SCHOOL OF STEM SYLLABUS

TERM:

INSTRUCTOR:

COURSE CODE: BIO-100

OFFICE HOURS:

COURSE TITLE: General Biology

OFFICE LOCATION:

DAY(S) AND TIME(S):

EMAIL:

LOCATION:

PHONE:

COURSE PREREQUISITE: None

CREDITS: 3

COURSE DESCRIPTION:
This is an introductory course in contemporary biology designed to provide a foundation for further studies in Biology. Instructional techniques include lectures and demonstrations

STUDENT LEARNING OUTCOMES:

Upon completion of this course students will be able to:

1. Evaluate the Scientific Method; identify the components of the Scientific Method.
2. Differentiate living from nonliving, they will use taxonomy. Identify the different forms of life on earth.
3. Distinguish between atoms and molecules; elements and compound; protons, neutrons, electrons, and define what are compounds and acid/ base.
4. Define the building blocks for all living as carbohydrates, saturated and unsaturated fatty acids, proteins and distinguish the different levels of structures and their diverse functions.
5. Recognize cells structure as the basic unit of life. compare the basic parts of eukaryotic cells organelles function in a cell, and distinguish bacteria from eukaryotic cells, protists and viruses. Compare and contrast meiosis (sexual) and mitosis (somatic cells); and describe the different stages in cell cycles. Identify chromosomes as the eukaryotic genes
6. Contrast DNA/ RNA structure and describe the DNA replication mechanisms, transcription and translation from DNA-RNA-proteins.
7. explain the concepts of Mendel inherited experiment. Define homozygous, heterozygous, genotype and phenotype & Discuss the ethical issues that surround the release of bioengineered organisms.
8. explain ways in which natural selection can affect a population over time, and the order of the taxonomic categories used in classifying organisms. Recognize the differences between viruses, bacteria, archaea and protists.

TEXTBOOK AND SUPPLEMENTAL MATERIALS:
Biology: Life on Earth, 12th Edition. Audesirk

Biology: Life on Earth Edition: 12th ISBN: (978-0134813448) only textbook

GRADING POLICY:

Two Exams	30%
Midterm	25%
Final Exam	25%
Article Summary	10%
Students Presentation	10%

Attendance, punctuality and participation are required. Students missing more than 2 classes may receive a filing grade. Cell phones should be turned off in the classroom

Students are expected to follow attendance guidelines as presented in the syllabus provided by the instructor. However, in case of an emergency or illness, students are advised to notify their instructor or counselor immediately. The instructor will determine the validity of the absence. The exceptions to instructor discretion exist when members of armed forces are called for training or assignment or any case where students are legally required to be elsewhere. Pending the submission of appropriate documentation reasonable accommodations for make-up work shall be provided, and in accordance with guidelines included in the syllabus. Make up exams will be given only in extenuating circumstances. It is your responsibility to let me know that you missed an exam. All make up exams are more difficult than the original.

SAMPLE COURSE SCHEDULE:

Week	Topic	L.O
1st	An Invitation to Biology & scientific method	SLO 1
2nd	Life's Chemical Basis	SLO 2
3rd	Molecules of Life	SLO 3,4
4th	The Cell Structure	SLO 5
5th	How the Cells Reproduce Mitosis & Meiosis	SLO 6
6th	Midterm Exam	

	Select articles for discussion and presentation	
7th	DNA Structure and Function	SLO 7
8th	Observing Patterns in Inherited Traits	SLO 8
9th	Studying and Manipulating Genomes	SLO 9
10th	Evidence of Evolution	SLO 10
11th	Viruses, Bacteria, and Archaea	SLO 11
12th	Protists	SLO 11
13th	Students Presentations	
14th	Students Presentations	
15th	**Final Exam**	

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https://www.hccc.edu/administration/academic-affairs/syllabus-addendum.html