

# BIOLOGY/BIOCHEMISTRY AND MOLECULAR BIOLOGY, BS/MS

**Campus:** NYC

The accelerated dual-degree program allows students to complete both the BS in Biology and the MS in Biochemistry & Molecular Biology in 5 years. The program provides students with the professional training required for the increasingly dynamic job market in the pharmaceutical, biotech, biochemistry, and molecular biology fields, by integrating a unique, cutting-edge curriculum with a year-long in-depth focus on an independent research project.

Students can apply for acceptance into the dual degree program when they are in the Junior year of their BS in Biology. In their Senior year, students in this program take 12 graduate BMB credits (3-4 courses) in place of 4 BIO elective courses (12-16 credits). In their 5th year, students take the remaining BMB courses they have not already completed. The benefit of completing the joint program (versus both programs separately) is that students can take graduate courses in their fourth year, freeing up time in their final (5th) year to focus their attention on finalizing their research projects. A joint degree program also enables students to start research with a Pace faculty member during their Senior year for their capstone course, or even earlier, thus giving them a head start on research.

**Total Undergraduate Major Credits:** (120)

**Total Credit Hours for the combined degree:** 150 (minimum)

12 credits of BMB graduate courses count toward undergraduate and graduate degree.

**Additional Graduate Credits:** (22)

**Note:** Students who meet the admissions criteria of this program must file a formal application with the Office of Graduate Admissions during their junior year of study after receiving approval from their faculty adviser. Transfer students may be admitted who satisfy all course and admission requirements.

**Total Undergraduate and Graduate Credits, and Total Credit Hours:** 150

**The criteria for admission to the Graduate portion of the program are as follows:**

Completion of at least 64 undergraduate credits and junior class standing with a cumulative GPA of at least 3.0.

GRE is not currently required.

Transfer students may be admitted to the program if they have satisfied all requirements listed above.

## Major Completion Summary

Requirement	Credits
University Core Credits	51
Major Requirements	53-55
Open Electives	4-16
Additional Graduate Courses for MS Degree	22
<b>Total Credits</b>	<b>150</b>

## University Core Requirements (51 Credits)

See complete University Core (<https://catalog.pace.edu/undergraduate/university-core-curriculum/>) requirements.

Note: Various major-required math and science courses listed below may fulfill foundation, area of knowledge, and/or core requirements. Please consult with an academic advisor.

## Major Requirements (53-55 Credits)

### Required Courses

Code	Title	Credits
<b>Biology Requirements</b>		<b>30-31</b>
BIO 101	General Biology I	4
BIO 102	General Biology II	4
BIO 210	Ecology	4
BIO 231	Genetics	4
BIO 327	Cellular Biochemistry	4

BIO 335	Molecular and Cellular Biology	4
BIO 335A	Molecular and Cellular Biology	1
BIO 480	Research in Biology	3
BIO 490	Introduction to Research in the Biological Sciences	3
BIO 493	Major Field Test in Biology	0

**Biology Elective**

Select one additional BIO course at 200 level or above 3-4

**BMB Core Courses**

12

Select 12 credits from list

BMB 610	Seminar	1
BMB 620	Quantitative Methods: Data Analysis and Presentation	3
BMB 626	Cellular Biochemistry and Advanced Molecular Biology	4
BMB 629	Molecular Biochemistry	4
BMB 640	Physical Biochemistry	4
BMB 710	Research I	4

**Required Math and Science Courses**

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CHE 112	General Chemistry II	0-4
CHE 223	Organic Chemistry I	0-4
CHE 224	Organic Chemistry II	0-4
MAT 141	Introductory Statistics for the Life Sciences	4
PHY 101 or PHY 111	College Physics I General Physics I	4
PHY 102 or PHY 112	College Physics II General Physics II	4

**Total Credits**

116-130

**Open Electives (4-16 CREDITS)**

Code	Title	Credits
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**Open Electives**

Select 4-16 credits 4-16