



SYLLABUS

[BIOL 1025 General Biology] [Summer 2019]



Instructor: Dr. George E Brown
Section # and CRN: P01 and 32123
P61 and 32141

Office Location: 430F New Science

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8:00a.m.-8:30a.m. in room A103 MTWRF before class. 4:00p.m. - 5:00p.m. in room 106 MTWRF. Students may schedule a tutorial session time with the instructor for 7:00p.m. on Monday, Tuesday, Wednesday, Thursday or Friday in room 106. Tutorials are also conducted at student request on Saturday 8:00a.m. in room 106. Please make your request either during class so that the instructor may announce the session to the entire class.

Dr. Sanders and PCI Biology Student Resident Leaders will conduct tutoring and completion of homework each night in room 106 from 7:00p.m. - 10:00p.m.

Mode of Instruction: [Face to Face]

Course Location: Rooms 104 in a.m. and 315 Lab in p.m. New Science Building

Class Days & Times: MTWRF 9:00am-11:50am MTWR and Laboratory section (P61 and 32141) at 1:30p.m.-4:50p.m.)

Catalog Description: [Basis of life, cell theory, cell structure, energy transformation, reproduction, genetic variability and origins of diversity of organisms]

Prerequisites: [Successful passage of BIOL 1015 General Biology I. Students must have a good understanding of the chemical context of life; water and life; carbon and the molecular diversity of life; the structure and function of large biological molecules; the structure and function of cells and their components; membrane structure and function; metabolism; cellular respiration and fermentation; photosynthesis; cell communication; the cell cycle and mitosis; meiosis and sexual life cycles; and an introduction to genetics.]

Co-requisites: BIOL 1025 P61 (30170) laboratory section. BIOL 1025 is a combined lecture-laboratory course. Students must be enrolled in both the lecture section and a laboratory section[]

Required Texts: Campbell Biology, **Eleventh Edition**, by Lisa A. Urry, Michael L. Cain, Steven A. Wasserman, Peter V. Minorsky, and Jane B. Reece
ISBN -10: 134-09341-0; or ISBN-13: 978-0-134-09341-3

Recommended Texts: Supplements: (Optional)
1. Student Study Guide to accompany Campbell Biology, Eleventh Edition by

Martha R. Taylor.
 ISBN: 978-0-134-44377-5 or ISBN: 0-134-44377-2

2. Website to accompany Campbell Biology, Eleventh edition; "Mastering Biology", Learn More at www.masteringbiology.com
 It is an online learning tool that contains pretest, narrated animations, and tutorials on basic math, chemistry, study skills, and word roots. It provides access to quizzes, glossary, exercises, internet activities, and annotated web links. Access to this website is provided with the purchase of a new textbook from a university bookstore. The publisher charges \$80 for access if you do not purchase a new textbook. The use of this web site is optional.

Materials needed to enhance learning biology:

1. Required Course Textbook (Students must read the chapters in the textbook prior to class and be prepared to be quizzed by the instructor)
2. Students are required to maintain a notebook with all class handouts, graded exams, reports, and quizzes attached to the notebook
3. **Number 2 pencils** for exams
4. At least 15 each **SCANTRON forms 884-ES** (Answer choices for 200 questions) for each exam

Student Learning Outcomes:

	Upon successful completion of this course, students will be able to: [NOTE: Begin each outcome with a verb]:	Program Learning Outcome # Alignment	Core Curriculum Outcome Alignment
1	Upon successful completion of this course, students will be able to demonstrate on class exams how to conduct laboratory investigations using safe, environmentally appropriate, and ethical practices.	#1, 2, 3, 4	1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social responsibility
2	Upon successful completion of this course, students will be able to demonstrate on class exams an understanding of the use of the scientific method during laboratory investigations in the following ways: a. Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting instruments and technology. b. Collect data, organize it, analyze it, evaluate, make inferences, and predict trends. c. Communicate valid conclusions.	#1, 2, 3, 4	1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social responsibility
3	Upon successful completion of this course, students will be able to demonstrate on class exams how to use critical thinking and scientific problem solving to make informed decisions in the following ways: a. Analyze, review, and critique scientific explanations, including hypotheses and theories using scientific evidence and information. b. Draw inferences based on data.	#1, 2, 3, 4	1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social responsibility
4	Upon successful completion of this course, students will be able to demonstrate on class exams understanding of cell communication and regulation of the cell cycle in the following ways: a. Understand the structure and functions of cellular receptors. b. Describe signal transduction and the cellular response.	#1, 2, 3, 4	1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social

