# BIOL 1015 General Biology
## Summer 2021

**Instructor:** Charcacia T. Sanders  
**Section # and CRN:** Section#: ZB2 & ZB3 and CRN: 32972  
**Office Location:** Physical Location: Elmer E. O’Banion Science Building, Rm 430R  
Virtual Location: [https://pvpanther.zoom.us/j/9680371418](https://pvpanther.zoom.us/j/9680371418)  
**Office Phone:** 936-261-3162  
**Email Address:** ctsanders@pvamu.edu  
**Office Hours:** Wednesdays and Friday 12:30 pm – 2:00 pm Appointment Only via Zoom  
**Mode of Instruction:** [Online]  
**Course Location:** Online via Canvas  
**Class Days & Times:** MTWR 9:00 am – 4:00 pm  
**Catalog Description:** BIOL 1015 General Biology: 5 semester hours. 
Basis of life, cell theory, structure and energy transformation, reproduction, and genetic variability. Origins of diversity of organisms.  
**Prerequisites:** TSIA Reading College Ready  
**Co-requisites:** BIOL 1015 is a combined lecture-laboratory course. Students must be enrolled in both a lecture section and a laboratory section  
**Required Texts:** Campbell Biology, 12th edition, by Lisa A. Urry, Michael L. Cain, Steven A. Wasserman, Peter V Minorsky, and Rebecca Orr  
Published by Pearson (May 9th 2020) - Copyright © 2021  
Format: Modified Mastering Biology with Pearson eText -- Instant Access -- for Campbell Biology  
Recommended Texts:  Supplements: (Optional)

Study Guide, Eleventh Edition 978-0-134-44377-5/0-134-44377-2 This study aid provides concept maps, chapter summaries, word roots, and a variety of interactive activities, including questions and answers.

Inquiry to Action: Interpreting Scientific Papers, Fourth Edition by Ruth V. Buskirk. ISBN 978-0-134-47861-6/0-134-47861-4 This guide helps students learn how to read and understand scientific research articles accompanied by questions that help students analyze the articles.


Student Learning Outcomes:

<table>
<thead>
<tr>
<th>Upon successful completion of this course, students will be able to:</th>
<th>Program Learning Outcome # Alignment</th>
<th>Core Curriculum Outcome Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Explain life has certain characteristics and begins at a molecular level.</td>
<td>1, 2, and 4</td>
<td>Critical Thinking, Problem Solving, Discipline Specific Knowledge</td>
</tr>
<tr>
<td>2 Explain how the structure and function of molecules determines the structure and function of the cell to make life possible.</td>
<td>1, 2, and 4</td>
<td>Critical Thinking, Problem Solving, Discipline Specific Knowledge</td>
</tr>
<tr>
<td>3 Demonstrate an understanding of the four types of biological molecules by examining their structure and function.</td>
<td>1, 2, and 4</td>
<td>Critical Thinking, Problem Solving, Discipline Specific Knowledge</td>
</tr>
<tr>
<td>4 Relate the characteristics of life to the structure and function of the cell and its organelles.</td>
<td>1, 2, and 4</td>
<td>Critical Thinking, Problem Solving, Discipline Specific Knowledge</td>
</tr>
<tr>
<td>5 Distinguish between the different ways in which substances are transported across cell membranes.</td>
<td>1, 2, and 4</td>
<td>Critical Thinking, Problem Solving, Discipline Specific Knowledge</td>
</tr>
<tr>
<td>6 Explain how matter and energy flow during life’s processes and how that flow is regulated.</td>
<td>1, 2, and 4</td>
<td>Critical Thinking, Problem Solving, Discipline Specific Knowledge</td>
</tr>
<tr>
<td>7 Compare and contrast the stages of anaerobic and aerobic cellular respiration describe how cells harvest chemical energy to generate ATP.</td>
<td>1, 2, and 4</td>
<td>Critical Thinking, Problem Solving, Discipline Specific Knowledge</td>
</tr>
</tbody>
</table>
8 Illustrate the relationship between the reactions that take place in photosynthesis that use light and chemical energy to make organic molecules of food.

9 Predict the possible outcomes when the cycle is not regulated properly.

10 Apply scientific approaches to problem solving and critical thinking to make informed decisions.

11 Conduct of laboratory investigations using environmentally appropriate, and ethical practices.

12 Apply appropriate concepts, tools, and techniques of scientific inquiry.

13 Apply scientific methodology and demonstrate the ability to draw conclusions based on observation, analysis, and synthesis.

