**BIOL 1501 General Biology**  
Fall Semester, 2021

**Instructor:** Dr. George E. Brown  
**Section # and CRN:** Lecture section P02 and 17858, Lab section P82 and 17868  
**Office Location:** 430F E. E. O'Banion Science Building  
**Office Phone:** 936-261-3161  
**Email Address:** gebrown@pvamu.edu  
**Office Hours:** MWF 1:00 p.m. to 1:50 p.m. following class by appointment.  
Tuesday/Thursday 3:00 p.m. to 3:50 p.m. following class by appointment.  
**Mode of Instruction:** Face to Face  
**Course Location:** Room 309 E. E. O'Banion Science Building  
**Class Days & Times:** MWF 12:00 p.m. to 12:50 p.m. for lecture. Tuesdays and Thursdays Lab 1:00 p.m. to 2:50 p.m.  
**Catalog Description:** Basis of life, cell theory, cell structure, energy transformation, genetic variability, and origins of diversity of organisms

**Prerequisites:** Course is designed for Biology majors and minors  
**Co-requisites:** BIOL 1501 CRN # 17868 P82 section, General Biology because General Biology is a combined lecture-laboratory course for five credit hours. Students must be enrolled in both the lecture and laboratory sections to earn the one grade for the course.  

**Required Text(s):** Campbell Biology, 12th edition, by Lisa A. Urry, Michael L. Cain, Steven A. Wasserman, Peter V Minorsky, and Rebecca B. Orr  

