

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

Course Prefix and Number: BIO 206

Credits: 4

Course Title: Cell Biology

Course Description: Introduces the ultrastructure and functions of cells. Emphasizes cell metabolism, cell division, and control of gene expression. Prerequisite: One year of college biology and one year of college chemistry. Lecture 3 hours. Recitation and Laboratory 3 hours. Total 6 hours per week.

General Course Purpose: This course covers the basic content and specific laboratory techniques of an introductory, college-level, cell biology class. The credits for this class can be used to satisfy the laboratory science requirements for the AS in Science degree.

Course Prerequisites and Co-requisites:

Prerequisite: One year of college biology and one year of college chemistry.

Course Objectives:

Upon completing the course, the student will be able to

- a. List and describe in detail the major components of the eukaryotic and prokaryotic cell;
- b. List and describe the major metabolic pathways of cellular respiration and photosynthesis;
- c. Explain membrane morphology and physiology;
- d. Describe the Central Dogma; and
- e. List and describe several techniques associated with recombinant DNA technologies.

Major Topics to Be Included:

- a. Chemistry review
- b. Cell structure and function
- c. Membrane physiology
- d. Chemistry of biological molecules
- e. DNA, RNA, Protein physiology, and metabolism
- f. Laboratory techniques common to cell biology

Effective Date of Course Content Summary: February 16, 2009