14 Apply methods of scientific measurement, analyze experimental data and report experimental results in scientific format.

This syllabus is subject to change at the discretion of the instructor

<table>
<thead>
<tr>
<th>Major Course Requirements</th>
<th>Method of Determining Final Course Grade</th>
<th>Value</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LECTURE</td>
<td>Lecture Exams</td>
<td>5 Exams (100 points each)</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>Mastering Biology Dynamic Study Modules</td>
<td>10 Modules (10 points each)</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>Mastering Biology Chapter Homework</td>
<td>10 Chapters (Points vary)</td>
<td>235</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>855</strong></td>
<td></td>
</tr>
<tr>
<td>LAB</td>
<td>Lab Activities</td>
<td>10 Activities (15 points each)</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>Laboratory Practical Exams</td>
<td>4 Exams (50 points each)</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Biology Lab Project</td>
<td>1 Project (100 points each)</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td><strong>Lab Total:</strong></td>
<td><strong>450</strong></td>
<td></td>
</tr>
</tbody>
</table>

Extra Credit (contingent upon participation in class and accuracy of responses)

| FINAL GRADE                | 4 Writing Assignments                 | 100   |

Grading Criteria and Conversion:
A = 90% to 100%
B = 80% to 89%
C = 70% to 79%
D = 60% to 69%
F = 0% to 59%
## Detailed Description of Major Assignments:

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Description:</th>
<th>Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Exams</td>
<td>Student’s knowledge of chapter content will be assessed using a combination of multiple choice and free response questions.</td>
<td>Every Monday from 1:30 pm – 3:30 pm</td>
</tr>
<tr>
<td>Mastering Biology Assignments</td>
<td>The Mastering Biology Assignments are adaptive learning modules designed to help students identify and distinguish the material you know from the information you have not yet mastered so you can more effectively focus your studies.</td>
<td>Dynamic Study Modules: Tuesdays &amp; Thursdays 8:00 am</td>
</tr>
<tr>
<td>Lab Activities</td>
<td>Students will engage in lab modules, record lab findings, and answer questions based on lab content and lab outcomes.</td>
<td>Mondays &amp; Wednesdays at 12:30 pm</td>
</tr>
<tr>
<td>Laboratory Practical Exams</td>
<td>Student’s knowledge of scientific practices and concepts gained during lab will be assessed using a combination of multiple choice and free response questions.</td>
<td>Lab Practical Exams will post on Mondays at 8:00 am and are due on Fridays at 4:00pm</td>
</tr>
<tr>
<td>Biology Lab Project</td>
<td>Students will complete an independent investigation and write a formal lab report based on their findings</td>
<td>TDB</td>
</tr>
</tbody>
</table>

## Course Procedures and Policies

Taskstream is a tool that Prairie View A&M University uses for assessment purposes. One of your assignments is REQUIRED to be submitted as an "artifact," an item of coursework that serves as evidence that course objectives are met. More information will be provided during the semester, but for general information, you can visit Taskstream via the link in eCourses.

I. **DIVERSITY STATEMENT**: The Department of Biology values the perspectives of individuals from all backgrounds reflecting the diversity of our students. We broadly define diversity to include race, gender identity, national origin, ethnicity, religion, social class, age, sexual orientation, political background, and physical and learning ability. We strive to make this classroom and this department an inclusive space for all students.

II. **COMMITMENT TO LEARNING**: You must be able to balance your time dedicated to this class along with your other responsibilities. Science courses often demand a much larger amount of your time than other courses. You must create a schedule where you have reserved a reasonable amount of time daily to focus on studying and completing online assignments for this course. My purpose in this class is to act as your guide through this subject material. I must make sure that your grade in this class indicates your mastery of the subject material required by this college. This class is 5 credit hours and you will need to commit to time it will take to be successful in the course. A 5 credit hour course corresponds to a minimum of 42 hours of student engagement per week for a 5-week summer course. This time may be spent on discussions, readings and lectures, study and research, and assignments. Procrastination and cramming will lead to negative consequences. At worst, this will lead to failing the class. At best, you pass but fail to truly learn the material.
III. **ONLINE PARTICIPATION – MASTERING BIOLOGY:** You will be required to enroll in the online course designed by your instructor located through the Mastering website supported by Pearson Publishing. You will complete online assignments, which will constitute a percentage of your grade in this course. You will be able to access Mastering Biology and register using the link located in the Course Resources module on Canvas.

