



BIOCHEMISTRY 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)	World Civilizations I/II	3
Total credits		14

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	3
_____	History or Social Science Elective	3
Total credits		16

SECOND YEAR

THIRD SEMESTER

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

FOURTH SEMESTER

Course #	Course Description	Credits
MTH 245	Statistics I	3
BIO 102	General Biology II	4
PHY 202	General College Physics II	4
_____	Literature Elective	3
_____	Fine Arts Elective	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.

ADVISING NOTES

- All students interested in the biochemistry major should obtain credit for college biology, chemistry, math, and physics prior to enrolling at EMU.
- Students who follow this plan will have BIOL 173 marked as satisfied. Additionally, students who have taken BIO 101 & 102 will have credit for 2 of the 3: BIOL 215, 235, and 240.
- Math is required for the biochemistry major at EMU in MTH 263 - Calc I and MTH 264 - Calc II OR MTH 245 - Statistics. Students may need to take necessary prerequisite math courses first.
- 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, Intercultural, and Senior Seminar requirements left to complete at EMU.
- Because of course sequencing and the rigor of the curriculum and depending on career goals, students with an AS degree should be prepared that they may need to spend more than two years at EMU to complete their degree; however, shown in the table below is one way to complete the biochemistry major courses within two years:

	FALL	SPRING
FIRST YEAR AT EMU	CHEM 315 (4H) *CHEM 325 (2H) *CHEM 405 (3H)	CHEM 316 (4H) BIOL 255 (1H) *BIOCH 438 (3H)
SECOND YEAR AT EMU	BIOCH 376 (3) CHEM 479 (1H) *BIOCH 398 (3H)	BIOL 485 (2H) BIOCH 318 (2H)

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

BIOCHEMISTRY 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)	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 Secondary Education)	3
Total Credits		13

SECOND YEAR

THIRD SEMESTER

Course #	Course Description	Credits
BIO 101	General Biology I	4
PHY 201	General College Physics I	4
CST 110 (or 100)	Introduction to Human Communication	3
_____	Fine Arts Elective	3
_____	Approved AS Electives – see note (1) below	***
Total Credits		14*

FOURTH SEMESTER

Course #	Course Description	Credits
BIO 102	General Biology II	4
PHY 202	General College Physics II	4
_____	Literature Elective	3
_____	History or Social Science Elective	3
_____	Approved AS Electives – see note (2) below	***
Total Credits		14*

Total Credits Required for Associate of Science Degree/EMU Chemistry Requirements: 61

(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 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. This guide 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.