

# MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

## COURSE OUTLINE

**DEPT. BIOL**

**COURSE NUMBER: 2202**

**NUMBER OF CREDITS: 4**

**Lecture: 3 Lab: 1 OJT: 0**

<b>Course Title:</b>
Human Physiology

<b>Catalog Description:</b>
Human Physiology covers an applied and systematic approach the physiology of the cells, tissues, organs, and organ systems of the human body. Laboratory exercises support the lecture and include hands-on exercises that coincide with the systems covered in the lecture topics.

<b>Prerequisites or Necessary Entry Skills/Knowledge:</b>
BIOL 2201 Human Anatomy

### FULFILLS MN TRANSFER CURRICULUM AREA(S)

Goal 3: Natural Sciences: \_\_X\_\_ by meeting the following competencies:

- Demonstrate understanding of scientific theories.
- 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.
- Communicate their experimental findings, analyses, and interpretations both orally and in writing.
- Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

<b>Topics to be Covered</b>
Physiology of cells and their surrounding environment
Chemical nature of the human body, enzymes, cellular respiration and metabolism
Nervous system function, sensory organ function, endocrine gland function
Muscular contraction and neural control, cardiovascular function, immune system function
Respiratory, digestive, urinary, and reproductive systems physiology.
Homeostasis mechanisms
Cellular diffusion and osmosis
Cranial nerve function, autonomic nervous system function
Cellular respiration and metabolism
Sensory function including visual, auditory, gustatory, equilibrium, and cutaneous

Cardiovascular function, respiratory function, urinary function nutritional metabolism.
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<b>Student Learning Outcomes</b>
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Describe and illustrate working knowledge of the physiology of the human body from the cellular level through the tissue, organ, and organ system levels.
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Summarize the critical and necessary inter-related functions of tissues, organs and organ systems.
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Compare and contrast normal physiological function from disease related physiological function.
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Explain and recognize the nature of physiological dysfunctions.
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Describe human physiology and be able to interpret and understand the medical and physiological articles found in current professional literature, as well as lay publications and news sources.
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Illustrate or describe and properly use physiological terminology as it applies to the study of human physiology.
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Identify and utilize Human Physiology knowledge in the student's chosen profession.
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<b>Is this course part of a transfer pathway: Yes   <input type="checkbox"/>   No   <input checked="" type="checkbox"/></b>
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Revised Date: 6/2021