

Biology/Pre-Medicine Program

Division of Biology & Chemistry — Curriculum Code: 0601
Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Biology/Pre-Medicine?

Biology is the primary life science from which students can enter specific fields of study as diverse as molecular biology, forestry, pathophysiology, neuroanatomy, and parasitology. Biology also provides the foundation for students who wish to become physicians, dentists, or other such medical professionals. The curriculum is equivalent to the first two years of a baccalaureate program in Biology. Emphasis is placed on scientific method and critical analysis that will enable you to be a contributor to any scientific or medical team.

If I major in Biology/Pre-Medicine, can I transfer to an upper-division college or university?

The Associate in Science degree in Biology/Pre-Medicine prepares you for transfer to upper-division colleges and universities to pursue a bachelor's degree. ECC's transfer/articulation agreements with area four-year institutions provide smooth transfer for our A.S. graduates.

Are there any requirements I must satisfy before I start taking courses in my major?

The basic skills competency test is a requirement for all majors. Major course work can begin once you have completed all developmental courses. In addition, if you are at the final level of remediation in mathematics and English, you can take either BIO 100 or CHM 100. While neither of these courses count toward graduation in this major, they provide an introduction to basic biology and chemistry that will prepare you for this program.

How long will it take for me to complete this degree?

If you do not need developmental courses and you take an average of 17 credits per semester, you should be able to complete the program in two years.

Where should I direct specific questions about this program?

Call the Division at (973) 877-3430.

Upon completion of this program, graduates will be able to:

- ◆ Utilize critical thinking and problem-solving skills, including the scientific method and methods of scientific conversion;
- ◆ Demonstrate a mastery of the fundamental concepts of inorganic chemistry, organic chemistry and biochemistry;
- ◆ Demonstrate a mastery of the fundamental concepts of biology at the genetic, molecular, cellular, tissue, organ, and organismal level;
- ◆ Perform scientific investigations using proper scientific and laboratory safety protocols; and
- ◆ Successfully transfer to a four-year undergraduate degree program in Biology.

Biology/Pre-Medicine — A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (33 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) Select two courses from: ANT 101, 105; ECO 101, 102; POL 101, 104; PSY 101, 102, 219; or SOC 101, 108 6</p> <p>Lab Science/Math (12 credits) BIO 103 General Biology I 4 BIO 104 General Biology II 4 MTH 119 Pre-Calculus I 4</p> <p>Humanities (9 credits) Select a History course from: HST 101, 102, 111, 112, 121, 122, 131, 132, 134, 135, 136, 137, 161, 162 3 Select a 200-level English literature course (ENG 205, 215 or 232 suggested) 3 ART 100, 101, 102, or MUS 100, 108, or 109 3</p> <p>MAJOR COURSE REQUIREMENTS: (28 credits)</p> <p>CHM 103 General Chemistry I 4 CHM 104 General Chemistry II 4 MTH 120 Pre-Calculus II 4 PHY 101 College Physics I and 4 PHY 102 College Physics II 4 Or CHM 203 Organic Chemistry I and 4 CHM 204 Organic Chemistry II 4 Two Biology electives selected from the following courses: BIO 211 Microbiology 4 BIO 220 Environmental Science 4 BIO 228 Molecular Biology 4 BIO 237 Genetics 4 Note: The sequence BIO 121-122 (8 cr.) may be substituted for one Biology elective.</p> <p>Total Credits Required for Degree 61</p> <p>The minimum passing grade for all courses designated BIO, CHM, MTH or PHY is "C." If you earn a grade below "C," you need to repeat that course.</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p>First Semester</p> <p>BIO 103 General Biology I 4 ENG 101 College Composition I 3 CHM 103 General Chemistry I 4 MTH 119 Pre-Calculus I 4 History requirement 3</p> <p>Second Semester</p> <p>BIO 104 General Biology II 4 CHM 104 General Chemistry II 4 ENG 102 College Composition II 3 MTH 120 Pre-Calculus II 4 Social Science requirement 3</p> <p>Third Semester</p> <p>CHM 203 Organic Chemistry I or PHY 101 College Physics I 4 Biology elective 4 Social Science requirement 3 English literature course (ENG 205, 215 or 232 recommended) 3</p> <p>Fourth Semester</p> <p>CHM 204 Organic Chemistry II or PHY 102 College Physics II 4 Biology elective 4 Art/Music requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section.