

# North Hennepin Community College

## BIOL 1000: Life Science

### A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 3

Lab Hours/Week: 3

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 03 - Natural Science

The course introduces the breadth of biology from the principles of chemistry to ecology. The production and utilization of biological energy is explored at the cellular and organism level. The principles of inheritance and cellular reproduction are explored at the molecular, cellular level and organism levels. The unity and diversity of life and life processes is emphasized. The laboratory focuses on the techniques required to discover biological principles. Activities are hands-on. (3 hours lecture, 3 hours lab).

**B. COURSE EFFECTIVE DATES:** 08/25/1997 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. This course examines the general principles of chemistry, the organization of cells, and the properties and functions of biological macromolecules. The production and utilization of biological energy are explored at the cellular level and the similarity found in all organisms is emphasized. Principles of inheritance and cellular reproduction are explored at the molecular and cellular level. This course also examines general principles of ecology and evolution. The laboratory is an integral part of the course; activities are hands-on.

### D. LEARNING OUTCOMES (General)

1. View biology as a collection of organizing themes, rather than a collection of facts. (MnTC G2 comps a, c; G 3 comp a; ELOs 1, 2)
2. Understand the unity and diversity of life on earth. (MnTC G 2 comp a, b; G 3 comp a; ELO 1)
3. Develop an understanding of biological processes at the molecular level and cellular level. (MnTC G 2 comps a, c; G 3 comps a, c?; ELO 1, 2)
4. Learn some of the techniques used in the modern biology laboratory. (MnTC G 2, comps a, b, c; G3 comps a, b, c; ELOs 1, 2, 3)
5. Identify potential areas of career interest (ELO 3)
6. Make more informed decisions on personal and civic choices (MnTC G 3 comp d; ELO 3, 4.)

### E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal 03 - Natural Science

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.

## **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

## **G. SPECIAL INFORMATION**

1. Knowledge of Human Cultures and the Physical and Natural World --Through study in the sciences, mathematics, social sciences, humanities, histories, languages, the arts, technology and professions.
2. Intellectual and Practical Skills - Including: Inquiry and analysis; Critical and creative thinking; Written and oral communication; Quantitative literacy; Information literacy; Teamwork and problem solving.
3. Personal and Social Responsibility and Engagement - Including: Civic knowledge and involvement - campus, local and global; Intercultural knowledge and competence; Ethical reasoning and action; Foundations and skills for lifelong learning .
4. Integrative and Applied Learning - Including: Synthesis and advanced accomplishment across general education, liberal studies, specialized studies and activities in the broader campus community