Minnesota North College

PROGRAM PLANNER
ACADEMIC YEAR 2024-25

Biology Transfer Pathway

Associate of Science (AS) Degree | 60 credits

Campus: Hibbing, Itasca-Grand Rapids, Mesabi Range-Virginia, Rainy River-Intl. Falls, Vermilion-Ely

Required Content Area Courses (24 credits)

BIOL	1561	General Biology of Cells, 4 cr.
BIOL	1562	General Biology of Organisms, 4 cr.*
BIOL	2330	Genetics, 4 cr.*
CHEM	1521	General Chemistry 1, 4 cr.*
CHEM	1522	General Chemistry 2, 4 cr.*

One of the following:

BIOL 2320 Microbiology, 4 cr.

BIOL 2325 Ecology, 4 cr.*

*indicates course has a prerequisite

Required MNTC Core Courses (22-24 credits minimum)

Goal 1 **Communication** (10 credits required)

COMM course, 3 cr.

ENGL 1231 College Composition 1, 4 cr.

One of the following:

ENGL 1232 College Composition 2, 3 cr.

ENGL 1240 Technical Report Writing, 3 cr.

Goal 3 **Natural Sciences** (Fulfilled by Required Content Area Courses)

Goal 4 **Mathematics/Logical Reasoning** (6-8 credits)

MATH 1220 College Algebra, 3 cr.

Additional MATH course, selected based on transfer institution requirements, 3+ cr.

Goal 5 **History and the Social and Behavioral Sciences** (3 credits required)

Goal 6 **The Humanities and the Fine Arts** (3 credits required)

Goal 10 **People and the Environment** (Fulfilled by Required Content Area Courses)

Electives

Select any courses numbered 1000 or above to total 60 credits for the Associate of Science Degree.

Graduation Requirements

- Complete all required content area courses.
- 2.0 minimum GPA required for both the MNTC and AS degree.
- Transfer courses with grades of A-D will be included in the GPA calculation for MNTC.

Program Description

The Biology Transfer Pathway AS offers students a powerful option: the opportunity to complete an Associate of Science degree with course credits that directly transfer to designated Biology bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

Universities within the Minnesota State system include Bemidji State University; Metropolitan State University; Minnesota State University, Mankato; Minnesota State University Moorhead; Southwest Minnesota State University; St. Cloud State University; and Winona State University.

Program Learning Outcomes

- SCIENTIFIC METHOD: Propose testable hypotheses and carry out experiments using standardized international systems of measurement.
- MICROSCOPY: Use the light microscope effectively.
- DATA INTERPRETATION & STATISTICAL ANALYSIS: Analyze simple data sets using appropriate descriptive and inferential statistics.
- SCIENTIFIC COMMUNICATION: Communicate data and analysis in oral and written format.
- COLLABORATION: Communicate and work productively with others in designing, conducting, and evaluating projects and experiments.
- SCIENTIFIC LITERATURE: Use public literature databases to find appropriate published material, and read, understand, and evaluate the validity and importance of the scientific literature.
- SCIENCE & SOCIETY: Analyze scientific studies in light of their ecological, social, economic, ethical, and cultural implications.
- INTERDISCIPLINARY NATURE OF SCIENCE: Utilize other disciplines as sources of context and skills to inform the learning and work they are engaged in.