

# Bemidji State University

## **BIOL 1110: Human Biology**

### **A. COURSE DESCRIPTION**

Credits: 4

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 03 - Natural Science

General introduction to biology, focusing on humans, including topics on cell biology, genetics, molecular biology, form and function of organ systems, and the interaction between humans and their environment. Intended for nonbiology majors. Lecture and laboratory. Liberal Education Goal Area 3 (LC).

### **B. COURSE EFFECTIVE DATES: 09/01/2002 - Present**

## **C. OUTLINE OF MAJOR CONTENT AREAS**

1. Introduction - Scientific method
2. What is life?
3. Basic chemistry
4. Water - The solvent of life
5. Molecules of life
6. Cell structure
7. Energy, transport, and enzymes
8. Cellular respiration
9. Fermentation
10. Homeostasis - The background theme
11. Animal organization
12. Cardiovascular system
13. Digestive system
14. Nutrition
15. Nutrition
16. Respiratory system
17. Excretory system
18. Skeletal
19. Muscular system
20. Immune/Lymphatic system, blood type
21. Nervous system
22. Senses
23. Endocrine system, reproductive hormones, reproduction system
24. Sexually transmitted diseases
25. Mitosis & Meiosis
26. Mendelian Genetics and other inheritance patterns
27. Genetic counseling and DNA
28. Transcription and translation
29. Gene regulation
30. Biotechnology
31. Evolutionary medicine

## **D. LEARNING OUTCOMES (General)**

1. identify and know the function of macromolecules and organelles within a cell
2. understand fundamental metabolic processes
3. demonstrate an understanding of the structure and function of the human body
4. demonstrate an understanding of mitosis and meiosis
5. demonstrate an understanding of Mendelian and molecular genetics
6. formulate scientific hypotheses and apply the methods of scientific inquiry
7. gather, interpret, and communicate data in a laboratory setting

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

Goal 03 - Natural Science

1. No Competencies Indicated
2. Demonstrate understanding of scientific theories.
3. 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.
4. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
5. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

## **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

## **G. SPECIAL INFORMATION**

None noted