

MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

COURSE OUTLINE

DEPT. BIOL

COURSE NUMBER: 2240

NUMBER OF CREDITS: 3

Lecture: 2 Lab: 1 OJT: 0

Course Title:
Genetics

Catalog Description:
Genetics covers the fundamentals of plant and animal genetics and includes the study of modes of inheritance, mechanisms of gene action, human genetics, and the behavior of genes in populations. Lecture and lab included.

Prerequisites or Necessary Entry Skills/Knowledge:
BIOL 1110 Principles of Biology I

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.

Topics to be Covered
Basic principles of genetics and problem-solving skills
Genetic linkage and gene mapping
Current methodologies in genetics, gene expression, gene regulation in prokaryotes and eukaryotes
Genetic basis of diseases common to organisms
Human genetics and evolutionary genetics.

Student Learning Outcomes
Demonstrate an introductory level of genetic knowledge.
Demonstrate and understand how genetics developments play important roles in society.
Demonstrate problem solving skills in lab and lecture as well as out of class settings.
Effectively summarize experimental findings and interpretations of laboratory investigations.
Describe techniques of modern genetic technology and apply to solve practical genetic problems. Identify interactions among genes, environmental factors, and behaviors and their roles in health and disease.

Is this course part of a transfer pathway: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Revised Date: 6/2021