**Student Learning Outcomes:**  
Upon successful completion of this course, students will be able to:  

<table>
<thead>
<tr>
<th>Program Learning Outcome #</th>
<th>Core Curriculum Outcome Alignment</th>
</tr>
</thead>
</table>
| 1  | All core outcomes 1, 2, 3, 4 | 1. Critical Thinking  
2. Communication  
3. Problem solving  
4. Personal and social responsibility |
<table>
<thead>
<tr>
<th></th>
<th>Demonstrate understanding of biological laboratory investigations, using safe, environmentally appropriate, and ethical practices.</th>
<th>All core outcomes 1, 2, 3, 4</th>
<th>1.Critical Thinking 2.Communication 3.Problem solving 4.Personal and social responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Describe the characteristics of living things that distinguish them from non-living things in the following ways: Describe the hierarchy of biological organization. Contrast the six kingdoms of living things and know examples of each. Summarize the role and examples of producers, consumers, and decomposers.</td>
<td>1.Critical Thinking 2.Communication 3.Problem solving 4.Personal and social responsibility</td>
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<tr>
<td>5</td>
<td>Demonstrate an understanding of the chemical basis of life by: Naming the common elements in living things and provide a function of each. Learning the mass, charge, and arrangement of electrons, protons and neutrons in the common atoms of living things to include the electron orbitals, energy levels, and electron shells. Distinguishing between atomic number and atomic mass. Explaining how the number of valence electrons of an atom is related to its chemical properties. Comparing the mechanisms by which ionic bonds, covalent bonds, and hydrogen bonds are formed. Explaining how cations and anions form and how they interact. Distinguishing between oxidation and reduction. Showing how hydrogen bonds are formed between water molecules and explain how they are responsible for the various properties of water that are essential for life. Converting the hydrogen ion concentration (moles/liter) of a solution to a pH value. Comparing the mechanism of acids, bases, and salts. Describe the composition of salts and why they are important to organisms.</td>
<td>1.Critical Thinking 2.Communication 3.Problem solving 4.Personal and social responsibility</td>
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<tr>
<td>6</td>
<td>Demonstrate an understanding of the four types of organic molecules in the following ways: Distinguishing between organic molecules and inorganic compounds. Describing the properties of carbon that make it the central atoms of organic compounds. Distinguishing between the three types of isomers. Identifying the major functional groups that present in certain organic molecules. Learning the function and draw the structures of the carbohydrates, lipids, proteins, and nucleic acids to include the building block molecules: monosaccharaides, glycerol, fatty acids, amino acids, phosphates, and nucleotides. Understanding biological function of each type of organic molecules organic molecules studied. Drawing the structures of amino acids, explain how they are grouped according to their radical, group, and explain the levels of protein structure. Drawing the chemical structures of ribonucleotides and deoxyribonucleotides to include the purines, pyrimidines, pentoses, and phosphate groups.</td>
<td>1.Critical Thinking 2.Communication 3.Problem solving 4.Personal and social responsibility</td>
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</table>
| 7 | Demonstrate why the cell is the basic unit of life and describe the cell theory by:  
Comparing and contrasting the characteristics of prokaryotic and eukaryotic cell.  
Explaining why the relationship between surface area and volume of a cell determines its efficiency and entrance into cell division.  
Describing the structure and function of the various bacterial cell structures.  
Describing the structure and function of eukaryotic cell structures and organelles  
Explaining the methods used to study cells.  
Tracing the path of proteins synthesized in the rough endoplasmic reticulum as they are processed, modified, and transported to specific destinations.  
Comparing the functions of mitochondria and chloroplasts.  
Explaining the structure and function of microtubules, intermediate filaments, and actin filaments and their importance to cells and animal tissues.  
Describing how flagella, cilia, pseudopods, actin and myosin, function in cellular and animal movement. | All core outcomes 1, 2, 3, 4 | 1. Critical Thinking  
2. Communication  
3. Problem solving  
4. Personal and social responsibility |
|---|---|---|---|
| 8 | Demonstrate Knowledge the phospholipids bilayer structure and function of biological membranes in the following ways:  
Explaining the importance of cellular membranes and their functions.  
Explaining how the various classes of membrane proteins associate with phospholipids bilayer and discuss the role of each class of proteins.  
Describing the passage of materials through the membranes by diffusion, osmosis, facilitated diffusion, active transport, endocytosis, and exocytosis.  
Understanding how cells communicate by cell signaling.  
Demonstrating how cell form tissues and how the various cell junctions connect cells. | All core outcomes 1, 2, 3, 4 | Critical Thinking  
Communication  
Problem Solving  
Personal and social responsibility |
| 9 | Demonstrate Knowledge of the laws of thermodynamics that apply energy transformations in living systems by:  
Knowing how ATP and GTP are the energy currency of cells.  
Understanding how organic catalyst such as enzymes and ribozymes speed up specific chemical reactions in cells.  
Knowing how the various enzymes function and how they are regulated. | All core outcomes 1, 2, 3, 4 | Critical Thinking  
Communication  
Problem Solving  
Personal and social responsibility |
| 10 | Demonstrate an understanding of the four stages of aerobic respiration by:  
Knowing the enzyme catalyzed reaction steps in stage I of glycolysis and stage II of glycolysis.  
Drawing the substrates and products of each step of glycolysis.  
Drawing the enzyme, substrates, and products of the conversion of pyruvate to acetyl CoA.  
Drawing the enzymes, substrates, and products of each step of the citric acid cycle.  
Conceptualizing the energy conversions of each step of the electron transport chains and the coupled oxidative phosphorylation. | All core outcomes 1, 2, 3, 4 | Critical Thinking  
Communication  
Problem Solving  
Personal and social responsibility |
| 11 | Demonstrate knowledge of photosynthesis in the following ways:  
Knowing how covalent bonds of water are disrupted during the light dependent reaction and the three products are produced.  
Knowing how ATP is formed by chemiosmosis. | All core outcomes 1, 2, 3, 4 | Critical Thinking  
Communication  
Problem Solving |
<table>
<thead>
<tr>
<th>Problem</th>
<th>Description</th>
<th>Core Outcomes</th>
<th>Critical Thinking</th>
<th>Communication</th>
<th>Problem Solving</th>
<th>Personal and Social Responsibility</th>
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<tr>
<td><strong>4</strong></td>
<td>Demonstrate by drawing the enzyme catalyzed steps of the Calvin Cycle to include the substrates and products. Drawing the substrates and products of each step of the synthesis of alpha glucose from two molecules of glyceraldehyde 3-phosphate (G3P) molecules.</td>
<td>All core outcomes 1, 2, 3, 4</td>
<td>Critical Thinking</td>
<td>Communication</td>
<td>Problem Solving</td>
<td>Personal and Social Responsibility</td>
