



BIOLOGY 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 (PSY 230 for Biology Secondary Education)	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 or MTH 264	General College Physics II or Calculus II – see note (1) below	4
_____	Literature Elective	3
_____	Literature/Humanities/Fine Arts Elective	3
Total credits		17

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

(1) 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.

ADVISING NOTES

- All students interested in the biology major should obtain credit for college biology and chemistry prior to enrolling at EMU. We highly recommend you complete your MATH requirements as well.
- Our biology core contains four courses: BIOL 173, BIOL 215, BIOL 235, and BIOL 240. Students who have completed 20 credits/semester hours of math & science courses with grades of "B" or better will be considered to have satisfied our biology major requirement BIOL 173, Concepts in Biology: Unity and Diversity of Life.
- Students who have taken BIO 101 & 102 will earn credit for 2 of the 3: BIOL 215, BIOL 235, and BIOL 240. Which course to take at EMU is chosen in consultation with an academic advisor.
- Math required for the biology major at EMU is MTH 256 and MTH 263. Students may need to take the necessary prerequisite math courses first.
- Students should consider taking PHY 201 or 241 as an approved elective. One semester of college or university physics is a biology major requirement.
- 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 biology major courses within two years:

	FALL	SPRING
FIRST YEAR AT EMU	CHEM 315 (4H) BIOL 245 (4H)*	BIOL 255 (1H) BIOL 327 (3H)*
SECOND YEAR AT EMU	BIOL 479 (1H) PHYS 252 & 253 (4H)	BIOL 485 (2H) ENVS 365 (2H)*

Courses with an * reflect choices that a student should make in consultation with their advisor. Some courses are offered every other year.



BIOLOGY 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 Biology 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
_____	Literature/Humanities/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 or MTH 264	General College Physics II or Calculus II – see note (1) below	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 Biology 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 (including EDU 200, for students interested in Secondary Biology 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. This guide shows pathways for both Precalculus and Calculus entry points. Students with a developmental math placement must complete MTE 1-9 as 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 biology?

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 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 to 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 degree. To register for the course, complete the EDU 200 Placement Request Form.