

BIOLOGY: BIOTECHNOLOGY TRACK

Science & Math Degree

#2160

Suggested Sequence by Semester

*This suggested sequence does not include any required developmental courses.
Degree completion time may vary depending upon the number of credits
taken each semester.*

SEMESTER I	CREDITS	SEMESTER II	CREDITS
English Composition I	ENG 111 3	English Composition II	ENG 112 3
General Biology I	BIO 121 4	General Biology II	BIO 122 4
Precalculus	MAT 123 4	Analytic Geometry & Calculus I	MAT 131 4
General Chemistry I Lecture	CHM 125 3	General Chemistry II Lecture	CHM 127 3
General Chemistry I Lab	CHM 126 1	General Chemistry II Lab	CHM 128 1
TOTAL	15	TOTAL	15
SEMESTER III		SEMESTER IV	
Math/Science/Technology Elective	3	General Education Elective	6
Social Science/Humanities Elective	3	Organic Chemistry II Lecture	CHM 233 3
Organic Chemistry I Lecture	CHM 231 3	Organic Chemistry II Laboratory	CHM 234 1
Organic Chemistry I Laboratory	CHM 232 1	Humanities Elective	3
Biology Elective (see page 3 for each university requirement)	4		
Social Science Elective	3		
TOTAL	17	TOTAL	13

MATHEMATICS/SCIENCE/TECHNOLOGY

MATHEMATICS: Students demonstrating proficiency in MAT 123 (Precalculus) are encouraged to take MAT 131 (Analytic Geometry and Calculus I) followed by MAT 132 (Analytic Geometry and Calculus II) or MAT 130 (Probability and Statistics).

SCIENCE/TECHNOLOGY: Consult the General Education course list for approved courses in Science and Technology.

TECHNOLOGY LITERACY: If you do not pass the Technology Literacy Competency exam, you must take one of the courses in the Technological Competency or Information Literacy listing from the General Education course list. This course can be used to fulfill a General Education Math/Science/Technology elective.

GENERAL EDUCATION ELECTIVES: Select any courses from the approved list of General Education courses. Students are strongly encouraged to take the following courses: MAT 132, or BIO 201. [Click here for the most recent General Education course list.](#)

HUMANITIES: Select a Humanities course from the General Education course list.

SOCIAL SCIENCES: Select a Social Science course from the General Education course list.

BIOLOGY ELECTIVES: See your Academic Advisor for specific course choices.

HONORS COURSES: BIO 121, BIO 122 and BIO 202 offer selected sections with an honors option. Consult with your Academic Advisor for more information.

NOTES:

- Students will not receive credit towards graduation for more than one of the following courses: MAT 124 and MAT 130.
- BIO 101 and BIO 102, Anatomy & Physiology I and II cannot be used for the Biology Elective.

CCM Transfer Equivalencies for BS in Biotechnology

Students interested in **William Paterson University (WPU)** should take:

- BIO 122 General Biology II (4 CR) although Biology is not required, it is a pre-requisite for BIO 201 Genetics (which is a required course at WPU).
- Social Science/Humanities Elective; two semesters of a foreign language are required.
- MAT 132 Calculus II or MAT 130 Probability and Statistics
- Humanities Elective; two semesters of a foreign language are required.
- Bio electives (4 CR) consult with WPU for specific Biology electives required.
- PHY 125/126 and PHY 127/128 General Physics I & II (these courses are not required as part of the CCM A.S. degree) however, they can be taken as Gen. Ed. Or Math/Science/Technology electives.

Students interested in **Rutgers University** should take:

- BIO 215 Microbiology
- MAT 132 Calculus II
- BIO 201 Genetics; recommended for preparation for Molecular Genetics
- Bio electives (4 CR) consult with Rutgers for specific Biology electives required.
- PHY 125/126, and PHY 127/128 General Physics I & II must be taken together to transfer (these courses are not required as part of the CCM A.S. degree), however they can be taken as Gen. Ed or Math/Science/Technology Electives

Students interested in **Fairleigh Dickinson University (FDU) - Metro Campus only** should take:

- BIO 202 Ecology
- BIO 201 Genetics
- Bio electives (4 CR) consult with FDU for specific Biology electives required.
- MAT 131 Calculus I is highest level of Math needed
- PHY 125/126, and PHY 127/128 General Physics I & II (these courses are not required as part of the CCM A.S. degree), however they can be taken as Gen. Ed or Math/Science/Technology Electives

Although not transferrable to any of the above four-year universities, **Analytical Chemistry – Instrumental Analysis, CHM 218**, is strongly suggested. This course will provide students with hands-on skills that may be applicable for future employment and/or research at the intended transfer institution.