Clinical Laboratory Science, B.S. *major* (4 + 1 Option)

Note: After completing the clinical year courses, students will receive a double major: Biology, B.S., and Clinical Laboratory Science, B.S.

In this option, the student completes a Biology, B.S., major at Bemidji State University, and then applies for admission to the clinical year program through the University of North Dakota or other affiliated institution (a 2.80 GPA overall and in science courses is one requirement for entrance into the clinical year program).

This option may be of interest to students considering a pre-professional program such as pre-medicine, pre-veterinary medicine, or other pre-professional area. Students who fail to gain admission to the professional school of their choice will have the option of pursuing a health-related career in Clinical Laboratory Science.

Required Credits: 108
Required GPA: 2.25

REQUIRED CLINICAL STUDIES 4 + 1 OPTION

(a 2.80 GPA overall and in science courses is one requirement for entrance into the clinical year program). This option may be of interest to students considering a pre-professional program such as pre-medicine, pre-veterinary medicine, or other pre-professional area. Students who fail to gain admission to the professional school of their choice will have the option of pursuing a health-related career in Clinical Laboratory Science. NOTE: After completing the clinical year courses, students will receive a double major: Biology, B.S. and Clinical Laboratory Science, B.S. In this option, the student completes a Biology, B.S., major at Bemidji State University, and then applies for admission to the clinical year program through the University of North Dakota or other affiliated institution

I REQUIRED BIOLOGY COURSES

I. REQUIRED BIOLOGY COURSES:

- BIOL 1211 Introductory Biology I (4 credits)
- BIOL 1212 Introductory Biology II (4 credits)
- BIOL 2110 Human Anatomy and Physiology (5 credits)
- BIOL 2360 Genetics (4 credits)
- BIOL 2610 General Ecology (3 credits)
- BIOL 3300 Introduction to Hematology (4 credits)
- BIOL 3380 Molecular Genetics: Theory and Practice (4 credits)
- BIOL 3580 Immunology (4 credits)
- BIOL 3710 Microbiology (4 credits)
- BIOL 4210 Parasitology (4 credits)

II CAPSTONE EXPERIENCE

This requirement may be completed in one of the following ways: A OR B

A.
COMPLETE A TWO-SEMESTER, 4 CREDIT RESEARCH COURSE (2 CREDITS PER SEMESTER)--ADVANCED LABORATORY PROJECTS IN
BIOLOGY (BIOL 4894 AND BIOL 4895) OR ADVANCED FIELD PROJECTS IN BIOLOGY (BIOL 4896 AND BIOL 4897)

B.
COMPLETE SOME OTHER CAPSTONE EXPERIENCE APPROVED BY
YOUR BIOLOGY ACADEMIC ADVISOR AND THE DEPARTMENT

III REQUIRED COURSES IN RELATED FIELDS

COMPLETE THE FOLLOWING COURSES:

- CHEM 2211 Principles of Chemistry I (4 credits)
- CHEM 2212 Principles of Chemistry II (4 credits)
- CHEM 3311 Organic Chemistry I (3 credits)
- CHEM 3312 Organic Chemistry II (3 credits)
- CHEM 3371 Organic Chemistry Laboratory I (1 credit)
- CHEM 3372 Organic Chemistry Laboratory II (1 credit)
- CHEM 4411 Biochemistry I (3 credits)
- CHEM 4471 Biochemistry Laboratory I (1 credit)

- PHYS 1101 General Physics I (4 credits)
  or PHYS 2101 Physics I (5 credits)
- PHYS 1102 General Physics II (4 credits)
  or PHYS 2102 Physics II (5 credits)

- STAT 2610 Applied Statistics (4 credits)
  or PSY 3401 Basic Statistics for Research (4 credits)

IV REQUIRED CLINICAL STUDIES

Clinical year courses, taken after the senior year beginning with summer term, are taken through entrance into the clinical year program at the University of North Dakota or at affiliated hospitals. NOTE: A clinical year position is not guaranteed. Students must apply for a clinical year position in October of the junior year. Please see advisor regarding the clinical year of study.