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<td><strong>12</strong></td>
<td>Demonstrate an understanding of cell communication and regulation of the cell cycle in the following ways: Understanding the structure and functions of cellular receptors. Describing signal transduction and the cellular response. Explaining how the cell cycle is regulated.</td>
<td>All core outcomes 1, 2, 3, 4</td>
<td>Critical Thinking</td>
<td>Communication</td>
<td>Problem Solving</td>
<td>Personal and Social Responsibility</td>
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<td><strong>13</strong></td>
<td>Demonstrate knowledge of chromosomes, mitosis, and meiosis by: Explaining chromosomes in terms of genes, loci, heterochromatin, euchromatin, and species number of chromosomes, sister chromatids, centromeres, and kinetochores. Describing the events of the stages of the eukaryotic cell cycle and how it is controlled. Diagraming the process of mitosis. Drawing the process of both stages of meiosis. Distinguishing between asexual reproduction and sexual reproduction. Distinguishing between haploid cells and diploid cells. Defining homologous chromosomes.</td>
<td>All core outcomes 1, 2, 3, 4</td>
<td>Critical Thinking</td>
<td>Communication</td>
<td>Problem Solving</td>
<td>Personal and Social Responsibility</td>
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<tr>
<td><strong>14</strong></td>
<td>Demonstrate knowledge of the basic principles of heredity in the following ways: Defining and using correctly, the terms allele, locus, genotype, phenotype, dominant, recessive, homozygous, heterozygous, monohybrid cross, dihybrid cross, trihybrid cross, and test cross. Applying the product rule and sum rule when predicting the outcomes of genetic crosses. Solving genetic problems involving complete dominance, incomplete dominance, epitasis, polygenes, multiple alleles, and X-linked inheritance. Explaining some of the ways that genes may interact to affect the phenotype. Explaining the genetic determination of sex.</td>
<td>All core outcomes 1, 2, 3, 4</td>
<td>Critical Thinking</td>
<td>Communication</td>
<td>Problem Solving</td>
<td>Personal and Social Responsibility</td>
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<td><strong>15</strong></td>
<td>Demonstrate knowledge of the structure of DNA determines the genetic codes of genes in the following ways: Summarizing the evidence observed in the 1950's which demonstrated that DNA was the genetic material. Drawing how the four types of deoxyribonucleotide subunits are bonded together to form the structure of DNA. State the base pairing rule for DNA. Drawing how the ribonucleotide subunits are bonded together to form RNA. Understanding DNA transformation of bacteria Understanding bacteriophage DNA transduction of bacteria. Summarizing the evidence that demonstrated semi-conservative replication of DNA. Explaining the steps of DNA replication showing catalytic function of each enzyme involved in DNA replication and its function. Comparing the organization of DNA in prokaryotic and eukaryotic cells.</td>
<td>All core outcomes 1, 2, 3, 4</td>
<td>Critical Thinking</td>
<td>Communication</td>
<td>Problem Solving</td>
<td>Personal and Social Responsibility</td>
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<td><strong>16</strong></td>
<td>Demonstrate by drawings and explanations knowledge of gene expression (transcription) in the following ways: By summarizing the early evidence that most genes code for proteins. Outlining the flow genetic information from DNA to Protein (central dogma). Describing the various types of RNA polymerases and how they catalyze the synthesis of specific RNA molecules.</td>
<td>All core outcomes 1, 2, 3, 4</td>
<td>Critical Thinking</td>
<td>Communication</td>
<td>Problem Solving</td>
<td>Personal and Social Responsibility</td>
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<td>Knowledge the substrates and products of transcription</td>
<td>All core outcomes 1, 2, 3, 4</td>
<td>Critical Thinking Communication Problem Solving Personal and Social Responsibility</td>
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| **17** Demonstrate an understanding of the substrates, products, enzymes and ribozymes involved in the steps of translation by:  
Identifying the features of tRNA that function in decoding the genetic information during translation.  
Explaining how ribosomes function in protein synthesis.  
Explaining the processes of initiation, chain elongation, and chain termination in protein synthesis.  
Comparing mRNA synthesis, modifications, and ribosome recognition sites in prokaryotes and eukaryotes. | All core outcomes 1, 2, 3, 4 | Critical Thinking Communication Problem Solving Personal and Social Responsibility |
| **18** Demonstrate knowledge of regulation of gene expression in the following ways:  
Explaining the organization of bacterial genes into operons.  
Explaining the function of each gene.  
Explaining why some operons are inducible and others are repressible.  
Explaining the role of repressors in the regulation of gene expression.  
Differentiating between positive and negative control of operon gene expression.  
Explaining the components of a eukaryotic gene and the DNA sequences that are involved in the regulation of transcription of that gene.  
Providing examples of DNA binding proteins and describe how they bind to DNA.  
Explaining how transcriptional factors (proteins) facilitate transcription.  
Describing how a change in chromosomal structure affects which genes are expressed.  
Explaining how one gene in a multicellular eukaryote might be able to produce different products in different types of cells.  
Explaining the types of regulatory controls that can be exerted in eukaryotes after the mature mRNA is formed. | All core outcomes 1, 2, 3, 4 | Critical Thinking Communication Problem Solving Personal and Social Responsibility |
| **19** Demonstrate knowledge of DNA technologies and genetic engineering by:  
Demonstrating how restriction enzymes cut DNA molecules and provide examples of how these restriction endonucleases are used in recombinant DNA technology.  
Describing the properties of plasmids other cloning vectors.  
Distinguishing between a genomic library and a cDNA library.  
Describing the uses for DNA hybridization probes.  
Explaining how specific primers are used to amplify (replicate) specific genes from mixture genomic DNA or cDNA.  
Explaining and comparing the various methods of sequencing DNA.  
Naming at least ten important proteins that have been produced by genetic engineering and the method employed.  
Describing the production of the transgenic plants and animals presented in the textbook. | All core outcomes 1, 2, 3, 4 | Critical Thinking Communication Problem Solving Personal and Social Responsibility |
| **20** Demonstrate knowledge of the human genome and human genetics in the following ways:  
Explaining human genetics, human genome, bioinformatics, and pharmacogenomics.  
Determining the probable genotypes of the individuals in a pedigree.  
Distinguishing between chromosomal abnormalities and single gene defects.  
Explaining how non-disjunction may occur during meiosis to cause Down's syndrome, Klinefelter Syndrome, and Turner Syndrome.  
Explaining how each of the following genetic defects is inherited: phenylketonuria, sickle cell anemia, cystic fibrosis, Tay-Sachs disease, Huntington disease, color blindness, and hemophilia A. | All core outcomes 1, 2, 3, 4 | Critical Thinking Communication Problem Solving Personal and Social Responsibility |
Explaining how prenatal diagnosis is made by amniocentesis, chorionic villus sampling and ultra-sound imaging.