	c. Explain how the cell cycle is regulated		responsibility
5	<p>Upon successful completion of this course, students will be able to demonstrate on class exams an understanding of chromosomes, mitosis, and meiosis in the following ways:</p> <ol style="list-style-type: none"> Explain chromosomes in terms of genes, loci, heterochromatin, euchromatin, and species number of chromosomes, sister chromatids, centromeres, and kinetochores. Describe the principle events of the stages of the eukaryotic cell cycle and how it is controlled. Diagram the process of mitosis. Draw the process of both stages of meiosis. Distinguish between asexual reproduction and sexual reproduction. Distinguish between haploid cells and diploid cells. Define homologous chromosomes. 	#1, 2, 3, 4	1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social responsibility
6	<p>Upon successful completion of this course, students will be able to demonstrate on class exams knowledge of the basic principles of heredity in the following ways:</p> <ol style="list-style-type: none"> Define and use correctly the terms allele, locus, genotype, phenotype, dominant, recessive, homozygous, heterozygous, monohybrid cross, dihybrid cross, trihybrid cross, and test cross. Apply the product rule and sum rule when predicting the outcomes of genetic crosses. Solve genetic problems involving complete dominance, incomplete dominance, epistasis, polygenes, multiple alleles, and X-linked inheritance. Explain some of the ways that genes may interact to affect the phenotype. Explain the genetic determination of sex. 	#1, 2, 3, 4	1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social responsibility
7	<p>Upon successful completion of this course, students will be able to demonstrate on class exams understanding of how the structure of DNA forms the genetic codes for genes in the following ways:</p> <ol style="list-style-type: none"> Summarize the evidence observed in the 1950's demonstrating that DNA is the genetic material. Draw how the four types of deoxyribo-nucleotide subunits are bonded together to form the structure of DNA. State the base pairing rule for DNA. Draw how the ribo-nucleotide subunits are bonded together to form RNA. Understand DNA transformation of bacteria, and bacteriophage DNA transduction of bacteria. Summarize the evidence that demonstrated semi-conservative replication of DNA. Explain the steps of DNA replication. Know each enzyme involved in DNA replication and its function. Compare the organization of DNA in prokaryotic and eukaryotic cells. 	#1, 2, 3, 4	1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social responsibility
8	<p>Upon successful completion of this course, students will be able to demonstrate on class exams by drawings, an understanding of gene expression (transcription) in the following ways:</p> <ol style="list-style-type: none"> Summarize the early evidence that most genes code for proteins. Outline the flow genetic information (central dogma) from 	#1, 2, 3, 4	1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social

