



WESTERN MICHIGAN UNIVERSITY

Delta College

Fall 2018

## 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 (CHM 101 at Delta) 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 (MTH 119 or 119A at Delta) with a grade of a “C” or higher, or place into MATH 1180 (MTH 151 at Delta) 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 Delta:**

**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

**Delta courses**

CHM 111 or 111H  
 CHM 112 or 112H  
 CHM 210/210L (not required for Geochem majors)  
 CHM 220/220L (not required for Geochem majors)  
 MTH 161  
 MTH 162  
 MTH 261 (not required for Geochem majors)  
 PHY 211 (not required for Geochem majors)  
 PHY 212 (not required for Geochem majors)

**Business-oriented majors may take these additional courses:**

BUS 1750	MGT 153
MKTG 2500	MGT 243
ACTY 2100	ACC 211

**Biochemistry majors may take these additional courses:**

BIOS 1610	BIO 171
BIOS 1620	BIO 172

**Geochemistry majors may take these courses:**

**\*\*\*Very important note:** Geochemistry majors only need the following Chemistry courses: CHM 111 or 111H, 112 or 112H, and CHEM 2250/2260 (not available at Delta), and 9 hours of **upper level Chemistry** course-work at WMU. You will also need 11 credits of **Math and General Science** (below), and 9 credits of Geoscience electives (taken at WMU):

CHEM 3750/3760	CHM 210 and 210L
CHEM 3770/3780	CHM 220 and 220L
BIOS 2320	BIO 203
MATH 2720	MTH 261
MATH 3740	MTH 264
PHYS 2050/2060	PHY 211
PHYS 2070/2080	PHY 212

**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  
(269) 387-4366 or [wmich.edu/arts-sciences/advising](http://wmich.edu/arts-sciences/advising)

**Business-chemistry**

Paul Hildenbrand - Haworth College of Business  
[paul.hildenbrand@wmich.edu](mailto:paul.hildenbrand@wmich.edu); or (269) 387-5085

**Geochemistry advising:**

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