21 Demonstrate an understanding of how the regulation of gene expression controls development of multicellular organisms by:
- Distinguishing between cell determination and cell differentiation.
- Describing the evidence that demonstrated totipotency (nuclear equivalence) of some differentiated plant and animal cells.
- Explaining the vertebrate cell lineage from zygote to germ layers to adult structures, organs, and systems.
- Distinguishing between the function of maternal effect genes, segmentation (zygotic) genes, and homeotic genes of animals.
- Explaining how cell signaling and transcription factors control the order in which genes are expressed during development. Provide some examples of genes that are known to function as genetic switches in development.
- Explaining induction and process of apoptosis (programmed cell death) and give examples of the roles they play in development.

<table>
<thead>
<tr>
<th>Course Grade Requirement</th>
<th>Value</th>
<th>Total</th>
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<tbody>
<tr>
<td>1) Exam 01, Tuesday 08/31/21 covers chapters 1 to 3</td>
<td>5%</td>
<td>5</td>
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<tr>
<td>2) Exam 02, Tuesday 09/07/21 covers chapters 1 to 4</td>
<td>5%</td>
<td>5</td>
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<td>3) Exam 03, Tuesday 09/14/21 covers chapters 1 to 5</td>
<td>5%</td>
<td>5</td>
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<td>4) Exam 04, Tuesday 09/21/21 covers chapters 1 to 6</td>
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<td>5) Exam 05, Tuesday 09/28/21 covers chapters 1 to 7</td>
<td>5%</td>
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<td>6) Exam 06 Lab exam Tuesday 10/05/21 covers all labs</td>
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<td>5</td>
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<td>7) Exam 07, Tuesday, 10/12/21 covers chapters 1 to 10</td>
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<td>8) Exam 08, Tuesday, 10/19/21 covers chapters 1 to 12</td>
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<td>9) Exam 09, Tuesday, 10/26/21 covers chapters 1 to 13</td>
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<td>10) Exam 10, Tuesday, 11/02/21 covers chapters 1 to 14</td>
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<tr>
<td>11) Exam 11, Tuesday, 11/09/21 covers chapters 1 to 15</td>
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<tr>
<td>12) Exam 12, Tuesday, 11/16/21 covers chapters 1 to 17</td>
<td>5%</td>
<td>5</td>
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<tr>
<td>13) Exam 13, Tuesday, 11/23/21 comprehensive laboratory exam</td>
<td>5%</td>
<td>5</td>
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<tr>
<td>FINAL EXAM, covers chapters 1 to 17 during PVAMU exam period</td>
<td>35%</td>
<td>35</td>
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<tr>
<td>Total:</td>
<td>100%</td>
<td>100</td>
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</table>

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: [Describe each assignment valued at 10% of grade or more]
Course Procedures or Additional Instructor Policies

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

Course Procedures or Additional Instructor Policies

I. [Course Purpose and Objectives:]

The purpose of this course is to provide first year biology majors with a detailed knowledge of general biology that satisfies the prerequisites for entry into health profession schools and graduate biomedical programs. This is the first semester course of a comprehensive introduction of the concepts of modern biology for freshmen biology majors. It covers the chemical basis of life, organization of cells, biological membranes, cell communication system, energetics, and metabolism, how cells make ATP, energy releasing pathways, photosynthesis, regulation of the cell cycle, mitosis, meiosis, principles of heredity, DNA structure, regulation of gene expression, DNA Technology, genomics, and developmental genetics. The second semester course, BIOL 1501, is taught in the next semester. It covers the diversity of life, evolution, structure and life processes in plants and animals, and ecology. The outcome expectations for learners are listed above.

II. Type of Course:

The course instructor conducts discussion type classes to engage students to demonstrate their knowledge learned from reading the textbook. These classes require 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 by answering questions, or demonstrating on the marker board, their knowledge of biological concepts. Students must read the assigned textbook chapter and write notes of what they have read before the instructor discusses that chapter in class. Grades are determined by student performance on exams that test knowledge of the chapter’s study objectives. Students should be prepared to ask questions at the beginning of each class about concepts or questions that they were not able to comprehend during their individual studies. This should enhance student’s performance of the outcome expectations for learners.

Students are required to bring their general biology textbook and course materials to each class and when they meet with the instructor for office conferences, study sessions, tutorials, laboratories, or any part of the course. In recent years some students have misunderstood the purposes of office hours and committed inappropriate request for higher grades than they have earned. This instructor will not discuss such request.

III. EXAMS

All exams are cumulative covering course topics taught from the first day of class to the day of the exam.

Twelve semester exams are tentative scheduled based on the pace of the course and activities imposed by the University’s Administration as follows:
Exam 01, Tuesday, August 31, 2021
Exam 02, Tuesday, September 02, 2021
Exam 03, Tuesday, September 07, 2021
Exam 04, Tuesday, September 14, 2021
Exam 05, Tuesday, October 21, 2021
Exam 06, Tuesday, October 28, 2021 (Lab exam)
Exam 07, Tuesday, October 05, 2021
Exam 08, Tuesday, October 12, 2021
Exam 09, Tuesday, October 19, 2021
Exam 10, Tuesday, October 26, 2021
Exam 11, Tuesday, November 02, 2021
Exam 12, Tuesday, November 16, 2021
Exam 13, Tuesday, November 23, 2021 (Lab exam)

The cumulative final exam for BIOL 1501 section P02 will be scheduled by the University during the FINAL EXAM period, Thursday, December 2 to Wednesday, December 8, 2021 in classroom.

Final exams are required to be given only at the times and dates announced in the University Final Exam Schedule. Students must arrange their schedule and activities so that they are prepared and present for the final exam. Students are strongly advised to take all exams at the scheduled time. During the past 40 years, only four students have passed make-up exams in this class. Plan and schedule your activities so that you can be present to take all exams at the scheduled time.

IV. Class Attendance:
Learning is a voluntary act. The University Attendance Policy requires students to be present for each scheduled class. Excessive absenteeism will result in the student’s grade being reduced.