	<p>DNA to Protein.</p> <ul style="list-style-type: none"> c. Know the various types of RNA polymerases and how they catalyze the synthesis of RNA. d. Know the substrates and products of transcription 		responsibility
9	<p>Upon successful completion of this course, students will be able to demonstrate on class exams an understanding of the substrates, products, enzymes and ribozymes involved in the steps of translation in the following ways:</p> <ul style="list-style-type: none"> a. Identify the features of tRNA that function in decoding the genetic information during translation. b. Explain how ribosomes function in protein synthesis. c. Diagram the processes of initiation, chain elongation, and chain termination in protein synthesis. d. Compare mRNA synthesis, modifications, and ribosome recognition sites in prokaryotes and eukaryotes. 	#1, 2, 3, 4	<ul style="list-style-type: none"> 1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social responsibility
10	<p>Upon successful completion of this course, students will be able to demonstrate on class exams knowledge about regulation of gene expression in the following ways:</p> <ul style="list-style-type: none"> a. Explain the organization of bacterial genes into operons. Explain the function of each gene. b. Explain why some operons are inducible and others are repressible. c. Explain the role of repressors in the regulation of gene expression. d. Differentiate between positive and negative control of operon gene expression. e. Draw the components of a eukaryotic gene and the DNA sequences that are involved in the regulation of transcription of that gene. f. Provide examples of DNA binding proteins and describe how they bind to DNA. g. Explain how transcriptional factors (proteins) facilitate transcription. h. Describe how a change in chromosomal structure affects which genes are expressed. i. Explain how one gene in a multicellular eukaryote might be able to produce different products in different types of cells. j. Describe types of regulatory controls that can be exerted in eukaryotes after the mature mRNA is formed. 	#1, 2, 3, 4	<ul style="list-style-type: none"> 1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social responsibility
11	<p>Upon successful completion of this course, students will be able to demonstrate on class exams knowledge of DNA technologies and genetic engineering in the following ways:</p> <ul style="list-style-type: none"> a. Demonstrate how restriction enzymes cut DNA molecules and provide examples of how these restriction endonucleases are used in recombinant DNA technology. b. Summarize the properties of plasmids cloning vectors. c. Distinguish between a genomic library and a cDNA library. d. Describe uses for DNA hybridization probes. e. Explain how specific primers are used to amplify (replicate) specific genes from mixture genomic DNA or cDNA. f. Diagram the dideoxyribo-nucleotide triphosphates method of sequencing DNA. g. Provide a list of important proteins that have been produced by genetic engineering. h. Describe some transgenic plants and animals that been 	#1, 2, 3, 4	<ul style="list-style-type: none"> 1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social responsibility

	produced.		
12	<p>Upon successful completion of this course, students will be able to demonstrate on class exams the basic laws of genetics in the following ways:</p> <ol style="list-style-type: none"> Determine the probable genotypes of the individuals in a pedigree. Distinguish between chromosomal abnormalities and single gene defects. Draw how non-disjunction may occur during meiosis to cause Down's syndrome, Klinefelter Syndrome, and Turner Syndrome. Explain 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. Describe how prenatal diagnosis is made by amniocentesis, chorionic villus sampling and ultra-sound imaging. 	#1, 2, 3, 4	<ol style="list-style-type: none"> Critical thinking Communication Problem solving Personal & social responsibility
13	<p>Upon successful completion of this course, students will be able to demonstrate on class exams an understanding of how the regulation of gene expression controls development of multicellular organisms in the following ways:</p> <ol style="list-style-type: none"> Distinguish between cell determination and cell differentiation. Describe evidence that demonstrated totipotency (nuclear equivalence) of some differentiated plant and animal cells. Explain the vertebrate cell lineage from zygote to germ layers to adult structures, organs and systems. Distinguish between the function of maternal effect genes, segmentation (zygotic) genes, and homeotic genes of animals. Explain 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. Define induction and programmed cell death and give examples of the roles they play in development. 	#1, 2, 3, 4	<ol style="list-style-type: none"> Critical thinking Communication Problem solving Personal & social responsibility
14	<p>Upon successful completion of this course, students will be able to demonstrate on class exams an understanding of how the regulation of gene expression controls development in eukaryotic organisms in the following ways:</p> <ol style="list-style-type: none"> Explain cell determination, differentiation, totipotency, nuclear equivalence, and cell lineage from zygote to adult structures Explain how the expression of maternal effect genes, segmentation genes, and homeotic genes control embryonic development Explain how cell signaling guides development 	#1, 2, 3, 4	<ol style="list-style-type: none"> Critical thinking Communication Problem solving Personal & social responsibility
15	<p>Upon successful completion of this course, students will be able to demonstrate on class exams knowledge of genomes and their evolution in the following ways:</p> <ol style="list-style-type: none"> Understand how bioinformatics is used to analyze genomes and their functions in development. Understand the functions of noncoding DNA and multigene families in multicellular eukaryotes. Define human genetics, human genome, bioinformatics, and pharmacogenomics. Explain how evolution of new species was studied long 	#1, 2, 3, 4	<ol style="list-style-type: none"> Critical thinking Communication Problem solving Personal & social responsibility

