



Henry Ford College

Fall 2019

Western Michigan University Chemistry Curriculum Guide

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

- **Chemistry major** – this 35 credit hour major in the College of Arts & Sciences Liberal Education Curriculum (LEC) is designed for students interested in graduate studies in chemistry;
- **Chemistry major ACS Certified** - this 42 credit hour major is certified by the American Chemical Society and is for students planning to enter the chemical industry, though it may be taken by students planning on graduate school study of chemistry;
- **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** – students choosing this 68 credit hour major should contact the department of Geosciences as early as possible for advising. The major is designed for students interested in the fields of geochemistry or environmental chemistry;
- **Secondary education chemistry major** - this 34 credit hour major is designed for students who desire to teach high school chemistry. Secondary education majors must meet with a College of Education and Human Development (CEHD) advisor for general education, pre-professional, and professional education requirements. To view the curriculum guide for this major, please go to the list of all major guides and select the chemistry guide listed under “Secondary Education.”

Important Information:

- To ensure that you possess adequate skills in chemistry, you must have had one year of high school chemistry. Otherwise you must enroll in CHEM 1000 (CHEM 111 at HFC) to build up your background in chemistry;
- In addition, chemistry students must meet one of the following math requirements: MATH ACT score of 25 or higher or MATH SAT score of 600 or higher (580 Old SAT), successful completion of MATH 1110 (MATH 110 at HFC) with a grade of a “C” or higher, or place into MATH 1180 (MATH 175 at HFC) or a higher math course;
- All chemistry majors must meet with a chemistry department advisor about major or minor requirements. You must make an advising appointment to declare your major or minor;

- For general education (see below) requirements, you must meet with a College of Arts & Sciences (A & S) advisor;
- All 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);
- If your major is chemistry, you must complete your last 14 credits hours in the Department of Chemistry at WMU;
- If your minor is chemistry, you must include at least one course that contains a laboratory experience, and your last seven (7) credits must be taken in the Department of Chemistry at WMU.

Courses that can be taken at Henry Ford:

WMU courses

CHEM 1100/1110
 CHEM 1120/1130
 CHEM 3750/3760
 CHEM 3770/3780
 MATH 1220
 MATH 1230
 MATH 2720
 PHYS 2050/2060
 PHYS 2070/2080

Henry Ford courses

CHEM 131 or 141
 CHEM 142
 CHEM 241/243 (not required for Geochem majors)
 CHEM 242/244 (not required for Geochem majors)
 MATH 180
 MATH 183
 MATH 280 (not required for Geochem majors)
 PHYS 231 (not required for Geochem majors)
 PHYS 232 (not required for Geochem majors)

Business-oriented majors may take these additional courses:

BUS 1750	BBA 131
MGMT 2500	BBA 133
MKTG 2500	BBA 252
ACTY 2100	BAC 131

Biochemistry majors may take these additional courses:

BIOS 1610	BIO 152
BIOS 1620	BIO 150

Geochemistry majors may take these courses:

*****Very important note:** Geochemistry majors only need the following Chemistry courses: CHEM 131 or 141, 142, and CHEM 2250/2260 (not available at HFC), 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 (taken at WMU).

Will transfer as “Math and General Science ” or Chemistry electives:

CHEM 3750/3760	CHEM 241/243
CHEM 3770/3780	CHEM 242/244
BIOS 2320	BIO 135 or 251

MATH 2720
MATH 3740
PHYS 2050/2060
PHYS 2070/2080

MATH 280
MATH 288
PHYS 231
PHYS 232

General education requirements:

- Please see the WMU [general education guide](#) for information on the courses that are required from all students, as part of the graduation requirements at WMU;
- 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 MTA satisfy the world language requirement.
 - If the student's first language is not English, then the student is exempt from this requirement, verified through the WMU departments of Spanish or World Languages and Literatures.

Contact information:

Chemistry department advisors:

Dr. John Miller
john.b.miller@wmich.edu
(269) 387-2871

Dr. Robert Sutton
robert.e.sutton@wmich.edu
(269) 387-2834

Dr. Donald Schreiber
donald.schreiber@wmich.edu
(269) 387-2856

Chemistry Satellite Office, 2220 Chemistry Building
<http://wmich.edu/chemistry/advising>, for appointments

General education advising:

A & S advisors – 2318 Friedmann Hall
wmich.edu/arts-sciences/advising or (269) 387-4366

Business-chemistry advising:

Paul Hildenbrand - Haworth College of Business
paul.hildenbrand@wmich.edu or (269) 387-5085

Geochemistry advising:

Dr. Michelle Kominz - 1187 Rood Hall
michelle.kominz@wmich.edu or (269) 387-5486