



2024-2025 Academic Year

Biology

Associate in Science Degree in Liberal Arts and Sciences (A.S.)

Math, Science, and
Health Professions Division
[609.570.3383](tel:609.570.3383) admiss@mccc.edu

The **Biology** option of the Liberal Arts and Sciences program primarily prepares graduates for transfer into the junior year of programs such as ecology, conservation, biology, microbiology, pharmacy, forestry, entomology, genetics, biotechnology, and preprofessional fields of medicine and dentistry. Biology graduates have transferred to colleges throughout Pennsylvania, New Jersey and the northeast, including Rider University, Temple University, Cornell University, Rutgers University, Stockton College, The College of New Jersey, and Rowan University.

Graduates earning a four-year degree have been employed by various research institutes and industries. Others have successfully completed medical, dental, chiropractic, pharmaceutical, physical/occupational therapy, physician's assistant, veterinary medicine, and other graduate programs.

The biology facilities include specially equipped laboratories for microbiology, genetics/molecular biology, and anatomy/physiology. Students learn a wide variety of investigative techniques, including microscopy, spectrophotometry, and gel electrophoresis. Real-life systems are studied through field trips to sites in the New Jersey Pinelands and elsewhere. A special honors sequence affords eligible students the opportunity to participate in a research project under the supervision of faculty at nearby Rider University, Monmouth University, or Princeton University as well as other research institutions.

PROGRAM OUTCOMES

- Demonstrate an understanding of the fundamental principles, concepts, and terminology of biology;
- Explain the structures and fundamental processes of life at molecular, cellular, and organismal levels;
- View the living world with greater understanding, insight, and appreciation as it relates to the field of biology and contemporary problems and issues;
- Demonstrate the ability to apply the scientific method of inquiry to gather and use information for the purposes of critical thinking, information analysis, and problem solving;
- Exhibit proficiency in the laboratory and in the field by using standard equipment and measurement and observation techniques that allow one to gather, analyze, and interpret qualitative data.

Most courses may be completed through part-time study in the evening. Course selection and program of study must be approved by an academic advisor.

Admission to the Biology option requires a high school diploma or equivalent with at least one year of science (biology, chemistry, or physics) and two years of academic mathematics. Successful completion of the Biology option results in the award of the Associate in Science degree in Liberal Arts and Sciences.

SEE ALSO:

[Plant Science](#) degree program

DEGREE CURRICULUM

2024-2025 Academic Year

BIO.AS
CIP 240101

The course sequence below represents a recommended example of how this degree program can be completed in two years, presuming a Fall Term start and satisfaction of all Developmental Studies (foundation courses) requirements and prerequisites. Actual approaches toward completion depend on each student's anticipated transfer institution, career objectives, or other individual circumstances.

Students are encouraged to meet regularly with an academic advisor or Success Coach to consider options, establish plans, and monitor progress.

| Code | Course (lecture/lab hours) | Credits | To Do This Semester |
|-------------------------|--|---------|---|
| FIRST SEMESTER | | | |
| BIO 101 | General Biology I (3/3) | 4 | ✓ Meet with your faculty advisor to complete an academic plan. Make sure you are aware of any course prerequisites you may need to take, and how long it will take to complete your degree. ✓ Use your online tools: Check your MercerMail daily, utilize features of Office 365, and get to know Student Planning . ✓ Take advantage of Learning Centers or Online Tutoring to support your studies and assignments. |
| CHE 101 | General Chemistry I (3/3) | 4 | |
| CSW 100 | College Success and Personal Wellness (2/0) | 2 | |
| | <ul style="list-style-type: none"> Some exemptions apply. Consult academic advisor for details. | | |
| ENG 101 | English Composition I (3/0) | 3 | |
| MAT 146 | Pre-Calculus (4/0) | 4 | |

SECOND SEMESTER

| | | | |
|----------------|-----------------------------------|---|---|
| <u>BIO 102</u> | General Biology II (3/3) | 4 | <p>✓ Transitioning to college can be challenging. Meet with your Success Coach for guidance and support.</p> <p>✓ Apply for financial aid by May 1.</p> <p>✓ Contact professors with questions and use their office hours to develop a connection.</p> <p>✓ Apply for Continuing Student scholarships at www.mccc.edu/m-scholarships.</p> <p>✓ Begin attending college transfer events and visit campuses. Be sure to visit the Transfer Services and Career Services offices to get to know how the transfer process works and to explore career options.</p> <p>✓ Plan for how you will complete transfer applications while finishing your classes.</p> |
| <u>CHE 102</u> | General Chemistry II (3/3) | 4 | |
| <u>CMN 111</u> | Speech: Human Communication (3/0) | 3 | |
| | OR | | |
| <u>CMN 112</u> | Public Speaking (3/0) | | |
| <u>ENG 102</u> | English Composition II (3/0) | 3 | |

THIRD SEMESTER

| | | | |
|--------------|--|---|--|
| <u>BIO</u> — | Biology elective | 4 | <p>✓ Keep in contact with each professor and your faculty advisor. Make sure you are on track to graduate.</p> <p>✓ Complete your applications to desired transfer institutions.</p> |
| | <ul style="list-style-type: none"> Select from BIO 201, 202, 203, 204, 208. | | |
| — — | Technical elective Select from any 200-level Biology (BIO) or Chemistry (CHE) course; COS 101, 102; MAT 151, 152, 201, 252; PHY 101, 102, 115, 215. | 4 | |
| — — | <u>Humanities general education elective</u> | 3 | |

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| — — | <u>Social Science general education elective</u> | 3 | <p>✓ Develop team and leadership skills by getting involved in activities and clubs.</p> <p>✓ Manage your stress! Take advantage of the MCCC pool, Fitness Center, free yoga and Zumba.</p> <p>Reach out for counseling or other support if you need it. Your Success Coach can connect you with resources.</p> |
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FOURTH SEMESTER

| | | | |
|--------------|--|---|--|
| <u>BIO</u> — | Biology elective | 4 | <p>✓ Apply for financial aid by May 1.</p> <p>✓ Talk to your faculty advisor and the Transfer office for advice on how to successfully transition to a new school.</p> <p>✓ Apply for Graduating Student scholarships at www.mccc.edu/m-scholarships.</p> |
| — — | Technical elective | 4 | <p>• Select from BIO 201, 202, 203, 204, 208.</p> |
| — — | Technical elective | 4 | <p>• Select from any 200-level Biology (BIO) or Chemistry (CHE) course; COS 101, 102; MAT 151, 152, 201, 252; PHY 101, 102, 115, 215.</p> |
| — — | Technical elective | 4 | <p>• Select from any 200-level Biology (BIO) or Chemistry (CHE) course; COS 101, 102; MAT 151, 152, 201, 252; PHY 101, 102, 115, 215.</p> |
| — — | <u>Social Science or Humanities general education elective</u> | 3 | |

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NOTE: Biology majors must earn a minimum grade of C in all BIO courses, including those applied as Technical electives.