V. Conduct That Is Not Allowed:

a. Cellular phones, I-Pads, I-Pods, Palm pilots, CD players, Radios, Cameras, Lab top Computers and other sorts of high technology communication instruments are not allowed to be used for cheating on exams and tests.

b. No cheating on exams, quizzes, reports, or any graded activity. The Department of Biology has an honor code which all students enrolled in this course are required to read and sign.
### Semester Calendar

#### Week One:
**Topic Description**
Readings for:

- **Monday (M)**: Chapters 1 and 2
- **Tuesday (T)**: Chapters 2
- **Wednesday (W)**: Chapter 2
- **Thursday (R)**: Chapter 3
- **Friday (F)**: Chapter 3

**Assignment(s):**
MTWRF Study textbook chapters 1 to 3, power point presentations, and Clicker questions posted on e-course Canvas

#### Week Two:
**Topic Description**
Readings:

- **M**: Chapter 4
- **T**: Exam 01 covers chapters 1 to 3
- **W**: Chapter 4
- **R**: Chapter 5
- **F**: Chapter 5

**Assignment(s):**
MTWRF Study textbook chapters 4 and 5, power point presentations, and clicker questions, posted on e-course Canvas
Exam 01 on Tuesday in classroom covers chapters 1, 2, and 3

#### Week Three:
**Topic Description**
Readings:

- **M**: Chapter 5
- **T**: Exam 02 in classroom covers Chapters 1 to 5
- **W**: Chapter 6
- **R**: Chapter 6
- **F**: Chapter 6

**Assignment(s):**
MTWRF Study textbook chapters 5 and 6, power point presentations, and clicker questions, posted on e-course Canvas

#### Week Four:
**Topic Description**

- **M**: Chapter 6
- **T**: Exam 03 covers Chapters 1-6
- **W**: Chapter 7
- **R**: Chapter 7

**Assignment(s):**

- **Monday (M)**: Chapters 1 and 2
- **Tuesday (T)**: Chapters 2
- **Wednesday (W)**: Chapter 2
- **Thursday (R)**: Chapter 3
- **Friday (F)**: Chapter 3

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**Assignment(s):**
MTWRF Study textbook chapters 4 and 5, power point presentations, and clicker questions, posted on e-course Canvas
Exam 01 on Tuesday in classroom covers chapters 1, 2, and 3
Readings: F Chapter 7

Assignment (s): MTWRF Study textbook chapters 6 and 7, power point presentations, and clicker questions, posted on e-course Canvas Week Four Modules

Week Five:
Topic Description

MODULE 02; THE CELL

M Chapter 7
T Exam 04 covers chapters 1-7
W Chapter 8
R Chapter 8
F Chapter 8

Readings: MTWRF Study textbook chapters 7 and 8, power point presentations, and clicker questions posted on e-course Canvas Week Five Modules

Assignment (s):

Week Six:
Topic Description

MODULE 02; THE CELL

M Chapter 9
T Exam 05 covers chapters 1-8
W Chapter 9
R Chapter 9
F Chapter 9

Readings: MTWRF Study textbook chapters 9, power point presentations, and clicker questions posted on e-course Canvas Week Six Modules

Assignment(s)

Week Seven:
Topic Description

MODULE 02; THE CELL

M Chapter 10
T Chapter 10 and Exam 06 covers Lab
W Chapter 10
R Chapter 10
F Chapter 10

Readings: MTWRF Study textbook chapters 10 and 11, power point presentations, and clicker questions posted on e-course Canvas Week Seven Modules

Assignment (s):

Week Eight:
Topic Description

MODULE 02; THE CELL

M Chapter 11
T Exam 07 covers chapters 1-10
W Chapter 11
R Chapter 11
F Chapters 11

Readings: MTWRF Study textbook chapters 9 and 11,
**Week Nine:**
**Topic Description**
Readings:

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<tr>
<th>Assignment (s):</th>
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<tr>
<td>MTWRF Study textbook chapters 12 and 13, power point presentations, and clicker questions posted on e-course Canvas Week Nine Modules</td>
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**Week Ten:**
**Topic Description**
Readings:

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<th>Assignment (s):</th>
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<tr>
<td>MTWRF Study textbook chapters 12 and 14, power point presentations, and clicker questions posted on e-course Canvas Week Ten Modules</td>
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**Week Eleven:**
**Topics Description**
Readings:

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<th>Assignment (s):</th>
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<tr>
<td>MTWRF Study textbook chapters 14 and 15, power point presentations, and clicker questions posted on e-course Canvas Week Eleven Modules</td>
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**Week Twelve:**
**Topic Description**
Readings:

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<th>Assignment (s):</th>
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<tr>
<td>MTWRF Study textbook chapters 16 and 17, power point presentations, and clicker questions posted on e-course Canvas Week Twelve Modules</td>
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</tbody>
</table>
Week Thirteen:
Topic Description
Readings:

MODULE 03; GENETICS
M Chapter 17
T Exam 12 covers chapters 1 to 17
W Chapter 17
R Chapter 17
F Chapter 17

Assignment (s):
MTWRF Study textbook chapters 16 and 16, power point presentations, and clickers questions posted on e-course Canvas Week Thirteen Modules

Week Fourteen:
Topic Description
Readings:

MODULE 03; GENETICS
M Review Chapter 17
T Chapter Exam 13 Lab Exam
W Chapter 17
R Thanksgiving
F

Assignment (s):
MTWRF Study textbook chapters 15, 16, and 17, power point presentations, and clicker questions posted on e-course Canvas Week Fourteen Modules

Week Fifteen:
Topic Description

M Review chapters
T Review chapter
W Review chapter
R FINAL EXAM, Thursday, December 2, 2021 8:00 a.m. to 10:00 a.m.

