

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

Course Prefix and Number: BIO 205

Credits: 4

Course Title: General Microbiology

Course Description: Examines morphology, genetics, physiology, ecology, and control of microorganisms. Emphasizes application of microbiological techniques to selected fields. 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. Lecture 3 hours. Laboratory and Recitation 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 and Co-requisites:

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:

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; and
- 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: February 16, 2009