

COUNTY COLLEGE OF MORRIS

BIOLOGY Associate of Science

SOCIAL SCIENCE (3 CR)

Principles of Economics I	ECO 211	3
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HUMANITIES (3 CR)

Choose from General Education course list (Humanities)		3
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SOCIAL SCIENCE OR HUMANITIES (3 CR)

Choose a Sociology Elective from General Education course list (Social Science)		3
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GENERAL EDUCATION ELECTIVES (6 CR)

General Psychology	PSY 113	3
Humanities, Social Science, Communication or Language		3

BIOLOGY NUTRITION CORE (28 CR)

General Biology I	BIO 121	4
General Biology II	BIO 122	4
Microbiology	BIO 215	4
Serv-Safe Food Handling	HOS 100	1
Food Science and Nutrition	HOS 105	3
Essentials of Organic Chemistry	CHM 210	4
FREE ELECTIVES (8 CR)		

TOTAL **60**

TEACHER EDUCATION BIOLOGY - TRACK 6 CURRICULUM

General Education Foundation (32 CR)

COMMUNICATION (9 CR)

English Composition I	ENG 111	3
English Composition II	ENG 112	3
Speech Fundamentals	COM 109	3

MATH/SCIENCE/TECHNOLOGY (8 CR)

Precalculus	MAT 123	4
Restricted Biology Elective		4

SOCIAL SCIENCE (3 CR)

General Psychology	PSY 113	3
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HUMANITIES (3 CR)

Choose from General Education course list (Humanities)		3
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SOCIAL SCIENCE OR HUMANITIES (3 CR)

Choose from General Education course list (Social Science or Humanities)		3
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GENERAL EDUCATION ELECTIVES (6 CR)

Literature/Language Sequence		3
		3

BIOLOGY EDUCATION CORE (19 CR)

General Chemistry I Lecture	CHM 125	3
General Chemistry I Lab	CHM 126	1

General Chemistry II Lecture	CHM 127	3
General Chemistry II Lab	CHM 128	1
General Biology I	BIO 121	4
General Biology II	BIO 122	4
FREE ELECTIVE		3

TEACHER EDUCATION CORE (9 CR)

Teaching in America	EDU 111	3
Behavior Observation in Education	EDU 211	3
Educational Psychology	PSY 217	3

TOTAL **60**

BIOTECHNOLOGY - TRACK 7 CURRICULUM

General Education Foundation (32 CR)

COMMUNICATION (6 CR)

English Composition I	ENG 111	3
English Composition II	ENG 112	3

MATH/SCIENCE/TECHNOLOGY (11 CR)

Precalculus	MAT 123	4
Biology Elective		4
Math/Science/Technology Elective		3

SOCIAL SCIENCE (3 CR)

Choose from General Education course list (Social Science)		3
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HUMANITIES (3 CR)

Choose from General Education course list (Humanities)		3
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SOCIAL SCIENCE OR HUMANITIES (3 CR)

Choose from General Education course list (Social Science or Humanities)		3
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GENERAL EDUCATION ELECTIVES (6 CR)

Choose from General Education course list		6
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BIOTECHNOLOGY CORE (28 CR)

General Biology I	BIO 121	4
General Biology II	BIO 122	4
General Chemistry I Lecture	CHM 125	3
General Chemistry I Lab	CHM 126	1
General Chemistry II Lecture	CHM 127	3
General Chemistry II Lab	CHM 128	1
Organic Chemistry I Lecture (Fall)	CHM 231	3
Organic Chemistry I Lab (Fall)	CHM 232	1
Organic Chemistry II Lecture (Spring)	CHM 233	3
Organic Chemistry II Lab (Spring)	CHM 234	1
Analytic Geometry and Calculus I	MAT 131	4

TOTAL **60**

Note: You must see a faculty advisor to plan your sequence of courses. For the most up-to-date listing of courses, see the Curriculum Checklist for this program on the CCM website at www.ccm.edu/checksheets.



WHAT YOU WILL LEARN

Biology is one of the most rapidly developing sciences due to the growing need for trained professionals in new, as well as traditional fields, including medical, environmental, research and veterinary. Students enrolled in the Associate of Science (A.S.) in Biology Program at CCM will complete courses that transfer and parallel those required in the first two years of most bachelor's degree programs in biology or those required for entry into the most popular professional programs such as medical, dental or veterinary schools. College programs may differ widely in course offerings for various biology majors. Therefore, the curriculum at CCM offers seven tracks within biology in order to achieve maximum transfer of credits, it is essential that students speak to their academic advisors and consult the transfer institution regarding specific curriculum requirements.