Student Support and Success
John B. Coleman Library
The John B. Coleman Library’s mission is to enhance the scholarly pursuit of knowledge, to foster intellectual curiosity, and to promote life-long learning and research through our innovative services, resources, and cultural programs, which support the Prairie View A&M University’s global mission of teaching, service, and research. It maintains library collections and access both on campus, online, and through local agreements to further the educational goals of students and faculty. Website: https://www.pvamu.edu/library/; Phone: 936-261-1500

Academic Advising Services
Academic Advising Services offers students a variety of services that contributes to student success and leads towards graduation. We assist students with understanding university policies and procedures that affect academic progress. We support the early alert program to help students get connected to success early in the semester. We help refer students to the appropriate academic support services when they are unsure of the best resource for their needs. Faculty advisors support some students in their respective colleges. Your faculty advisor can be identified in Panther Tracks. Advisors with Academic Advising Services are available to all students. We are located across campus. Find your advisor’s location by academic major at www.pvamu.edu/advising. Phone: 936-261-5911

The University Tutoring Center
The University Tutoring Center (UTC) offers free tutoring and academic support to all registered PVAMU students. The mission of the UTC is to help provide a solid academic foundation that enables students to become confident, capable, independent learners. Competent and caring staff and peer tutors guide students in identifying, acquiring, and enhancing the knowledge, skills, and attitudes needed to reach their desired goals. Tutoring and academic support are offered face-to-face in the UTC, in virtual face-to-face sessions (https://www.pvamu.edu/student-success/sass/university-tutoring-center/), and through online sessions (https://www.pvamu.edu/pvplace/). Other support services available for students include Supplemental Instruction, Study Break, Academic Success Workshops, and Algebra Study Jam. Location: J. B. Coleman Library, Rm. 307; Phone: 936-261-1561; Email: pvtutoring@pvamu.edu; Website: https://www.pvamu.edu/student-success/sass/university-tutoring-center/

Writing Center
The Writing Center provides well-trained peer tutors to assist students with writing assignments at any stage of the writing process. Tutors help students with various writing tasks from understanding assignments, brainstorming, drafting, revising, editing, researching, and integrating sources. Students have free access to Grammarly online writing assistance. Grammarly is an automated proofreading and plagiarism detection tool. Students must register for Grammarly by using their student email address. In addition, students have access to face-to-face and virtual tutoring services either asynchronously via email or synchronously via Zoom. Location: J. B. Coleman Library, Rm. 209; Phone: 936-261-3724; Website: https://www.pvamu.edu/student-success/writing-center/; Grammarly Registration: https://www.grammarly.com/enterprise/signup

Academic Early Alert
Academic Early Alert is a proactive system of communication and collaboration between faculty, academic advisors, and PVAMU students that is designed to support student success by promptly identifying issues and allowing for intervention. Academic Early Alerts help students by providing a central location to schedule advising appointments, view advisor contact information, and request assistance. Students who recognize that they have a problem that is negatively affecting their academic performance or ability to continue school may self-refer an Academic Early Alert. To do so, students will log in to PV Place and click on Academic Early Alert on the left sidebar. Phone: 936-261-5902; Website: https://www.pvamu.edu/student-success/early-alert/

Student Counseling Services
The Student Counseling Services unit offers a range of services and programs to assist students in maximizing their potential for success: short-term individual, couples, and group counseling, as well as crisis intervention, outreach, consultation, and referral services. The staff is licensed by the State of Texas and assists students who are dealing with academic skills concerns, situational crises, adjustment problems, and emotional difficulties. Information shared with the staff is treated confidentially and in accordance with Texas State Law. Location: Hobart Taylor, 2nd floor; Phone: 936-261-3564; Website: https://www.pvamu.edu/healthservices/student-counseling-services/

Office of Testing Services
Testing Services serves to create opportunities by offering a suite of exams that aid in the students’ academic and professional success. Currently, we administer entrance (HESI A2), college readiness (TSI assessment), Prior
Office of Diagnostic Testing and Disability Services
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, contact the Office of Disability Services. As a federally mandated educational support unit, the Office of Disability Services serves as the repository for confidential disability files for faculty, staff, and students. For persons with a disability, the Office develops individualized ADA letters of request for accommodations. Other services include learning style inventories, awareness workshops, accessibility pathways, webinars, computer laboratory with adapted hard and software, adapted furniture, proctoring non-standardized test administrations, ASL interpreters, ALDs, digital recorders, Livescribe, and a comprehensive referral network across campus and the broader community. Location: Hobart Taylor, Rm. 1D128; Phone: 936-261-3583; Website: https://www.pvamu.edu/disabilityservices/

Center for Instructional Innovation and Technology Services (CIITS)
Distance Learning, also referred to as Distance Education, is the employment of alternative instructional delivery methods to extend programs and services to persons unable to attend college in the traditional manner. The Center for Instructional Innovation and Technology Services (CIITS) supports student learning through online, hybrid, web-assist, and 2-way video course delivery. For more details and contact information, visit: https://www.pvamu.edu/dlearning/distance-learning-2-2/students-2/; Phone: 936-261-3283

