



# CHEMISTRY MAJOR

## Advising Guide for BRCC Associate of Science Degree

Science major courses must be completed with “B” grades or better. These courses completed with “C” grades will count as elective credits and applied toward graduation at EMU.

### MTH 161 (PRECALCULUS) START

#### FIRST YEAR

##### FIRST SEMESTER

Course #	Course Description	Credits
ENG 111	College Composition I	3
MTH 161	Precalculus I	3
SDV 101	Student Development	1
CHM 111	General Chemistry I	4
HIS 111 (or 112)	History of World Civilizations I/II	3
<b>Total credits</b>		<b>14</b>

##### SECOND SEMESTER

Course #	Course Description	Credits
ENG 112	College Composition II	3
MTH 162	Precalculus II	3
CHM 112	General Chemistry II	4
_____	Social Science Elective (PSY 230 for Chemistry Secondary Education)	3
_____	History or Social Science Elective	3
<b>Total credits</b>		<b>16</b>

#### SECOND YEAR

##### THIRD SEMESTER

Course #	Course Description	Credits
MTH 263	Calculus I	4
BIO 101	General Biology I	4
PHY 201	College Physics I	4
CST 110 (or 100)	Introduction to Communication	3
<b>Total credits</b>		<b>15</b>

##### FOURTH SEMESTER

Course #	Course Description	Credits
MTH 245	Statistics I	3
PHY 202 or MTH 264	College Physics II or Calculus II	4
_____	Literature Elective	3
_____	Fine Arts Elective	3
<b>Total credits</b>		<b>17</b>

Total Credits Required for Associate of Science Degree/EMU Chemistry Requirements: 61  
Credits shown (62) may be slightly above 61 due to elective choices.

### ADVISING NOTES

- ▶ All students interested in the chemistry major should obtain credit for college chemistry, calculus, statistics, and physics prior to enrolling at EMU.
- ▶ If you wish to teach chemistry, you should take a semester of college biology. Students who have taken BIO 101 & 102 will earn credit for 2 of the 3: BIOL 225, BIOL 235, and BIOL 245, the choice is made in consultation with an academic advisor.
- ▶ Math required for the chemistry major at EMU is MTH 245 – Statistics, MTH 263 – Calc I, and MTH 264 – Calc II. Students may need to take necessary prerequisite math courses first. Math required for the biochemistry major at EMU is MTH 263 – Calc I and MTH 264 – Calc II OR MTH 245 – Statistics.
- ▶ As two semesters of Organic Chemistry will only transfer in as CHEM 315, we recommend that you wait to take organic chemistry until later.
- ▶ Students who transfer in with an approved associate degree have met most of EMU’s general education requirements. These students will have ABP and Cross-Cultural requirements left to complete at EMU.
  - Taking HIST 111/ 112 as one of the History electives lowers the cross-cultural requirements that would need to be taken at EMU.
  - There are many ways to meet the cross-cultural requirements without spending a semester abroad. Decisions about how to meet this requirement should be made in consultation with your advisor. A semester cross-cultural program in the spring is possible.
- ▶ Because of course sequencing and the rigor of the curriculum and depending on career goals, students with associate degrees should be prepared that they may need to spend more than two years at EMU to complete their degree; however shown below is one way to complete the chemistry major courses within 2 years:

	FALL	SPRING
FIRST YEAR AT EMU	CHEM 315 (4H) *CHEM 325 (2H) *CHEM 405 (3H)	CHEM 316 (4H) BIOL 255 (1H)
SECOND YEAR AT EMU	BIOCH 376 (3) CHEM 479 (1H) *CHEM 345 (2H) *CHEM 406 (3H)	BIOL 485 (2H) *CHEM OR BIOCH ELECTIVE (2-4H)

Courses with an \* reflect courses that are offered every other year.



# CHEMISTRY MAJOR

## Advising Guide for BRCC Associate of Science Degree (cont.)

Science major courses must be completed with “B” grades or better. These courses completed with “C” grades will count as elective credits and applied toward graduation at EMU.

### MTH 263 (CALCULUS) START

#### FIRST YEAR

##### FIRST SEMESTER

Course #	Course Description	Credits
ENG 111	College Composition I	3
MTH 263	Calculus I	4
SDV 101	Student Development	1
CHM 111	General Chemistry I	4
HIS 111 (or 112)	History of World Civilizations I/II	3
Total Credits		15

##### SECOND SEMESTER

Course #	Course Description	Credits
ENG 112	College Composition II	3
MTH 245	Statistics I	3
CHM 112	General Chemistry II	4
	Social Science Elective (PSY 230 for Chemistry Secondary Education)	3
Total Credits		13

#### SECOND YEAR

##### THIRD SEMESTER

Course #	Course Description	Credits
PHY 201	College Physics I	4
CST 110 (or 100)	Introduction to Communication	3
	Literature/Humanities/Fine Arts Elective	3
	Approved AS Electives – see note (1) below	3
Total Credits		17

##### FOURTH SEMESTER

Course #	Course Description	Credits
MTH 264	Calculus II – see note (1) below	4
PHY 202	College Physics II – see note (1) below	4
	Literature Elective	3
	History or Social Science Elective	3
	Approved AS Electives – see note (2) below	3
Total Credits		17

**Total Credits Required for Associate of Science Degree/EMU Chemistry Requirements: 61**  
Credits shown (62) may be slightly above 61 due to elective choices.

(1) The AS degree requires 61 credits total to complete. If you have dual enrollment credit for Precalculus (6 credits of MTH 161/162 or 5 credits of MTH 167) you do not need to complete any electives in these slots. If you place directly into MTH 263 by the Virginia Placement Test and have no prior Precalculus credit, you will need a minimum of five additional credits to bring the total to 61.

(2) Any approved AS elective (including EDU 200, for students interested in Secondary Chemistry Education) can be applied to this requirement; if you would like to explore additional electives, work with an Academic Advisor, and we can approve them by the Program Substitution process.

#### Mathematics placement

All students in the AS Science Program complete at least one semester of Calculus (MTH 263). Your first step as a science major is to work with Academic Advising to determine your mathematics placement. Students may be placed into Precalculus using multiple measures, but to place directly into Calculus, you must take the Virginia Placement Test for Mathematics. The guide below shows pathways for both Precalculus and Calculus entry points. Students with a developmental math placement must complete MTE 1-9 as a prerequisite to both MTH 161 and CHM 111 and should plan on entering the pathway after that point.

#### Are you interested in teaching high school chemistry?

Students who wish to teach their subject at the high school level will major in that subject, and also complete additional education courses. Most of your teaching endorsement coursework will happen at EMU, but there are a couple of things you can do at BRCC prior to transfer to set yourself up for Secondary Education. One is to choose PSY 230 – Developmental Psychology as one of your Social Science requirements. The other is complete EDU 200 – Introduction to Teaching as a Profession. EDU 200 is an approved AS Science elective, however, depending on your level of mathematics placement and space for free electives, you may choose to complete it in addition to the minimum credits needed for the AS Science. To register for the course, complete the EDU 200 Placement Request Form.