WHY STUDY BIOLOGY AT CCM?

Students who study Biology at CCM learn from enthusiastic and dedicated faculty members who have the knowledge and experience to guide students with a wide range of courses. Faculty members help students achieve their goals by using state-of-the-art laboratories and equipment. Several faculty members have been nominated or won the National Institute for Staff and Organizational Development Excellence Award. CCM students will have a solid foundation of knowledge and critical thinking and problem-solving skills. Class sizes are small and students receive individual attention as well as supplemental help and free tutoring, if needed.

CCM offers seven tracks in the Biology Program.

Traditional - Track 1

- Track 1 is the traditional curriculum, which, because of its general scope, is anticipated to satisfy the needs of majority of students.
- Students in this program can continue in any direction. In certain circumstances, students may have to make up credits upon transferring.

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Curriculum Checklist: www.ccm.edu/checksheets

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CAREERS

- Biological Technician
- Biologist
- Biology Teacher
- Chiropractor
- Dentist/Hygienist
- Environmental Scientist/Technician
- Occupational Health/Safety Specialist
- Pharmaceutical Sales Representative
- Physician/Physician's Assistant
- Registered Dietician
- Veterinarian

CONTACT INFORMATION

Biology & Chemistry Department

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Sheffield Hall, Room 208

Professor Caitlin Burns

Chairperson
cburns@ccm.edu
973-328-5373



Health Related – Track 2

- Intended only for students who are preparing to transfer directly to certain professional schools including chiropractic, occupational therapy and physician's assistant programs.
- This program is not suitable for students wishing to apply to programs in medicine, dentistry, optometry or podiatry since this track has a more narrow selection of courses which may restrict transfer options.

Preprofessional/Scientific – Track 3

- Intended to meet the needs of those whose math and science skills are above average and who hope to transfer to the more competitive baccalaureate programs, professional schools or medical, veterinary or dental schools.

Environmental – Track 4

- Designed to meet the needs of students who are interested in environmental science, ecology and natural resources.
- These programs are becoming increasingly more specialized in the array of courses required in the first two years.

Nutrition – Track 5

- The courses in this track are specifically designed to meet the needs of students who are interested in a career in nutrition.
- Intended for students who are preparing to transfer directly to a four-year school with programs offering a Registered Dietician (RD) credential or Dietetic Technician Registered (DTR) certification.

Teacher Education Biology – Track 6

- Students in this program are preparing to transfer to a four-year program that will prepare them to teach at the elementary to high school levels.
- The Teacher Education Program includes 10 other areas of specialization. Faculty advisors from both the biology and education departments advise students in this program as it is within a larger, multidisciplinary program, TEBIO.

Biotechnology – Track 7

- Biotechnology, the most rapidly growing sector in the field of biology and a major industry in New Jersey, is the application of life sciences to benefit humankind.
- Designed to meet the needs of students interested in biotechnology.

WHERE YOU CAN GO!

CCM credits from the Biology program are readily transferrable towards four-year Biology programs and other degree programs at many state and private colleges and universities. CCM has Biology articulation agreements with:

- Centenary College
- Drew University
- East Stroudsburg University
- Rider University
- Saint Elizabeth University
- West Virginia University
- William Paterson University

TRADITIONAL – TRACK 1 CURRICULUM

General Education Foundation (32 CR)

COMMUNICATION (6 CR)

English Composition I	ENG 111	3
English Composition II	ENG 112	3

MATH/SCIENCE/TECHNOLOGY (11 CR)

Precalculus	MAT 123	4
Biology Elective		4
Math/Science/Technology Elective		3

SOCIAL SCIENCE (3 CR)

Choose from General Education course list (Social Science) 3

HUMANITIES (3 CR)

Choose from General Education course list (Humanities) 3

SOCIAL SCIENCE OR HUMANITIES (3 CR)

Choose from General Education course list (Social Science or Humanities) 3

GENERAL EDUCATION ELECTIVES (6 CR)

Choose from General Education course list 3
3

BIOLOGY TRADITIONAL CORE (28 CR)

General Biology I	BIO 121	4
General Biology II	BIO 122	4
General Chemistry I Lecture	CHM 125	3
General Chemistry I Lab	CHM 126	1
General Chemistry II Lecture	CHM 127	3
General Chemistry II Lab	CHM 128	1
Biology Elective		4
Probability and Statistics OR	MAT 130	4
Analytic Geometry and Calculus I	MAT 131	4
FREE ELECTIVES (4 CR)		4

