



## GUIDE TO MAJORS AT YESHIVA: BIOLOGY

Choosing a major can be stressful, but it is important to understand that you can pursue almost any career regardless of which major you choose. While there are some exceptions, most entry-level positions simply require general transferable skills—those that can be learned in one setting and applied in another. Relevant experience through internships and activities is generally more important to employers than a major. It is best to choose an area that you find interesting and in which you have the ability to do well.

### What is the Biology Major?

Biologists study living organisms and their relationship to their environment. According to the course catalog, “The curriculum in biology provides students with an understanding of the biotic world from molecules and cells through organs and ecosystems. Course work and research opportunities develop students’ analytical and experimental skills, enabling them to continue the study of science at advanced levels.”

### What can I do with a Biology Major?

Biology is the ideal preparation for students planning to enter professions such as medicine, dentistry and other health-related fields such as physical therapy, occupational therapy, physician assistant, nursing nutrition and genetic counseling. A background in biological science is also relevant for those wishing to pursue careers in teaching, industry, veterinary medicine, nutrition, recreational therapy, public health, environmental science, biotechnology, pharmacy, bioinformatics, and bioengineering. Biology students interested in law often move into patent and/or environmental law. There are several major tracks to choose from including General Biology, Molecular and Cellular and Neuroscience.

#### Scientific Research

- Agricultural Scientist
- Biochemist/Molecular Biologist
- Bioengineer
- Biological Photographer
- Ecologist
- Environmental Engineer
- EPA Inspector
- Food Scientist/Technologist
- Food and Drug Inspector
- Forensic Scientist
- Forester
- Horticultural Scientist
- Marine Biologist
- Medical Illustrator
- Medical Researcher
- Microbiologist

#### Animal Care

- Animal Trainer

- Aquarium Technician
- Veterinarian Technician
- Wildlife Biologist

#### Healthcare/ Allied Health

- Athletic Trainer
- Blood Bank Supervisor
- Environmental Health Specialist
- Hospital/HMO Administrator
- Physical Therapist
- Physiologist
- Public Health Statistician
- Registered Nurse
- Pharmaceutical Salesperson

#### Social Services

- Consumer Safety Officer
- Criminologist
- Funeral Director/Embalmer

- Occupational Safety Specialist
- Science Teacher
- Dermatologist
- Optometrist

#### Graduate study required

- Anesthesiologist
- Biophysicist
- Biostatistician
- Chiropractor
- Dentist
- Pharmacist
- Physician
- Pre-Law
- Professor
- Psychiatrist
- Radiologist
- Zoologist

### **Skills and Abilities**

Biology majors gain expertise in identifying, exploring and solving problems. Students gain communication skills in explaining and discussing their research and findings within the biological sciences. Some of the additional skills and abilities cultivated through the Biology major include:

#### Communication

- Write well both creatively and analytically
- Speak clearly, persuasively, and coherently
- Read extensively, draw conclusions, and share perspectives
- Listen to differing opinions and communicate thoughts

#### Leadership/ Teamwork

- Build, maintain, and establish relationships
- Initiate ideas within a team, manage a team, and facilitate cooperation
- Engage, motivate, set direction, and achieve goals
- Demonstrate curiosity - how and why things work and how they can be changed

#### Problem Solving

- Research causes of problems, choose courses of action, and evaluate potential solutions, learn and adapt quickly

#### Critical and Analytical Thinking

- Understand, absorb, and analyze complex material through written and verbal information
- Identify information and problems, gather evidence through research, evaluate a situation from a wide variety of viewpoints, and derive conclusions
- Complex thinking - the ability to process information and examine how projects can be done more effectively

#### Research

- Consult multiple sources, analyze data, and assess needs
- Research causes of problems and evaluate potential solutions
- Use intellectual agility to see things in a new light; utilize critical analysis

### **Additional Joint Program Options**

Nursing- B.A./B.S.N./M.S.N.: Stern College offers combined programs in nursing with John's Hopkins University and New York University. Students complete a Shaped major as well as

adjusted Jewish and General Education requirements at Stern College. Credits remaining to complete the Bachelor of Arts degree are counted back from the nursing school. Students are awarded the BSN at the successful completion of the respecting nursing school and have the option of continuing on for a master's degree.

Occupational Therapy- B.A./M.S.: Stern College offers a combined program in OT with Columbia University. During the first three years at Stern College, students complete college requirements and pre-requisites for Columbia's OT program. Students may apply for the 2-year Columbia University program during the fall semester of their junior year. Students are award a Bachelor of Arts degree from Stern College after completing the first year at Columbia and then a master's from Columbia after completion of the entire program.

Optometry-B.A./O.C: Stern College and the State University of New York State College of Optometry offer an affiliation program to qualified students through which they can receive an undergraduate degree and a Doctor of Optometry degree in seven years. Students accepted into this program will attend Stern College for three years while they complete their college requirements and prerequisites for the College of Optometry. After the first year at SUNY College of Optometry, students receive their Bachelor of Arts degree. The O.D. degree is awarded after completing the program at SUNY College of Optometry.

Physical Therapy- B.A./D.P.T.: Stern College offers combined programs in Physical Therapy with New York Medical College Graduate School of Health and Sciences and the University of Medicine and Dentistry of New Jersey. During the first three years at Stern College, students complete college requirements and prerequisites for the Doctorate of Physical Therapy program. Students are awarded the Bachelor of Arts degree after completing the first year at the professional school and the D.P.T. at the completion of the three year program.

Teaching Math and Science- B.A/M.A.: Stern College and NYU Steinhardt offer an accelerated option for a master's degree in Mathematics and Science Education. During junior/senior year, students may take up to 14 credits at NYU Steinhardt which will count towards both the undergraduate and graduate degrees. Students pay NYU directly for these credits. YU awards students the Bachelor of Arts degree after completion of all the undergraduate requirements and NYU awards the Master's of Arts degree upon completion of the graduate program.