Veteran Affairs
Veterans Services works with student veterans, current military, and military dependents to support their transition to the college environment and continued persistence to graduation. The Office coordinates and certifies benefits for both the G.I. Bill and the Texas Hazlewood Act. Location: Evans Hall, Rm. 102; Phone: 936-261-3563; Website: https://www.pvamu.edu/sa/departments/veteranaffairs/

Office for Student Engagement
The Office for Student Engagement delivers comprehensive programs and services designed to meet the co-curricular needs of students. The Office implements inclusive and accessible programs and services that enhance student development through exposure to and participation in diverse and relevant social, cultural, intellectual, recreational, community service, leadership development, and campus governance. Location: Memorial Student Center, Rm. 221; Phone: 936-261-1340; Website: https://www.pvamu.edu/studentengagement/

Career Services
Career Services supports students through professional development, career readiness, and placement and employment assistance. The Office provides one-on-one career coaching, interview preparation, resume and letter writing, and career exploration workshops and seminars. Services are provided for students at the Northwest Houston Center and College of Nursing in the Medical Center twice a month or on a requested basis. Distance Learning students are encouraged to visit the Career Services website for information regarding services provided. Location: Anderson Hall, 2nd floor; Phone: 936-261-3570; Website: https://www.pvamu.edu/careerservices/

University Rules and Procedures

Academic Misconduct
Academic dishonesty is defined as any form of cheating or dishonesty that has the effect or intent of interfering with any academic exercise or fair evaluation of a student’s performance. The college faculty can provide additional information, particularly related to a specific course, laboratory, or assignment.

You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with the University Administrative Guidelines on Academic Integrity, which can be found on the Academic Integrity webpage. Students who engage in academic misconduct are subject to university disciplinary procedures. As listed in the University Administrative Guidelines on Academic Integrity, the University Online Catalog, and the Student Code of Conduct, the following are examples of prohibited conduct. This list is not designed to be all-inclusive or exhaustive. In addition to academic sanctions, any student found to have committed academic misconduct that is
also a violation of criminal law may also be subject to disciplinary review and action by the Office of Student Conduct (as outlined in the Student Code of Conduct).

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 learned, giving, or receiving aid unauthorized by the instructor on assignments or examinations. Examples: unauthorized use of notes for a test; using a "cheat sheet" on a quiz or exam; any alteration made on a graded test or exam which is then resubmitted to the teacher.

2. **Plagiarism:** Careless or deliberate use of the work or the ideas of another; representation of another's work, words, ideas, or data as your own without permission or appropriate acknowledgment. Examples: copying another's paper or answers, failure to identify information or essays from the internet and submitting or representing it as your own; submitting an assignment which has been partially or wholly done by another and claiming it as yours; not properly acknowledging a source which has been summarized or paraphrased in your work; failure to acknowledge the use of another's words with quotation marks.

3. **Collusion:** When more than one student or person contributes to a piece of work that is submitted as the work of an individual.

4. **Conspiracy:** Agreeing with one or more persons to commit an act of academic/scholastic dishonesty.

5. **Multiple Submission:** Submission of work from one course to satisfy a requirement in another course without explicit permission. Example: using a paper prepared and graded for credit in one course to fulfill a requirement and receive credit in a different course.

Nonacademic Misconduct
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. The Office of Student Conduct will adjudicate such incidents under nonacademic procedures.

Sexual Misconduct
Sexual harassment of students and employees at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating the university's sexual harassment policy will be subject to disciplinary action. In accordance with the Texas A&M University System guidelines, your instructor is obligated to report to the Office of Title IX Compliance (titleixteam@pvamu.edu) any instance of sexual misconduct involving a student, which includes sexual assault, stalking, dating violence, domestic violence, and sexual harassment, about which the instructor becomes aware during this course through writing, discussion, or personal disclosure. The faculty and staff of PVAMU actively strive to provide a learning, working, and living environment that promotes respect that is free from sexual misconduct, discrimination, and all forms of violence. If students, faculty, or staff would like assistance or have questions, they may contact the Title IX Coordinator at 936-261-2144 or titleixteam@pvamu.edu. More information can be found at www.pvamu.edu/titleix, including confidential resources available on campus.

Pregnancy, Pregnancy-related, and Parenting Accommodations
Title IX of the Education Amendments of 1972 prohibits sex discrimination, which includes discrimination based on pregnancy, marital status, or parental status. Students seeking accommodations related to pregnancy, pregnancy-related conditions, or parenting (reasonably immediate postpartum period) are encouraged to contact Student Disability Services or the Dean of Students' Office for additional information and to request accommodations.

Non-Discrimination Statement
Prairie View A&M University does not discriminate on the basis of race, color, sex, religion, national origin, age, disability, genetic information, veteran status, sexual orientation, or gender identity in its programs and activities. The University is committed to supporting students and complying with The Texas A&M University System non-discrimination policy. It seeks to establish an environment that is free of bias, discrimination, and harassment. If you
experience an incident of discrimination or harassment, we encourage you to report it. If you would like to speak with someone who may be able to afford you privacy or confidentiality, there are individuals who can meet with you. The Director of Equal Opportunity & Diversity has been designated to handle inquiries regarding the non-discrimination policies and can be reached at Harrington Science Building, Suite 109 or by phone at 936-261-1744 or 1792.