TOTAL 60

HEALTH RELATED – TRACK 2 CURRICULUM

General Education Foundation (32 CR)

COMMUNICATION (6 CR)

English Composition I	ENG 111	3
English Composition II	ENG 112	3

MATH/SCIENCE/TECHNOLOGY (11 CR)

Precalculus	MAT 123	4
Biology Elective		4
Math/Science/Technology Elective		3

SOCIAL SCIENCE (3 CR)

Choose from General Education course list (Social Science) 3

HUMANITIES (3 CR)

Choose from General Education course list (Humanities) 3

SOCIAL SCIENCE OR HUMANITIES (3 CR)

Choose from General Education course list (Social Science or Humanities) 3

GENERAL EDUCATION ELECTIVES (6 CR)

Choose from General Education course list 6

BIOLOGY HEALTH RELATED CORE (28 CR)

General Biology I	BIO 121	4
General Biology II	BIO 122	4
General Chemistry I Lecture	CHM 125	3
General Chemistry I Lab	CHM 126	1
General Chemistry II Lecture	CHM 127	3
General Chemistry II Lab	CHM 128	1
Anatomy & Physiology I	BIO 101	4
Anatomy & Physiology II	BIO 102	4
Probability and Statistics OR	MAT 130	4
Analytic Geometry & Calculus I	MAT 131	4

Total 60

PREPROFESSIONAL/SCIENTIFIC – TRACK 3 CURRICULUM

General Education Foundation (32 CR)

COMMUNICATION (6 CR)

English Composition I	ENG 111	3
English Composition II	ENG 112	3

MATH/SCIENCE/TECHNOLOGY (11 CR)

Precalculus	MAT 123	4
Biology Elective		4
Math/Science/Technology Elective		3

SOCIAL SCIENCE (3 CR)

Choose from General Education course list (Social Science) 3

HUMANITIES (3 CR)

Choose from General Education course list (Humanities) 3

SOCIAL SCIENCE OR HUMANITIES (3 CR)

General Psychology PSY 113 3

GENERAL EDUCATION ELECTIVES (6 CR)

Choose from General Education course list 6

BIOLOGY PREPROFESSIONAL CORE (28 CR)

General Biology I	BIO 121	4
General Biology II	BIO 122	4
General Chemistry I Lecture	CHM 125	3
General Chemistry I Lab	CHM 126	1
General Chemistry II Lecture	CHM 127	3
General Chemistry II Lab	CHM 128	1
Organic Chemistry I Lecture (Fall)	CHM 231	3
Organic Chemistry I Lab (Fall)	CHM 232	1
Organic Chemistry II Lecture (Spring)	CHM 233	3

Organic Chemistry II Lab (Spring)	CHM 234	1
Analytic Geometry & Calculus I	MAT 131	4

Total 60

ENVIRONMENTAL – TRACK 4 CURRICULUM

General Education Foundation (32 CR)

COMMUNICATION (6 CR)

English Composition I	ENG 111	3
English Composition II	ENG 112	3

MATH/SCIENCE/TECHNOLOGY (11 CR)

Precalculus	MAT 123	4
Biology Elective		4
Math/Science/Technology Elective		3

SOCIAL SCIENCE (3 CR)

Choose from General Education course list (Social Science) 3

HUMANITIES (3 CR)

Choose from General Education course list (Humanities) 3

SOCIAL SCIENCE OR HUMANITIES (3 CR)

Choose from General Education course list (Social Science or Humanities) 3

GENERAL EDUCATION ELECTIVES (6 CR)

Choose from General Education course list 3
3

ENVIRONMENTAL SCIENCE CORE (28 CR)

General Biology I	BIO 121	4
General Biology II	BIO 122	4
Ecology	BIO 202	4
General Chemistry I Lecture	CHM 125	3
General Chemistry I Lab	CHM 126	1
General Chemistry II Lecture	CHM 127	3
General Chemistry II Lab	CHM 128	1
Probability and Statistics	MAT 130	4
FREE ELECTIVES (4 CR)		4

TOTAL 60

NUTRITION – TRACK 5 CURRICULUM

General Education Foundation (32 CR)

COMMUNICATION (6 CR)

English Composition I	ENG 111	3
English Composition II	ENG 112	3

MATH/SCIENCE/TECHNOLOGY (11 CR)

Statistics	MAT 124	3
Human Biology	BIO 133	4
Introductory Chemistry – Lecture	CHM 117	3
Introductory Chemistry – Lab	CHM 118	1