

# COUNTY COLLEGE OF MORRIS

## ENVIRONMENTAL SCIENCE

Chemical Technology Option



### WHAT YOU WILL LEARN

Environmental Science is the study of the relationship between human activities and the environment.

County College of Morris (CCM) students will be exposed to the general principles of biology, chemistry, physics and mathematics through core courses.

Upper level courses, such as Ecology and Instrumental Methods of Analysis, are rich in hands-on field and laboratory experiences, and integrate the basic natural sciences into environmental problem-solving strategies.

The Environmental Science Program's purpose is to prepare graduates for employment at the technician level for research, testing and quality control laboratories associated with the internationally prestigious pharmaceutical, chemical, personal care products, food industry, environmental and chemical companies located in New Jersey.

### WHY STUDY ENVIRONMENTAL SCIENCE AT CCM?

The CCM faculty is committed to providing quality education and maintains close relationships with students throughout their educational experience.

Many faculty members have industrial experience, are involved in research, and have published articles in peer-reviewed journals. In addition, many belong to professional organizations including the American Chemical Society, The American Society for Microbiology, the Metropolitan Association of College and University Biologists, the New Jersey Chapter of Society of Women Environmental Professionals (NJSWEP) and North American Association for Environmental Education (NAAEE).

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Curriculum Checksheet: [www.ccm.edu/checksheets](http://www.ccm.edu/checksheets)

Revised 07/21

### CAREERS

- Water Pollution Control
- Environmental Analysis of Water, Air and Soil
- Hazardous Waste Management
- Site Remediation
- Environmental Regulation
- Environmental Technician

Job opportunities exist in government, industry and environmental firms.

### CONTACT INFORMATION

**Biology and Chemistry Department**  
973-328-5360  
Sheffield Hall, Room 208



Several faculty members have been nominated or won the National Institute for Staff and Organizational Development Excellence Award.

#### • Facilities

Our laboratory facilities include not only standard lab equipment, but also the most modern instrumentation including:

- Benchtop nuclear magnetic resonance (NMR)
- Gas (GC) and liquid chromatography (HPLC)
- Atomic absorption (AA)
- UV and visible spectroscopy
- Infrared spectroscopy (FTIR)
- Electrophoresis (HPCE)
- Polymerase chain reaction (PCR)
- Fourier transform infrared spectroscopy (FTIR)

In the course of their studies, students will use laboratory instrumentation to analyze real-world samples. Class sizes are small and students receive individual attention as well as supplemental help and free tutoring, if needed.

## WHERE YOU CAN GO!

Although the A.A.S. degree is a career-oriented program, selected four-year institutions may provide graduates of this program opportunity for transfer. For more information, contact the Transfer Coordinator and/or your academic advisor. To determine the transferability of your courses to participating NJ Colleges & Universities, visit the NJ Transfer at [www.njtransfer.org](http://www.njtransfer.org).

The Biology and Chemistry Department works collaboratively with Career Services in providing opportunities to the students for paid and unpaid internships.

Many graduates pursue baccalaureate degrees in environmental science and chemistry or related disciplines at four-year institutions.

Many employers will pay for continuing education towards a four-year degree and reward the employee with a pay increase and new classification if a more advanced degree is attained.

## CURRICULUM

### General Education Foundation (21 CR)

#### COMMUNICATION (6 CR)

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

#### MATH/SCIENCE/TECHNOLOGY (3 CR)

Statistics	MAT 124	3
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#### SOCIAL SCIENCE OR HUMANITIES (3 CR)

Choose from General Education course list (Humanities/Social Science)		3
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#### GENERAL EDUCATION ELECTIVES (9 CR)

Choose from General Education course list		9
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### ENVIRONMENTAL SCIENCE CORE (39 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
Ecology	BIO 202	4
Essentials of Organic Chemistry	CHM 210	4
Analytical Chemistry – Instrumental Analysis	CHM 218	4
Concepts of Physics	PHY 103	4
TECHNICAL ELECTIVE (7 CR)		7

#### 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](http://www.ccm.edu/checksheets).*

