

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: BIO 205

Credits: 4

Course Title: GENERAL MICROBIOLOGY

Course Description (including lecture hours, lab hours, total contacts)

Examines morphology, genetics, physiology, ecology, and control of microorganisms. Emphasizes application of microbiological techniques to selected fields. Lecture 3 hours. Recitation and Laboratory 3 hours. Total 6 hours per week.

General Course Purpose

This course emphasizes the application of microbial techniques to selected fields. It provides 4 credits of a laboratory science for the AS in Science degree.

Course Prerequisites/Corequisites (*Entry-level competencies **required** for enrollment*)

Prerequisites: BIO 101-102 and CHM 111-112 or equivalent, or permission of instructor. CHM 101-102 are acceptable equivalent courses. Credits for CHM 101-102 do not count toward the AS in Science degree.

Course Objectives (Each item should complete the following sentence.)

Upon completing the course, the student will be able to:

- a. Understand basic aseptic techniques.
- b. Understand principles of microbiology and culture of microbes.
- c. Understand identifications and culture of microbes.
- d. Understand applications of microbiology in biotechnology.

Major Topics to be Included

- a. History of Microbiology
- b. Cell Structure
- c. Microbial Metabolism
- d. Microbial Genetics
- e. Immunology
- f. Microbes and Disease
- g. Microbial Ecology

Effective Date of Course Content Summary (Month, Date Year): 02/016/09