CHEMISTRY

Division of Science and Mathematics

ADMISSION TO CHEMISTRY MAJORS

All admission criteria are monitored and enforced by the discipline faculty. Admission to the Chemistry major requires that the student:

- Complete CHEM 121, CHEM 122, and CHEM 341 with a minimum grade of "C" in each course.
- Have an institutional cumulative GPA of at least 2.50.
- Have satisfactory communication skills as demonstrated by successful completion of ENGL 110 and ENGL 120 with a minimum grade of "C" in each course.
- Have satisfactory mathematics skills as demonstrated by successful completion of MATH 103 with a minimum grade of "C."
- Have satisfactory computer skills as demonstrated by successful completion of CIS 112, CIS 114, CIS 116, and CIS 118 with a minimum grade of "B" in each course or comparable performance on the appropriate University examination.
- Complete an oral interview with the discipline faculty.

- Final approval of the discipline faculty is contingent upon their professional judgment following consideration of documentation and faculty assessment.

Major: Chemistry Bachelor of Science

This major provides the student with the knowledge, skills, and techniques commensurate with a Bachelor of Science in Chemistry. The student pursuing this degree may plan a professional or industrial vocation or pursue a graduate degree. The student must complete 36 semester hours of general education courses and the chemistry core listed below. The student must maintain a GPA of 2.50 in the core courses. The MSU Bachelor of Science degree requires completion of at least a minor program in a supporting area in conjunction with the major.

Chemistry majors complete 36 hours of general education, including ENGL 110, ENGL 120, and MATH 103, which are pre-requisite courses to this major.

Core Requirements:

CHEM 121-General Chemistry I	4	CHEM 466/466L–Survey of Physical Chemistry / Lab	4
CHEM 122-General Chemistry II	4	CHEM 480S-Chemistry Comprehensive	1
CHEM 330/330L-Quantitative Analysis I / Lab	4	MATH 165-Calculus I	4
CHEM 341/341L-Organic Chemistry I / Lab	5	MATH 323-Probability and Statistics	3
CHEM 342/342L-Organic Chemistry II / Lab	5		
CHEM 360/360L-Elements of Biochemistry	4	**Total**	**38**

Major: Composite in Chemistry Education Bachelor of Science in Education

This major provides students the knowledge and skills essential for teaching science courses in junior and senior high school with emphasis in chemistry. Students are provided with a broad base of knowledge, which permits certification as junior and senior high school science teachers in North Dakota. Students who plan to teach in Minnesota need to complete an additional six semester hours in physics for certification. A minor is not required with this major. In addition to the core courses listed below the student must complete Educ 398 –Secondary Education Field Experience and EDUC 484-Secondary Methods for Science and the secondary education core required for teacher certification (see Education section of this catalog) as well as 36 semester hours of general education courses.

Composite in Chemistry Education majors complete 36 hours of general education, including Comm 110, Engl 110, Engl 120, Geog 103, Math 103, and Psyc 111, which are pre-requisite courses to this major.

Core Requirements:

CHEM 121-General Chemistry I	4	MATH 165-Calculus I	4
CHEM 122-General Chemistry II	4	MATH 323 Probability and Statistics	3
CHEM 330/330L-Quantitative Analysis I / Lab	4	PHYS 110-Astronomy	4
CHEM 341/341L-Organic Chemistry I / Lab	5	PHYS 211/211L-College Physics I / Lab	4
CHEM 360/360L–Elements of Biochemistry / Lab	4	PHYS 212/212L-College Physics II / Lab	4
CHEM 466/466L–Survey of Physical Chemistry / Lab	4	SCNC 322–Environmental Science	3
CHEM 480S–Chemistry Comprehensive	1	BIOL Electives	4
BIOL 150-General Biology I	4	GEOL 115-Introductory Geology	4
BIOL 151-General Biology II	4	**Total**	**64**

Minor: Chemistry/Chemistry Education

Students in this program complete Chem 121-General Chemistry I and Chem 122-General Chemistry II, plus 12 semester hours of chemistry electives to total a minimum of 20 semester hours. Teacher certification candidates are also required to complete Educ 398 –Secondary Education Field Experience and Educ 484-Secondary Methods for Science.