Course Prefix and Number: BIO 149  Credits: 1

Course Title: Microbiology for Allied Health

Course Description: Studies the characteristics of microorganisms that are especially important to programs in the Allied Health fields. This course also emphasizes these characteristics in regard to individual and community health. Prerequisites: ENG 111, MTH 126, and BIO 141 (or NAS 161 or BIO 231). Lecture 1 hour.

General Course Purpose: Provides a single-credit, non-laboratory experience for allied health students required to have general knowledge of microbiology and affiliated practical content.

Course Prerequisites and Co-requisites:
Prerequisites: ENG 111, MTH 126, and BIO 141 (or NAS 161 or BIO 231)

Student Learning Outcomes:
Upon completing the course, the student will be able to
a. Describe the roles played by Hooke, Leeuwenhoek, Needham, Lister, and Pasteur in the development of the science of microbiology;
b. List several ways in which microbes affect our lives;
c. Explain the Germ Theory of Disease;
d. List the differences between prokaryotic and eukaryotic cellular structure and function;
e. Describe bacterial structure, reproduction, and metabolism;
f. Describe viral structure and replication;
g. Describe the structure of protozoans and fungi;
h. Discuss the role of the human immune system to defend against microbial infection;
i. Describe lab techniques for growth, control, and diagnostic testing of microbes; and
j. Describe the physiology, transmission, symptoms, complications, and treatment of various microbial diseases of the genitourinary, integumentary, respiratory, and digestive systems.

Major Topics to Be Included:
a. Introduction to Microbiology
b. Bacterial Structure and Function
c. Overview of Fungi, Protozoans, and Viruses
d. Immune Response
e. Laboratory Techniques and Control
f. Microbial Diseases of the Integumentary, Genitourinary, Respiratory, and Digestive Systems

Date Created/Updated (Month, Day, Year): January 22, 2019