Class Attendance Policy (See the University Online Catalog for Full Attendance Policy)
Prairie View A&M University requires regular class attendance. Attending all classes supports the full academic development of each learner, whether classes are taught with the instructor physically present or via distance learning technologies such as interactive video and/or the internet. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in the assignment of a grade of "F." Absences are accumulated beginning with the first day of class during regular semesters and summer terms. Each faculty member will include the University's attendance policy in each course syllabus.

Student Academic Appeals Process
Authority and responsibility for assigning grades to students rest 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 University Online Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.

Technical Considerations

Minimum Recommended Hardware and Software:
- Intel PC or Laptop with Windows 10 or later version; Mac with OS High Sierra*
- Smartphone or 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, or Firefox

Note: Be sure to enable Java & pop-ups in the Web browser preferences

* Smartphones, Google Chrome books, and Android tablets may not be supported. iPads are the only tablets supported.

Participants should have a basic proficiency of the following computer skills:
- Sending and receiving email
- A working knowledge of the Internet
- Microsoft Word (or a program convertible to Word)
- Acrobat PDF Reader
- Windows or Mac OS
- Video conferencing software

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 discussion boards. Foul or abusive language will not be tolerated. Do not use ALL CAPS for communicating to others AS IT CAN BE INTERPRETED AS YELLING. Avoid slang terms such as "wassup?" and texting abbreviations such as "u" instead of "you." Limit and possibly avoid the use of emoticons. Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post, and the message might be taken seriously or sound offensive.

Video Conferencing Etiquette
When using Zoom, WebEx, or other video conferencing tools, confirm the visible area is tidy, clear of background clutter, inappropriate or offensive posters, and other distractions. Ensure you dress appropriately and avoid using high traffic or noisy areas. Stay muted when you are not speaking and avoid eating/drinking during the session. Before the class session begins, test audio, video, and lighting to alleviate technology issues.

**Technical Support**

Students should go to [https://mypassword.pvamu.edu/](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 Center for Instructional Innovation and Technology Services at 936-261-3283 or email ciits@pvamu.edu.

**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 occur in a seminar fashion. The use of the discussion board will accomplish this. The instructor will determine the exact use of discussion boards.

*It is strongly suggested* that students type their discussion postings in a word processing application such as Word 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, copy and paste, to the discussion board.

**COVID-19 Campus Safety Measures**

To promote public safety and protect students, faculty, and staff during the coronavirus pandemic, PVAMU has adopted policies and practices to limit virus transmission.

- **Self-monitoring** - Students should follow CDC recommendations for self-monitoring. Students who have a fever or exhibit symptoms of COVID-19 should participate in class remotely and should not participate in face-to-face instruction.

- **Face Coverings** - Face coverings (cloth face covering, surgical mask, etc.) are recommended in classrooms, teaching laboratories, common spaces such as lobbies and hallways, public study spaces, libraries, academic resource, and support offices, and outdoor spaces where 6 feet of physical distancing is challenging to maintain reliably.

- **Physical Distancing** - Physical distancing should be maintained between students, instructors, and others in course and course-related activities where possible.

- **Personal Illness and Quarantine** - Students required to quarantine are to participate in courses and course-related activities remotely and must not attend face-to-face course activities. Students should notify their instructors of the quarantine requirement. Students under quarantine are expected to participate in courses and complete graded work unless they have symptoms that are too severe to participate in course activities. Students experiencing personal injury or illness that is too severe for the student to attend class qualify for an excused absence. To receive an excused absence, students must provide appropriate documentation to the Office for Student Conduct, studentconduct@pvamu.edu.

**2021 Fall Semester Calendar**
The Academic Calendar for fall 2021 is published in the University’s web site and in the fall semester.

1. Instruction begins for this class on **Monday, August 23, 2021**

2. Attendance reporting period is August 23 to September 01. Students that do not attend class during this period will have their courses removed and financial aid reduced or cancelled.

3. Late Registration for the fall semester ends by 5:00p.m., Monday, August 30, 2021

4. Last day to withdraw from a course without it being part of the academic record, Tuesday, September 07, 2021

5. Withdrawal from courses between Wednesday, September 08 and Monday, November 01, 2021 will earn a “W” on the academic record.

6. **Mid-Semester Exam: Tuesday, October 12, 2021**

7. Biology majors should start their intensive **Study Schedule** for their very important Final Exams by Wednesday, November 17, 2021 and continue until the start of final exams on Thursday, December 2, 2021.

8. Thanksgiving is a Student Holiday that occurs Thursday, November 25 to Sunday, November 28, 2021. Classes resume on Monday, November 29, 2021. **Only three class days remains before the start of final exams on Thursday, December 2, 2021**


10. Last day to withdraw from the University: Wednesday, December 1, 2021.

11. **The cumulative final exam** for this section will be scheduled by PVAMU during the final exam period (**Thursday, December 2, to December 8, 2021**). The cumulative final exam will constitute the remaining 50% of the final semester grade. **It will test all topics covered during the semester. Final exams are required** to be given only at the times and dates announced in the 2021 Fall University Final Exam Schedule. Students must arrange their schedule and activities so that they are prepared and present for the final exam.