A. Course Description

Credits: 5

Prerequisites:

BIOL 111 General Biology I AND
BIOL 112 General Biology II AND
CHEM 111 General Chemistry I AND
CHEM 112 General Chemistry II AND
MATH 115 College Algebra

OR

BIOL 111 General Biology I AND
BIOL 112 General Biology II AND
CHEM 111 General Chemistry I AND
MATH 120 Precalculus

Lab Hours/ Weeks: Corequisites: None

Lecture Hours/ Week :

MnTC Goals: None

This course covers genetics, heredity and genetic information, its transmission from parents to offspring, its phenotypic and molecular expression in cells and organisms, and its course in populations. Also covers the modern techniques of genetics including gene mapping, cloning, genome manipulation and mutation. Lab included. Intended for biology and life sciences teaching majors.


C. Outline of Major Content Areas:

See Course Description for major content areas.

D. Learning Outcomes (General)

1. Explain and apply scientific knowledge in genetics, both theoretical and experimental, at the upper division level.
2. Demonstrate quantitative reasoning skills and competency with arithmetic, algebra, and statistics at a level appropriate for graduates of bachelor's degree program in biology.
3. Properly conduct supervised independent laboratory research at the senior undergraduate level.
4. Read and interpret primary scientific literature in genetics.
5. Recall, explain and apply the concepts, knowledge and vocabulary of genetics at the level necessary for success in graduate study in genetics.

E. Learning Outcomes (MN Transfer Curriculum)

This contains no goal areas.

F. Special Information

Note: Enrollment limited to Biology and Life Science Teaching majors only, except by instructor permission. First day attendance required except by instructor permission.