	<p>before Charles Darwin by many religious scholars and naturalists that had no knowledge of genetics.</p> <ul style="list-style-type: none"> e. Explain how Darwin's ignorance of genetics and plagiarism of Alfred Russel Wallace's manuscript, confused the understanding of evolution for over 150 years. f. Explain the evidence for evolution which has been obtained from genomics, proteomics, molecular genetics, developmental biology, comparative anatomy, fossils and biogeography. g. Describe how the principles of genetics explain natural selection, homology, homoplasy, vestigial structures, survival of the fittest, and the modern theory of evolution. h. Demonstrate an understanding of the evolutionary history of biological diversity of living organisms and how they are classified in groups based on genetic inheritance. 		
16	<p>Upon successful completion of this course, students will be able to demonstrate on class exams knowledge of viruses and the two prokaryotic domains in the following ways:</p> <ul style="list-style-type: none"> a. Explain the various types of viruses, viroids, and prions, and how they infect and replicate in specific host cells to cause diseases. b. Explain characteristics of the types of bacteria studied in chapter 27 and the function of the cell structures. c. Understand the metabolic and genetic diversity among bacteria. 	#1, 2, 3, 4	1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social responsibility
17	<p>Upon successful completion of this course, students will be able to demonstrate on class exams knowledge of the distinguishing characteristics of the representative protists covered in chapter 28.</p>	#1, 2, 3, 4	1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social responsibility
18	<p>Upon successful completion of this course, students will be able to demonstrate on class exams an understanding of the characteristics, diversity, ecological importance, economical importance, and medical importance of fungi and lichens covered in chapter 31.</p> <p>Explain how fungi are classified into four different phyla, their characteristics, how they reproduce, and their importance to humans.</p>	#1, 2, 3, 4	1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social responsibility
19	<p>Upon successful completion of this course, students will be able to demonstrate on class exams knowledge of the characteristics of animals that are used to classify them into the various groups in the following ways:</p> <ul style="list-style-type: none"> a. Explain how animal tissues develop from embryonic layers. b. Understand how animals are characterized by "body plans". c. Explain the distinguishing characteristics of each animal phylum studied in chapters 32, 33 and 34. d. Understand invertebrate diversity. 	#1, 2, 3, 4	1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social responsibility
20	<p>Upon successful completion of this course, students will be able to demonstrate on class exams the evolution of vertebrates in the following ways:</p> <ul style="list-style-type: none"> a. Describe the characteristics and evolution of chordates. b. Demonstrate knowledge of vertebrate evolution and characteristics. c. Understand the evolution and characteristics of ray-finned fish and lobe-finned fish. d. Explain the evolution and characteristics of amphibians. e. Describe the evolution and characteristics of amniotes. f. Understand the evolution and characteristics of mammals. g. Demonstrate knowledge of the anatomy and physiology of the animal 	#1, 2, 3, 4	1. Critical thinking 2. Communication 3. Problem solving 4. Personal & social responsibility

	<p>body as covered chapters 40, 41, 42, 43, 44, 45, 46, 47, 48, 49 and 50.</p> <p>h. Explain the structure and function of the various animal tissues.</p> <p>i. Explain the structure and function of the animal skin, skeletal, muscular, digestive, circulatory, respiratory, urinary, nervous, endocrine, and reproductive systems.</p>		
21	<p>Upon successful completion of this course, students will be able to demonstrate on class exams knowledge of animal behavior and how the interaction of animal genes with the environment contributes to foraging, social, sexual, and helping behavior in the following ways:</p> <p>a. Demonstrate knowledge of how evolution (sexual reproduction and genetic mutations) produce offspring with genotypes that are different from that of their ancestors.</p> <p>b. Understand that over many generations the surviving diploid offspring with these new genes can express new (evolved) phenotypic traits that can reproductively isolate them from other offspring of their ancestors.</p>	#1, 2, 3, 4	<p>1. Critical thinking</p> <p>2. Communication</p> <p>3. Problem solving</p> <p>4. Personal & social responsibility</p>
22	<p>Upon successful completion of this course, students will be able to demonstrate on class exams an understanding of the characteristics of seedless plants (bryophytes and vascular plants) and their life cycles. Demonstrate knowledge of the characteristics, life cycles of the seed plants in the following ways:</p> <p>a. Explain the structure and function of leaves, stems, and roots of flowering plants.</p> <p>b. Describe reproduction in the flowering plants.</p> <p>c. Understand ecosystems and restoration ecology.</p>	#1, 2, 3, 4	<p>1. Critical thinking</p> <p>2. Communication</p> <p>3. Problem solving</p> <p>4. Personal & social responsibility</p>

