

## **MAJORING IN THE BIOLOGICAL SCIENCES**

The Department of Biological Sciences offers two major programs. [Major I](#) is for students who intend to prepare for graduate study, medicine, dentistry, secondary school teaching, biotechnology and industry.

### [Major II](#)

is for students preparing to teach in elementary schools. Students planning to pursue Major I are strongly encouraged to declare their major as soon as possible after completing one semester of Principles of Biology. Declared majors are assigned a permanent faculty adviser who will assist in individual curriculum planning. Students are required to meet with their adviser at least once each semester throughout their undergraduate career to discuss their program and progress. Click

[here](#)

to see the current

[advising schedule.](#)

Students wishing to declare a Biology Major should contact Prof. David Foster at (212) 772-4075.

### **CR/NC Policy**

Only a letter grade (A, B, C, D, including + or -) will be accepted by the department in the required science and mathematics courses for the biology Major I and Major II.

### **Minor for other Majors**

The minor in Biological Sciences gives students a basic understanding of biology from the molecular and cellular to the organismal and population level. This includes both theoretical aspects presented in lecture as well as practical aspects presented in lab. Flexibility is built into the minor to allow students to select courses corresponding to their interests.

In order to minor in Biological Sciences a student must pass four courses resulting in a minor GPA of 2.0 or higher. All students who want a Minor in Biological Sciences must take:

BIOL 100 - Principles of Biology I and BIOL 102 - Principles of Biology II or BIOL 100 -

Principles of Biology I and BIOL 160 - Honors Principles of Biology II or the equivalent. Two additional courses in Biological Sciences, one of which must be at the 200 level or higher

Number of Credits: A minimum of 12 credits. Transfer credits may be applied. At least 2 courses must be taken at Hunter College.

### **Undergraduate Research**

Students who wish to undertake a research project under the supervision of a faculty member must first obtain written permission from that faculty member and then register for BIOL 480-483. Research opportunities for undergraduates at Hunter are available in cell and molecular biology, developmental biology, neuroscience, cancer biology, AIDS, microbiology and a variety of other contemporary areas. In some cases students may be permitted to work at one of the several neighboring research institutions. Synopses of faculty research interests can be obtained from the faculty pages of this site. Please note that to qualify for departmental honors at graduation, there is a research requirement (see below).

### **Honors Work**

In order to qualify for departmental honors, students must have a departmental GPA of at least 3.5 and an overall GPA of at least 2.8. They must also satisfy a research requirement consisting of either: (a) at least 2 credits of BIOL 480-483; or (b) at least one course chosen from among BIOL 375, 390, or 410. The research requirement includes a written report resulting from work in any of these courses.

### **BA/MA Program With Specilzation In Biotechnology**

In this five-year program, qualified biology majors begin graduate work as seniors and receive the MA one year after completing BA requirements. Students are provided with theoretical knowledge and skills in molecular biology and a foundation for application of these skills in careers in the biotechnology and pharmaceutical industries, academic research, or public health. Successful completion of the biotechnology workshop (BIOL 410/610), an essential program component, entitles students to a summer internship in an industrial or private research laboratory. Interested biology majors should contact Dr. Patricia Rockwell, rockwell@genectr.hunter.cuny.edu, departmental adviser as early as possible.

For more information see this [brouchure](#)

### **BA/MA Program With Concentration In Biophysics**

The changing landscape of biological and clinical research often requires students to be fluent

in topics from a number of disciplines. Biophysics is a field that combines Biology, Physics, Chemistry, and Computational tools. Our cross-departmental faculty offer a number of interdisciplinary coursework and research opportunities to complete a Biophysics specialization in either the Biological Science or Physics BA programs of study.

Classically, Biophysics entailed the study of the structure and function of biological molecules. Many of these discoveries required the development of novel microscopy and spectroscopy technologies. Today, the same is true, as we have entered an age of sequencing entire genomes, or capturing information from millions of genes simultaneously. Both the design and analysis of these experiments requires a host of skills from many disciplines. Your strong foundation in a number of scientific fields will prepare you for the diversity of today's job market. For more information see this [brouchure](#)

### **BA/MS Program in Biological Sciences/Environmental and Occupational Health Sciences**

This is an accelerated program leading to a BA in biology and an MS in environmental and occupational health sciences in five years. Biology majors admitted to the program start graduate work in their senior year. Interested students should contact a departmental adviser early in their undergraduate studies, as well as the office of the director of the Environmental and Occupational Health Sciences Program at the Brookdale Campus. The program provides biology majors with a career option in public health.

### **BS/MA Program in Medical Laboratory Sciences and Biotechnology**

See the Medical Laboratory Sciences section of the college [undergraduate catalogue](#) .

### **BA/MA Program in Biological Sciences and Adolescent Education: Biology**

This is an accelerated program leading to a BA in Biological Sciences and an MA in Adolescent Education: Biology. Undergraduates admitted to the program start graduate courses during their senior year and will be able to complete the MA degree one year after they complete the requirements for the BA degree. Interested students should contact a Biology Department adviser early in their undergraduate career.

For more information see this [brouchure](#)

### **MA Program in Biological Sciences**

See [Career Planning-Graduate Study](#)

**Majors Offered**

Options in Degree

Number Credits

Recommended/ Required GER

Prereq

BA in Biological Sciences

Major I – for students preparing to graduate in biology, medicine, dentistry, secondary school teach

37 plus 33.5-36.5 credits in required additional courses (total 70.5 to 73.5 credits)

1/B: Math 150 2/E: BIOL 100,102 PD (/C, /D): BIOL 100, 102

MATH 101 or equiv. MATH 125/126 or equiv

Major I – Biophysics Concentration

22.5 to 27.5 credits in Chemistry, 12 - 16 credits in Math and 23 credits in Phy

1/B: Math 150 2/E: BIOL 100,102 PD (/C, /D): BIOL 100, 102

MATH 101 or equiv. MATH 125/126 or equiv. PHYS 111 and 121

Major I – Behavioral Neurobiology Concentration

29 to 31 credits plus 4 credits in Math, 9 credits in Physics, 15 credits in Chemistry and 17 to 19 credits

1/B: Math 150 2/E: BIOL 100,102 PD (/C, /D): BIOL 100, 102

MATH 101 or equiv. MATH 125/126 or equiv. PSYCH 100

Major I – Bioinformatics Concentration

23 credits plus 11 to 14 credits in Math, 9 credits in Physics, 15 to 18 credits in Chemistry and 6 credits

1/B: Math 150 2/E: BIOL 100,102 PD (/C, /D): BIOL 100, 102

MATH 101 or equiv. MATH 125/126 or equiv

Major II - for students preparing to teach in elementary schools

26 plus 12 additional science credits and 6 credits in math (44 credits)

1/B: MATH 104 1/C: HIST 151 2/A: ENGL 220 2/B: GEOG 101 3/B: exempt

MATH 101 or equiv. MATH 125/126 or equiv.

### **Accelerated bachelor's/master's degrees in biological sciences**

BA/MA in Biological Sciences with specialization in Biotechnology

Five-year program. Begin undergraduate work as seniors (BIOL 440/640) or one year after completing BA

BA/MS in Biological Sciences/Environmental and Occupational Health

Opportunity for biology majors to have a career option in public health. Consult a departmental adviser

BS/MA in Medical Laboratory Sciences with specialization in Biotechnology

Qualified seniors majoring in medical laboratory sciences (see p. 20) (BA 400) is the only labo

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