qualify as an excused absence will have a 0-score entered for that exam.
- Any act of academic dishonesty on exams will result in a 0-score for that exam and the student will be dropped from the course with a grade of “F”.

### Quizzes

- Quiz 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 one attempt and a set amount of time to finish the quiz. Time limits are dependent upon the number of questions and the difficulty of the topics covered.
- **Always review your quizzes** after they have been graded as I may leave feedback. This can be done by going to My Grades and clicking on the grade you received for that quiz.
- Missed quizzes CANNOT be made up unless missed due to a reason that qualifies as an excused absence.
- The lowest quiz grade (1) will be dropped at the end of the semester.

### Assignments

- Assignments include concept checks as well as additional exercises to reinforce topics covered in class. Read the instructions before beginning any assignment.

Assignments are meant to challenge you to apply what you are learning in class to various situations. This skill is needed in your upper level biology courses, so it is my goal to help you develop this skill early in your academic career.

### *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-** Punctual and regular lecture and lab attendance is required of all students.
  - Open door policy: if you do arrive late, quietly take your seat. You may not make up quizzes or other work. Excessive tardiness will not be tolerated and may result in withdrawal from the course (3 late arrivals exceeding 10 minutes = 1 unexcused absence).
  - In the case of unexcused absence, the student will receive a 0 for the work submitted that day and it is the student’s responsibility to obtain missed notes from classmates.
  - When unavoidable situations such as illness, weather, an official college-sponsored trip, or a death in the family causes absence, the student may make up the missed class work as long as documentation can be provided. The student will have one week from the date the makeup work is assigned to turn it in for credit.
  - The student may be administratively withdrawn from the course when absences become excessive (4 unexcused absences or more) AND the minimum course objectives cannot be met. The instructor is required to initiate a student’s administrative withdrawal when the student has missed every class period for two weeks excluding holidays.
  - Should a student, for any reason, delay in reporting to a class after his/her official enrollment, absences will be attributed to the student from the first meeting of the class. A student who does not attend a class by the 12th day of classes will automatically be dropped from the course and receive a grade of “X”.

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 a course message *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 work (online quizzes/assignments or in-person exams) is missed for reasons that would not be considered an excused absence, it cannot be made up. There will be **no exceptions** to this rule. If, however, a student misses work due to circumstances out of their control, missed work may be made up. All make-up work is due within one week of the date that it is assigned. **It is essential that you communicate with me to ensure that you stay caught up in the class. If circumstances prevent you from making it to an exam, you must email me BEFORE the time at which the exam is administered (unless you are prevented from doing so due to an emergency situation).**

4. **Online Course Netiquette-** Remember that you are addressing a professor and/or a group, even though you don't see them.

- Don't say things that you wouldn't say publicly in a traditional class setting.
- Don't address comments to individuals unless you want all to know what you are telling that person.
- Don't share confidential information.
- Read any messages or comments before sending; once it is out there, you can't change it.
- Because electronic communication does not show smiles and frowns (other than the graphic kind), or employ intonation, humor and sarcasm might be misunderstood. Use these carefully and employ good word choice so that your meaning comes through clearly.
- Aim for clarity and readability in your text. Paragraph often, avoid using only capital letters, and stay away from character symbols and conventions that get in the way of visual comfort.
- Although electronic communication can be very informal, try for good language usage so that your message comes through rather than your mistakes (many mail programs have spell checkers). Avoid correcting other people's language, however. Try to be clear, indicating what you are talking about fully instead of presuming that others know which message you are responding to, what chapter or assignment you are referring to, etc.
- Use of inappropriate or disrespectful language, cyber bullying, etc. will result in a zero for that assignment and will require that the student attend a meeting with the instructor and/or any other appropriate faculty to address this issue.

5. **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. Failure to comply with this policy will result in an F for the assignment and can result in an F for the course if circumstances warrant.

- 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.
- 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.
- 9. Diversity Statement:** In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.
- 10. Disability Statement:** 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.
- 11. Nondiscrimination Policy:** 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.
- 12. Title IX Pregnancy Accommodations Statement:** If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact the Director of Health and Wellness at 806-716-2362 or email [cgilster@southplainscollege.edu](mailto:cgilster@southplainscollege.edu) for assistance.

**13. 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

Please also notify DeEtte Edens, BSN, RN, Associate Director of Health & Wellness, at [dedens@southplainscollege.edu](mailto:dedens@southplainscollege.edu) or 806-716-2376.

**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. Be aware that with the ongoing COVID-19 pandemic, changes may be necessary if the format of the course has to change.**

## Breakdown of Course Topics

### Unit 1: The Chemistry of Life

Chemical Context of Life  
The Life Supporting Properties of Water  
Carbon & the Molecular Diversity of Life  
The Structure & Function of Macromolecules

#### Exam 1

### Unit 2: Cells- Structure & Function

A Tour of the Cell  
Membrane Structure & Function  
Introduction to Metabolism  
Enzymes  
Cellular Respiration  
Photosynthesis

#### Exam 2

### Unit 3: Cellular Reproduction, Genetics, & Inheritance

Cell Communication  
The Cell Cycle  
Meiosis & Sexual Life Cycles  
Mendel & the Gene Idea  
Chromosomal Basis of Inheritance  
Molecular Basis of Inheritance  
From Gene to Protein

#### Exam 3

### Unit 4: Viruses, DNA Technology, Evolution & Natural Selection

Viruses  
DNA Technology  
Genomes and Their Evolution  
Descent with Modification  
Evolution of Populations  
The Origin of Species  
**Exam 4 (Comprehensive Final)**

