A. COURSE DESCRIPTION

Credits: 4
Lecture Hours/Week: 0
Lab Hours/Week: 0
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. [Core Curriculum 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. Respiratory system
  16. Excretory system
  17. Skeletal
  18. Muscular system
  19. Immune/Lymphatic system, blood type
  20. Nervous system
  21. Senses
  22. Endocrine system, reproductive hormones, reproduction system
  23. Sexually transmitted diseases
  24. Mitosis & Meiosis
  25. Mendelian Genetics and other inheritance patterns
  26. Genetic counseling and DNA
  27. Transcription and translation
  28. Gene regulation
  29. Biotechnology
  30. 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. 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

None noted