Major Course Requirements

Method of Determining Final Course Grade

Course Grade Requirement	Value	Total
1) Exam 1,	5.5%	5.5
2) Exam 2,	5.5%	5.5
3) Exam 3,	5.5%	5.5
4) Exam 4,	5.5%	5.5
5) Exam 5,	5.5%	5.5
6) Exam 6	5.5%	5.5
7) Exam 7	5.5%	5.5
8) Exam 8	5.5%	5.5
9) Home Work & Laboratory Grade	5.5%	5.5
Subtotal:	50%	50.00
9) FINAL EXAM (Covers chapters 15 to 56) Grade	50.00%	50.00
Total:	100%	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: [Demonstrate on the cumulative final exam that they can earn scores between 70% to 100%. Therefore students can earn up to 50% of their semester grade.]

Assignment Title or

Grade Requirement

Score 70%-100%

Description

Standardized Cumulative Final Exam of chapters 15 to 56.

Course Procedures or Additional Instructor Policies

I. Type of Course:

This is part two of a comprehensive introduction of the concepts of modern Biology for students majoring in biology. Part one covered the organization and chemistry of living things, cell biology, energy transformations through living systems, cell signaling, multicellularity, and a large part of genetics (that included nucleic acid structure and function, gene expression, and gene regulation). Part two will cover mutation, DNA repair, cancer, mitosis and meiosis, simple patterns of inheritance, complex patterns of inheritance, genetics of bacteria and viruses, developmental genetics, genetic technology, genomes and proteomes, the diversity of life, the structure and life processes of plants and animals, evolution, and ecology.

This course is taught at the standards established for accredited universities. It should not be confused or compared with high school or junior college courses. In order to be successful, **students must understand that they are being graded and evaluated based on standards that require mastery of the contents of the course textbook and supplements.**

II. Course Goals and Objectives:

The purpose of this course is to provide first year biology majors with sufficient current knowledge of biology that satisfies the prerequisite knowledge required for the pre-entry exams and applications to health profession schools, graduate biomedical programs, and teacher certification. **The outcome expectations for learners** are listed below in the next section.

The learning outlines are listed at the beginning of each chapter of the textbook. The daily assignment for students is to read the chapter outline in the student study guide (or make their own chapter outline) and then read the corresponding chapter in the textbook. Notes should be made in a **wire binder note book as the** student reads. This should enhance conceptualizing of biology topics and performance of the learning objectives. The questions at the end of each textbook chapter and those in the student study guide should be answered. Questions are provided at the end of each chapter for students to test their learned knowledge. The study guide provides chapter outlines and concepts review for each chapter

The instructor conducts discussion type lecture classes. It requires student participation in class discussions and demonstrations. Students are encouraged to enhance their knowledge by raising questions, responding to questions, and solving problems in front of the class.

When you meet with your instructor in class or for study help, bring your biology course notebook with all graded exams and the course textbook. These items will support your learning.

III. Course Evaluation Methods:

The University's Academic Catalog grading policy is used. **All lecture exams will be cumulative in terms of the topics that will be included on tests.** Unit exams are not administered. **Each exam covers all chapters taught from the first class day to the last chapter** studied prior to the exam. The laboratory mid-term average and the final laboratory average will count as lecture exams. The semester average of all lecture exams will constitute fifty percent (50%) of the final semester grade. **The cumulative final exam will constitute the remaining 50% of the final semester grade.**

The goal is to administer at least eight cumulative exams for the semester **in classroom A101, New Science Building.** The date for each exam will be announced at least 3 days prior to the administration of the exam. However, unannounced quizzes are given during selected lectures for the purpose of evaluating how well students are learning the most recently taught concepts. The average of all graded quizzes, notebooks, laboratory exams and reports will equal one lecture exam.

