

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

Course Prefix and Number: BIO 206

Credits: 4

Course Title: CELL BIOLOGY

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

Introduces the ultrastructure and functions of cells. Emphasizes cell metabolism, cell division, and control of gene expression. 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/Corequisites (*Entry-level competencies **required** for enrollment*)

One year of college biology or one year of college chemistry.

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

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.
- 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 (Month, Date Year): 02/16/09