



North Central Michigan College

2025/26

Western Michigan University Chemistry Curriculum Guide

The WMU Department of Chemistry offers a choice of four majors:

- **Chemistry major** - this 35-credit hour major in the College of Arts & Sciences is designed for students interested in graduate studies in chemistry. This major also suits students interested in teaching chemistry at the middle/high school level after completion of a Master of Arts in Teaching: Secondary Education.
- **Biochemistry** - this 36-credit hour major is recommended for students interested in careers in health sciences (medicine, dentistry, nutrition, pharmacology, etc.) or a graduate career in biochemistry or molecular biology.
- **Business-oriented chemistry major** - this 37-credit hour major is available to provide the chemical understanding needed if you are preparing for a career in the chemical industry, outside the laboratory. A minor will be chosen in the Haworth College of Business, and students are prepared to enter areas of management, sales, and some aspects of government service.
- **Geochemistry major** - this 68-credit hour major is designed for students interested in the fields of geochemistry or environmental chemistry and is advised in the department of Geological and Environmental Sciences.

Important Information:

- You must meet one of the following math requirements: **MATH ACT** score of 27 or higher or **MATH SAT** score of 640 or successful completion of **MATH 1110** (MATH 120 at NCMC) with a grade of a "C" or higher or score 61% on the ALEKS math placement exam. More information about the ALEKS math placement can be found at <https://wmich.edu/math/placement>.
- All chemistry majors must meet with the College of Arts and Sciences chemistry advisor about major or minor, WES, and degree requirements. You must make an advising appointment to declare your major or minor.
- Chemistry majors must complete a minor (except Geochemistry). Business-oriented chemistry majors will be required to complete a minor in General Business, Management, or Marketing in the Haworth College of Business (HCoB).
- Chemistry majors must complete their last 14 credit hours in the department of Chemistry at WMU.
- Chemistry minors must complete at least 8 credits at WMU.

Courses that can be taken at NCMC:**WMU courses**

CHEM 1100|1110
CHEM 1120|1130
CHEM 3750|3760
CHEM 3770|3780
MATH 1220
MATH 1230
PHYS 2050|2060
PHYS 2070|2080

NCMC courses

CEM 121
CEM 122
CEM 231 (elective for Geochem majors)
CEM 232 (elective for Geochem majors)
MATH 150
MATH 210
PHY 230 (elective for Geochem majors)
PHY 231 (elective for Geochem majors)

Business-oriented majors may take these additional courses:

ACTY 2100	B 211
BUS 1750	B 161
MKTG 2500	M 200

Geochemistry majors may take these courses:

****Very important note:** Geochemistry majors only need the following Chemistry courses: **CEM 121, 122, CHEM 2250|2260** (not available at NCMC), and 9 hours of **upper-level Chemistry** coursework at WMU. You will also need 11 credits of **Math and General Science** (below), and 9 credits of Geoscience electives (not available at NCMC).

Math and General Science or Chemistry electives:

BIOS 2320	BIO 226
CHEM 3750 3760	CEM 231
CHEM 3770 3780	CEM 232
PHYS 2050 2060	PHY 230
PHYS 2070 2080	PHY 231

General education requirements:

- Please refer to the [WMU Essential Studies \(WES\) transfer guide](#) that lists courses meeting WES requirements at WMU that may be taken at NCMC.
- All students graduating from the College of Arts & Sciences must complete the College of Arts and Sciences Essentials (**CASE**). This includes world language proficiency (detailed in next bullet point), ENGL 1050/1060 sequence, and by completing the baccalaureate writing requirement.
- All students graduating from the College of Arts & Sciences must meet the world language proficiency by completing two semesters (6-8 hours) of the same foreign language or American Sign Language or passing WMU's proficiency by exam. Please contact the College of Arts & Sciences Undergraduate Advising Office at (269) 387-4366 with any questions. Neither the MACRAO Agreement nor the Michigan Transfer Agreement satisfy the world language requirement.
 - If the student's first language is not English, the student is exempt from this requirement. Determination of eligibility for this exemption is based on whether the student was required to take the TOEFL test for admission and can be verified through the WMU departments of Spanish or World Languages and Literatures.

- You may email the WMU advisors in the College of Arts & Sciences for further clarification about **WES or CASE**.

Contact information:

Chemistry Advisor

College of Arts & Sciences

Department of Chemistry

wmich.edu/chemistry/advising

chem-advising@wmich.edu

(269) 387-4341

For general education advising or world language requirement questions:

wmich.edu/arts-sciences/advising