The **final exam** for this course is scheduled by the University for **1:30p.m., Thursday, August 8, 2019 in room A101, New Science Building.** It will test all topics covered during the semester. Arrange your schedule to take the final exam on time. We can-not give the final exam before or after this set time. **Please do not request to take your final exam at a different time.**

MAKE-UP EXAMS: Students are **strongly advised to take exams at the announced scheduled time.** Over 44 years of analysis of test results have demonstrated that students make higher grades when they take Dr. Brown's exams at the regular testing period. **Over 99% of the students that took make-up exams failed them.** Make-up exams are different from the regular exams. They require students to demonstrate their knowledge in more specific terms because students would have had access to the regular test and its answers. **Take exams at the scheduled time.** Students may request a make-up exam for the one that was missed. However, the instructor will schedule the time and place for the make-up exam which will not interrupt class lectures and laboratories. Students that are scheduled for a make-up exam and fail to take it will not be provided a second chance to take the exam.

IV. Class Attendance:

The University's attendance policy requires students to be present for each scheduled class. Students with or without official excuses for missing class are responsible for obtaining the class notes and learning the concepts covered in class while they were absent. They will be tested on the same topics as students with perfect attendance. The class attendance is taken at each class. **Excessive absenteeism will contribute to the lowering of the student's final semester grade.**

V. Conduct That Is Not Allowed In Class:

1. **Cellular phones, 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 any part of this course. These are **instruments of cheating**. They **must be turned off** and locked in your book bag so that they can't be seen or used during any part of this course. Students that are caught using these or any instruments of cheating **will be charged with cheating** and therefore earn a failing grade. See item 2 below concerning cheating.
2. **No cheating on exams, quizzes, reports, or any graded activity.** Failing grades (zero) are assigned to students that cheat. **This classroom has a video camera which will videotape exams. These tapes can be used as evidence of student cheating.** Please go to the rest room before starting your exam. Once a student leaves the classroom during an exam they will not be permitted to return to that exam. Students are not permitted to communicate with each other during an exam. Therefore students can't talk to, pass written materials to, or show answers or questions to other students in the class. Laboratory reports and presentations must be the work of the individual student. **Evidence of copying your work from others, including the world wide net, is cheating. Students should read the section on Offenses and Appropriate Disciplinary Actions in the current PVAMU web site catalog.** This is referred to in section XII below.
3. **No Smoking.** Smoking is not allowed in the New Science Building.
4. **No Eating is Class:** Food and beverages are not allowed in the classrooms. Do not bring food into the class room.
5. Students enrolled in this course are not permitted to wear hats, caps, head rags, helmets or any type of hear gear in the class rooms for this course. Dress for success. Please do not insult and disrespect the class by violating this cultural academic practice.

6.

Semester Calendar

Week One:

Topic Description

Readings:

- M **Lecture 9:00a.m.: Review** Chapters 14 and 15 before the lecture
Lab: 1:30p.m. Safety/Pre Exam, Scientific Method
- T **Lecture: Read** Chapter 16 before the 9:00a.m. lecture
Lab: 1:30p.m. Bring Text Book,
- W **Exam 1** covers chapters 14, 15, and 16. Read Chapters 17 for before 10:00a.m. lecture
Lab: 1:30p.m.
- R **Lecture:** Read Chapters 17 and 18 before the 9:00 a.m. lecture
Lab: 1:30p.m.

Assignment (s):

- M Study Quiz for Chapters 14 and 15 on **e-course**
- T Study Quiz for Chapter 16 on **e-course**
- W Study Quiz for Chapter 17 on e-course
- R Study Guide hand outs and quiz for chapter 18 on e-course for Monday's exam

Week Two:
Topic Description
Readings:

M **Exam 2: 9:00a.m.** : Read chapter 19
T **Lecture:** Read Chapter 20 before 9:00a.m. lecture
Lab: 1:30p.m.
W **Exam 3** covers chapters 14-20. Read Chapter 21 before 10:00a.m. lecture
Lab: 1:30p.m.
R **Lecture:** Read Chapter 21 before lecture at 10:00 p.m.
(The lab occurs following the lecture)

Assignment (s):

M Chapter 19 study quiz on e-course and class handouts
T Chapter 20 study quiz and class handouts
W Chapter study quiz and class handouts
R Chapter 21 study quiz and class handouts

Week Three:

Readings

M **Exam 4:** Read chapter 22 before the 9:00a.m. lecture
Lab: 1:30p.m.
T **Lecture:** Read chapter 23 before the 9:00a.m. lecture
Lab: 1:30p.m.
W **Exam 5** covers chapters 14 - 23: Read chapter 24 before the 10:30a.m. lecture
Lab: 1:30p.m.
R **Lecture:** Read chapter 25 before 9:00a.m. lecture.
Lab occurs 1:30p.m.