**ZOOM:** It is mandatory that you attend all scheduled ZOOM sessions during the scheduled class times. If you are unable to attend the live class session, you are required to watch the video of the recorded session.

IV. **MINIMUM TECHNOLOGY REQUIREMENTS:** Students are required to maintain to have access to the following:

A. A computer (desktop/laptop) or mobile device (tablet) that is less than 5 years old
B. Speakers/headphones/earbuds for listening to audio or videos presented in courses.
C. Webcam for interacting in course activities that require video feedback from students (such as VoiceThread), video test proctoring (such as Respondus Monitor, Examity), or other third-party tools
D. An Internet Browser, such as Mozilla Firefox and Google Chrome preferred.
E. Adobe Acrobat Reader (latest version) - Download.
F. A stable high speed Internet connection

V. **CLASS FORMAT:** The class instructor facilitates an asynchronous, and synchronous course. This class requires student participation and demonstrations. The instructor will ask students questions, present problems to solve and use audiovisuals to demonstrate concepts. Students should be prepared to actively participate in class to demonstrate their knowledge of biological concepts.

VI. **MATERIALS:** Students are required to maintain a folder with all class notes, handouts, and reports. You will also need access to a reliable internet connection and a computer.

Students are required to maintain a lab notebook with all complete record of procedures (the actions you take), the reagents you use, the observations you make (these are the data), and the relevant thought processes that would enable another scientist to reproduce your observations.

VII. **USING PROCTORIO FOR ONLINE ASSESSMENTS:** Unless otherwise stated, all lecture and lab exams, and extra credit writing assignments will be given using Proctorio. Proctorio can only be used on a computer and in the Chrome Browser and you will NOT be able to complete any Proctorio assignment on your smartphone or tablet. You will need a computer whether laptop or desktop for these assignments. Download the [Proctorio Chrome Extension](#) to your computer.

VIII. **SUBMITTING ASSIGNMENTS:** All assignments must be submitted online via Canvas or Mastering Biology. The instructor will not accept any assignments via email unless prior arrangements are made.

IX. **MAKE-UP ASSESSMENTS:** You are required to complete assessments as scheduled with the rest of your class. No make-up will be given automatically. If you cannot complete an assessment during the scheduled time you must contact the instructor immediately to discuss your options (e-mail within 24 hours of missing the assessments and the make-up must be taken within 72 hours after the assessments has been administered). Make-ups are will be given in a free-response format during a designated day and time at the discretion of the instructor.

Do not assume that you are eligible to take a make-up. It is up to the instructor decide if a student is eligible for a make-up pending the submission of the appropriate documentation. Appropriate documentation must be supplied before any make-up will be scored (please discuss with instructor what is considered an appropriate documentation).

If students do not appear at the prearranged time or meet the prescribed deadline for makeup work, they forfeit their rights for further makeup of that work and will receive a grade of a zero.
LATE WORK: Late work is not accepted*. Any assignment not submitted by the due date will receive a 0 grade, unless prior arrangements are approved by the instructor. *Mastering Biology Homework Quizzes are accepted late and have a penalty of 20% per day.

CLASS ATTENDANCE: Success in this course is dependent on your active participation and engagement throughout the course. As such, students are required to complete all assignments by the due date, and to actively participate in class discussions.

Students are expected to:

- Log on at least four times a week – on different days in order to complete weekly assignments, assessments, discussions and/or other weekly deliverables as directed by the instructor and outlined in the syllabus
- Participate in the weekly activities, this means that, in addition to attending the schedule meetings, students are expected to actively participate in class discussions and class activities.

Your attendance will be taken in the form of your participation during live Zoom sessions and activity on Canvas. Attendance in this class is not only important to your success in this class, but also to the success of the entire class. This course is designed to be inter-active and student-centered.

In case of absence, it is the student's responsibility to contact the instructor.

Excused absences will only be considered under extenuating circumstances and at the instructor’s discretion. Extenuating circumstances include sickness requiring hospitalization (not doctor’s appointments), death of an immediate family member (parent, sibling, spouse, and children), military obligations, and religious holidays (which requires a written notice to be provided to the instructor no later than the second-class meeting of the semester). Official documentation must be provided in the case of an excused absence (i.e., medical paperwork, funeral acknowledgement in newspaper).

