



Semester: [Fall 2017]

This syllabus is a plan, not a contract. Changes may occur during the term as the instructor deems necessary.

I. On-Ground Course Information:

- **Course Title: General Biology**
- **Course Number: BIO 1005**
- **KRSN Number: BIO 1010**
- **Prerequisites: None**
- **Credit Hours: 5**

Required Textbook and Supplies:

1. Campbell Essential Biology, 6th Edition
by Simon, Dickey, Hogan, & Reece, The Benjamin/Cummings Publishing Co., 2016
ISBN 10:0-133-91778-9; 13:978-0-133-91778-9
 2. General Biology Lab manual by Lal & Foreman
- **Course Description:** A course organized around concepts and themes fundamental to an understanding of the nature of living organisms and their interactions with the environment and each other. Content covered will include basic chemistry and biochemistry, cellular structure, metabolism, Mendelian genetics, evolution, and diversity of life. A minimum of six hours of classroom work required per week including: lectures, discussions, labs tests, computer mediated instruction, and completing educational objectives in course syllabus.

IV. Learning Outcomes: Upon completion of this course, students will be able to do the following:

1. Describe the nature of science.
 - Scientific Processes
 - Scientific Methods
2. Identify and describe the levels of organization and emergent properties of life.
 - Chemical
 - Cellular
 - Organ/Organ System
 - Organismal
 - Ecological
3. Describe the principles of Bioenergetics.
 - Enzymes Activity
 - Metabolism
 - Cellular Respiration / Photosynthesis
4. Describe the importance of reproduction in maintaining the continuity of life
 - Mitosis
 - Meiosis

- Differentiation/Development
 - Diversity of Reproductive Strategies
5. Define and apply the Principles of Genetics to the Unity and Diversity of Life
 - Classical (Mendelian) Genetics
 - Molecular Genetics
 6. Describe Evolution as the mechanism of change in Biology
 - Natural Selection
 - Speciation
 - Diversity of Life / Classification /
 7. Identify and describe the Principles of Ecology
 - Ecosystem Organization
 - Ecological Interactions
 - Environmental Issues

Laboratory topics/skills

Upon completion of this course, students will be able to:

Demonstrate an understanding of the lecture topics through application of the following lab skills

- Microscopy
- Quantitative measurement skills incorporating the metric system
- Analytical and statistical skills including presenting and/or interpreting graphs and tables
- Experience with living organisms in the laboratory and/or field setting
- Identification and proper use of laboratory equipment

The learning outcomes and competencies detailed in this course outline or syllabus meet or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Groups project for this course as approved by the Kansas Board of Regents.

V. Grading Policy:

Grades will be calculated based upon the following scale unless licensing or accreditation boards have a higher standard:

100 – 90%	A
89 – 80%	B
79 – 70%	C
69 – 60%	D
Below 60%	F

VI. Credit Description:

A credit hour is defined as one hour of classroom instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester of credit. So for every course credit hour, the typical student should expect to spend at least three clock hours per week of concentrated attention on course-related work, including but not limited to time attending class, as well as out-of-class time spent reading, reviewing, organizing notes, preparing for upcoming quizzes/exams, problem solving, developing and completing projects, and other activities that enhance learning. Thus, for a three hour course, a typical student should expect to spend at least nine hours per week dedicated to the course.

VII. Common Learning Expectations: All sections of [list course] use the activities listed below to measure whether you learned a required learning outcome for this course:

- 1. Lecture Exams (see schedule below)**
- 2. Completion of Weekly Labs (see schedule below)**
- 3. Practicum Lab exams (see schedule below)**
- 4. Final Exam (schedule to be announced)**