Assignments

M Study quiz for chapter 22
T Study quiz for chapter 23 and class handouts
W Study quiz for chapter 24 and class handouts
R Study quiz for chapter 25 and class handouts

Week Four:
Readings

M **Exam 6:** Read Chapters 26, 27, and 28 for 9:00a.m. lecture
Lab: 1:30p.m.
T **Lecture:** Read Chapter 29, 30, and 31 before the 9:00a.m. lecture
Lab: 1:30
W **Exam 7** covers chapters 14 - 31: Read Chapter 28 before the 10:30a.m. lecture
Lab: 1:30p.m.
R **Lecture:** Read chapters 32, 33, and 34 before 9:00a.m. lecture
Lab: 1:30p.m.

Assignments

M Study quiz for chapters 26, 27, and 28.
T Study quiz for chapter 29, 30, and 31.
W Study quiz and class handouts for chapters 32, and 33.
R Study quiz for chapter 34.

Week Five:
Readings

M **Exam 8:** Read Chapters 34 -40 before the 9:00a.m. Lecture
T Lecture: Read chapters 41 -49 before 9:00a.m. lecture

Assignments

MTWR Study chapter reviews for final exam quiz

VI. Course Outline:

PART	CHAPTERS
3	Genetics
	14 Mendel and the Gene Idea(Review)
	15 Chromosomal Basis of Inheritance (Review)
	16 The molecular Basis of Inheritance (Semester start)
	17 From Genes to Proteins
	18 Regulation of Gene Expression
	19 Viruses
	20 Biotechnology
	21 Genomes and Their Evolution
4	Mechanisms of Evolution
	22 Descent with Modification: A Darwinian View of Life
	23 The Evolution of Populations
	24 The Origin of Species
	25 The History of Life on Earth
5	The Evolutionary History of Biological Diversity
	26 Phylogeny and the tree of Life
	27 Bacteria and Archaea
	28 Protists
	31 Fungi
	32 An Overview of Animal Diversity
	33 An Introduction to vertebrates
	34 The Origin and Evolution of Vertebrates
7	Animal Form and Function
	40 Basic Principles of Animal Form and Function
	41 Animal Nutrition
	42 Circulation and Gas Exchange
	43 The Immune System
	44 Osmoregulation and Excretion
	45 Hormones and the Endocrine System
	46 Animal Reproduction
	47 Animal Development
	48 Neurons, Synapses, and Signaling
	49 Nervous Systems
	50 Sensory and Motor Mechanisms
	51 Animal Behavior

8	Ecology
52	An Introduction to Ecology and the Biosphere
53	Population Ecology
54	Community Ecology
55	Ecosystems and Restoration Ecology
56	Conservation Biology and Global Change

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.

Center for Academic Support

The Center for Academic Support (CAS) 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

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 PC or Laptop with Windows 7; Mac with OS X; 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, Internet Explorer or Firefox

Note: Be sure to enable Java & pop-ups

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 accomplished 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.

XII. Semester Calendar

The Academic Calendar for Summer 2018 is published in the University's web site and Registration Bulletin which can be accessed by students.

1. Instruction begins for this class on **Monday, July 8, 2019**
2. Late Registration and Drop/Add Ends for Undergraduate Students: **Monday, July 8, 2019**
3. Course Review Days: Thursday, August 9, 2018
4. Last Day to withdraw from the University (all courses) for summer 2018 Semester: **Monday, August 5, 2019**
5. **Thursday, August 8, 2019 1:30p.m. It is the University's Final Exam Period.** Take your exams according to the published PVAMU Final Exam Schedule. This prevents time conflicts. **The cumulative final exam will constitute the remaining 50% of the final semester grade. Final exams are required to be given only at the times and dates announced in the 2019 Summer University Final Exam Schedule. Students must arrange their schedule and activities so that they are prepared and present for the final exam.**