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