CLASS CONDUCT: It is the goal of the instructor to maintain the integrity of the course and an environment conducive to learning. Students are expected to follow Prairie View A&M University Code of Student Conduct and adhere the course procedure and policies.

A. Academic Dishonesty: No cheating on exams, quizzes, reports, or any graded activity. Cheating will result in a grade of a zero.

B. Online Etiquette: It is important to recognize that the online classroom is in fact a classroom, and certain behaviors are expected when you communicate with both your peers and your instructors. These guidelines for online behavior and interaction are known as netiquette. Please review the “NETIQUETTE GUIDE FOR ONLINE COURSES” posted on Canvas to familiarize yourself with the proper netiquette for this course.

ASSIGNMENT FOLLOW-UP: All assignments that are automatically graded will be available for review after the assignment is completed with the exception of exams and extra credit writing assignments. Assignments with open-ended responses will receive a grade and instructor feedback within a week after the due date.

To review assignments that are not available to view online, you must set up an appointment during the instructor’s office hours. Students will have 7 days after the assignment grade has posted to discuss their performance on the assignment with the instructor. After the 7-day follow-up period, students will forfeit the opportunity to discuss the assignment with the instructor.

COMMUNICATION: My primary means of communication with you will be through the email address listed in this syllabus and email messaging via Canvas. Do not expect instantaneous replies and responses. You can expect a response to communications within 48 hours Monday – Friday from 9:00 am – 5:00 pm.

I expect you to check your PVAMU student email account and Canvas Inbox daily and to use these systems as your primary mode of communication with me. Failure to keep up with email communications from me will
solely be your responsibility as the student. Only email me from your PVAMU student email account. In the subject line of the email please write the course code and term in the following format: **BIOL 1015 Summer 2021.** Any email that does not have the proper subject line will possibly be overlooked and receive a delayed response.

If a student’s parent or guardian requests a meeting with the instructor, the student and a biology faculty member must be present.

**Taking Exams: Exams in this course are administered through PVAMU eCourses with Proctorio**

Requirements to take exams include:
- A reliable computer, desktop or laptop (phones, tablets, and iPads are not allowed).
- Windows: 7 or higher • Mac: OS 10.11 or higher • Chromebook: Chrome OS 58 or higher
- Web camera (internal or external) & microphone
- A room to take the exam where you are alone (other individuals in the room are not allowed)

To learn more about Proctorio and how to setup, read the information in this [link](#).

I. **Exam Guidelines:** When taking an online quiz, follow these guidelines:
- Have your ID available
- Ensure you’re in a location where you won’t be interrupted
- Turn off all other devices (e.g. tablets, phones, second computers) and place them outside of your reach
- Before starting the test, know how much time is available for it, and also that you’ve allotted sufficient time to complete it
- Clear your desk or workspace of all external materials not permitted - books, papers, other devices
- Remain at your computer for the duration of the test

To produce a good webcam video, do the following:
- Avoid wearing baseball caps or hats with brims or an
- Ensure your computer or device is on a firm surface (a desk or table). Do NOT have the computer on your lap, a bed, or other surface where the device (or you) are likely to move
- If using a built-in webcam, avoid readjusting the tilt of the screen after the webcam setup is complete
- Take the exam in a well-lit room but avoid backlighting (such as sitting with your back to a window)

II. **Exam Assistance:**

1. The fastest way to get support is though the live chat. Just click the extension icon once you are in the exam

2. Proctorio have Frequently Asked Questions from [https://proctorio.com/support](https://proctorio.com/support)
3. If you're still unable to resolve a technical issue with Proctorio, email support@proctorio.com and provide detailed information about your problem and what steps you took to resolve it.

4. If your computer freezes during a quiz or exam and the timer shows time available, stop taking the quiz/exam. Close the window and contact your instructor right away.

III. **Academic Violations during Proctorio Exams:** You will receive a zero on your exam for violating any of the following rules:

   A. Your webcam check must show that you are working alone in an isolated room.

   B. Your webcam check must show that all accessible academic resources are stored away during the exam such as textbook, unapproved written or digital notes, anything attached to your monitor/computer that can be considered notes (i.e. post-its) must be put away and out of sight while taking the exam.

   C. During your webcam check with an internal webcam, you will need to use a hand-held mirror to show that the computer and monitor are free of any attachments using the mirror reflection of the work area.

   D. No one should be in the room with you at any time during the exam. Lock the door and inform everyone not to enter the room during the exam.

   E. Do not get up and leave your computer at any point during the exam

   F. No restroom breaks or breaks of any kind are allowed.

   G. You must take the exam on a table or desk. Do not take exams in your bed, on the floor, etc.

   H. Your entire face, head, and torso must be visible during the exam.

   I. Do not deviate your head and/or eyes away from the monitor.

   J. Do not play any background noise such as TV or radio during the exam.

   K. Do not use headphones/earbuds during the exam.

   L. Do not wear caps, bonnets, beanies, hoodies, or any other head covering.

   M. The room must be well illuminated during the exam. Do not take the exam in the dark.

   N. Do not take the exam in a public location. You must be in an isolated room.

   O. No eating or drinking during the exam.

   P. No pets/animals in the room during the exam.

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**Student Support and Success**

**John B. Coleman Library**
The library and its partners have as their mission "to provide resources and instructional material in support of the evolving curriculum, as a partner in Prairie View A&M University's mission of teaching, research, and service" and to support the
University's core values of "access and quality, diversity, leadership, relevance, and social responsibility" through emphasis on ten key areas of service. It maintains library collections and access both on campus, online, and through local agreements to further the educational goals of students and faculty.

**University Tutoring Center**

The University Tutoring Center offers Tutoring via peer tutoring. The services include workshops (i.e., Save My Semester, Recalculate Your Route), seminars (i.e., Tools You Can Use: TI-84), group review sessions (i.e., College Algebra Topic Reviews, GRE Preparation), group study opportunities (i.e., TSIA, HESI, Study Break, Exam Cram), and test-taking strategies (How to take Notes, Study Buddy, 5 Day Study Guide). The Tutoring Center is a nationally certified tutoring program through the National Tutoring Association. The peer tutors are trained and certified by the coordinator each semester. Location: J.B. Coleman Library

**Online Tutoring**

The University Tutoring Center has partnered with Tutor.com to offer 24/7 academic support to every registered student at PVAMU. Online Tutoring is available for just about every subject offered at the University. Students can access tutoring support through their student portal and should be connected to a tutor in 30 seconds or less. Online tutoring is free of charge. Each PVAMU student is allotted 500 minutes of online tutoring time. Additional minutes can be requested by contacting the University Tutoring Center at (936) 261-1558.

To access the online tutoring platform, please follow these directions:

1. Log onto PV Place (The Student Portal)
2. Once on, click the tab on the left of the page that says “Tutoring”
3. Next, follow the link that says Online Tutoring

**COMPASS**

The Center for the Oversight and Management of Personalized Academic Student Success (COMPASS) is designed to help Prairie View students in their second year and beyond navigate towards graduation by providing the following services: Academic Advisement, Targeted Tutorials for Personalized Learning, Campus-Wide Referrals, and Academic & Social Workshops. Location: J.B. Coleman Library

**Writing Center**

The Writing Center provides student consultants on all aspects of the writing process and a variety of writing assignments. Writing Center consultations assist students in such areas as prewriting, brainstorming, audience awareness, organization, research, and citation. Location: Hilliard Hall 121

**University Rules and Procedures**

**Disability statement (See Student Handbook):**

Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

**Academic misconduct (See Student Handbook):**

You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

**Forms of academic dishonesty:**
1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.

2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.

3. Fabrication: use of invented information or falsified research.

4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else’s words, ideas, or data as one’s own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one’s own work also constitutes plagiarism.

Nonacademic misconduct (See Student Handbook)
The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the instructor’s ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

Sexual misconduct (See Student Handbook):
Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

Attendance Policy
Prairie View A&M University requires regular class attendance. Excessive absences will result in lowered grades. Excessive absenteeism, whether excused or unexcused, may result in a student’s course grade being reduced or in assignment of a grade of “F”. Absences are accumulated beginning with the first day of class.

Student Academic Appeals Process
Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor’s assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.

Disability statement (See Student Handbook):
Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

TECHNICAL CONSIDERATIONS

Minimum Recommended Hardware and Software:
- Intel Computer or Laptop with Windows 7; Mac with OS X; iPad/Tablet with Wi-Fi
- High speed Internet access
- 8 GB Memory
- Hard drive with 320 GB storage space
- 15” monitor, 800x600, color or 16 bit
• Sound card w/speakers
• Microphone and recording software
• Keyboard & mouse
• Most current version of Google Chrome, Safari, Internet Explorer or Firefox

Note: Be sure to enable Java & pop-ups and Adobe Flash

Participants should have a basic proficiency of the following computer skills:
• Sending and receiving email
• A working knowledge of the Internet
• Proficiency in Microsoft Word (or a program convertible to Word)
• Proficiency in the Acrobat PDF Reader
• Basic knowledge of Windows or Mac O.S.

Netiquette (online etiquette):
Students are expected to participate in all discussions and virtual classroom chats as directed. Students are to be respectful and courteous to others on discussions boards. Foul or abusive language will not be tolerated.

Technical Support:
Students should go to https://mypassword.pvamu.edu/ if they have password issues. The page will provide instructions for resetting passwords and contact information if login issues persist. For other technical questions regarding eCourses, call the Office of Distance Learning at 936-261-3283

Communication Expectations and Standards:
Emails or discussion postings will receive a response from the instructor, usually in less than 48 hours. Urgent emails should be marked as such. Check regularly for responses.

Discussion Requirement:
Online courses often require minimal to no face-to-face meetings. However, conversations about the readings, lectures, materials, and other aspects of the course can take place in a seminar fashion. This will be accomplish by the use of the discussion board. The exact use of discussion will be determined by the instructor.

It is strongly suggested that students type their discussion postings in a word processing application and save it to their PC or a removable drive before posting to the discussion board. This is important for two reasons: 1) If for some reason your discussion responses are lost in your online course, you will have another copy; 2) Grammatical errors can be greatly minimized by the use of the spell-and-grammar check functions in word processing applications. Once the post(s) have been typed and corrected in the word processing application, it should be copied and pasted to the discussion board.
<table>
<thead>
<tr>
<th>Week/One 6/1</th>
<th>LECTURE TOPIC</th>
<th>ACTIVE LEARNING ACTIVITIES</th>
<th>PROBLEM SETS</th>
<th>LAB ACTIVITIES</th>
</tr>
</thead>
</table>
| Week Two 6/7 | • Chapter 1: Evolution, the Themes of Biology, and Scientific Inquiry  
• Chapter 2: The Chemical Context of Life  
• Penicillin: From Chemistry to Cure (Part I-II) | • Penicillin: From Chemistry to Cure (Part I-II) | Chemical Bonding | 1. The Process of Science  
2. Measurements in Biology: The Metric System and Data Analysis |
| Week Three 6/14 | • Chapter 3: Water and Life  
• Chapter 4: Carbon and Molecular Diversity of Life  
• Do Grasshoppers Sweat?“  
• Penicillin: From Chemistry to Cure (Part III) | • Do Grasshoppers Sweat?“  
• Penicillin: From Chemistry to Cure (Part III) | Properties of Water  
• Functional Groups | 3. Solutions, Acids, and Bases: The pH Scales  
4. Biological Molecules: Carbohydrates, Proteins, Lipids, and Nucleic Acids |
| Week Four 6/21 | • Chapter 5: The Structure and Function of Large Biological Molecules  
• Chapter 7: Membrane Structure and Function  
• A Curious Mission: An Analysis of Martian Molecules  
• Water Can Kill? Exploring Effects of Osmosis | • A Curious Mission: An Analysis of Martian Molecules  
• Water Can Kill? Exploring Effects of Osmosis | Biological Molecules  
• Cellular Transport | 5. Microscopy and The Cells  
6. The Structure and Function the Cell Membrane |
| Week Five 6/28 | • Chapter 8: An Introduction to Metabolism  
• Chapter 9: Cellular Respiration and Fermentation  
• Why is Patrick Paralyzed?  
• The Mystery of the Seven Deaths | • Why is Patrick Paralyzed?  
• The Mystery of the Seven Deaths | Biochemical Reactions and Enzymes  
• Glycolysis, Respiration and Fermentation | 7. The Factors Affecting the Rate of Activity  
8. Cellular Respiration: Aerobic and Anaerobic Oxidation of Organic Molecules |
| Week Six 7/6 | • Chapter 10: Photosynthesis  
• Chapter 12: The Cell Cycle  
• Killing Chloroplasts: Herbicides Targeting Photosynthesis | • Killing Chloroplasts: Herbicides Targeting Photosynthesis | Chemosmotic Principle & Photosynthesis  
• Regulation of the Cell Cycle | 9. Photosynthesis  
10. The Cell Cycle |

FINAL EXAMS