WHAT COULD YOUR FUTURE LOOK LIKE?

Students interested in biology have access to a tremendous breadth of careers. The most traditional avenues include teaching, research and medicine, but today’s students are not limited to these options. In recent years, Wellesley biology graduates have pursued careers in biotechnology, public health, epidemiology, fisheries and mariculture, forestry, statistics, environmental protection and regulation, conservation, and agriculture. Your future also could expand into business (research and development, administration), law (patent law, intellectual property), consulting (a million possible avenues!), politics (lobbying, education), and science policy (ethics, advising). Many areas of current scientific investigation involve not only technological challenges, but also political and ethical issues. Well-trained, engaged and assertive minds are needed in all of these areas.

Come and talk to us about your goals, and how to develop a career path that will blend your personal interests and skills.

HOW TO GET INVOLVED

We are busy planning a variety of interesting department events for the year. Our yearly Faculty/Student Research Night is a good place to meet faculty and to raise questions about the major, student research, internships, and off-campus study. Also, please visit our Facebook page https://www.facebook.com/wellesleybiology.

For further information please contact:

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THE FACULTY

Melissa Beers  Genetics, cell and developmental biology
Steven Biller  Microbiology, systems biology, genomics, marine ecology
Michelle Carmell  Molecular, cellular, and developmental biology
Louise Darling  Cellular and molecular biology, light microscopy
Jocelyne Dolce  Comparative anatomy and physiology of vertebrates, evolution
John Goss  Eukaryotic cell and molecular biology, cell cycle regulation
Kristina Jones  Plant-animal interactions, agricultural ecosystems, biodiversity
Vanja Klepac-Ceraj  Microbial ecology and microbial interspecies interactions
Martina Königer  Plant physiology
Jaclyn Matthes  Ecosystem ecology
Adam Matthews  Immunology, molecular cell biology, epigenetics
Heather Mattila  Social insect organization and behavior
Kimberly O’Donnell  Cellular and developmental biology
Leah Okumura  Germ cell development
Kaye Peterman  Plant cellular and molecular biology
Julia Roden  Cellular biology
Becca Selden  Aquatic ecology
Andrea Sequeira  Conservation genetics
Christa Skow  Animal behavioral ecology and development
Yui Suzuki  Evolutionary development, entomology
OUR PHILOSOPHY AND LEARNING GOALS

Biology is a dynamic and vibrant discipline, constantly evolving as technological advances provide new tools to solve previously unsolvable biological puzzles. Biologists explore life at all levels of organization (molecular, cellular, organismal, and ecosystem) with the ultimate goal of producing an integrated picture of the complexities of living organisms. Our course offerings reflect the diversity of biology, as well as the breadth and timeliness of faculty research interests. Our curriculum is designed to achieve the following learning outcomes:

- Articulate the relevance of biology in your life and the lives of others and evaluate ethical and public policy issues of biological significance.
- Collaborate successfully to solve problems in an interdisciplinary team.
- Identify, discuss and explain the fundamental principles and concepts of biology from molecules to ecosystems.
- Recognize and explain the evolutionary basis of biology and the dynamic nature of life.
- Summarize and assess new biological problems and use critical thinking and problem-solving skills to arrive at defensible conclusions within the framework of current knowledge.
- Frame focused biological questions, to formulate hypotheses and test them through well-designed experiments, to quantitatively analyze and interpret data, and to model, simulate, and statistically evaluate data.
- Effectively communicate both orally and in writing about biological topics with the general public and with discipline specific audiences.
- Examine, analyze, interpret and critique the primary biological literature.
- Implement and safely apply a broad array of experimental research skills.

We hope that you will enroll in our classes, enjoy learning with us and take the opportunity to work alongside us in our labs.

THE MAJOR

The Biological Sciences Major includes nine Biological Sciences courses (at least seven of which must be taken at Wellesley) and two Chemistry courses. Below are the detailed information about requirements.

Nine Biological Courses

Two Introductory Course:
1) One course in Cellular and Molecular Biology
   BISC 110, 110P, 112, 112Y, 116
2) One course in Organismal Biology
   BISC 111, 111T, 113, 113Y

Four 200-Level Courses*
1) At least one course in Group I Cell Biology
   BISC 219, 220
2) At least one course in Group II Systems Biology
   BISC 203, 207, 216
3) At least one course in Group III Community Biology
   BISC 201, 202, 204, 209, 210, 214, BISC 247/ES 247
4) Another 200-level Biology course (any listed above)

Two 300-Level Courses* At least one course must include laboratory and this course must be taken at Wellesley College:

One Elective Course* This ninth course can be any level Biology course; with additional course option EXTD 225, EXTD 226

Two Chemistry Courses: CHEM 105, 105P, 116, 120 or higher. (Additional chemistry beyond the two required units is strongly recommended or required for certain 300-level Biology courses.)

*Please note Independent Research for credit is encouraged, but is not counted towards the major requirements. (BISC 250, 250H, 350, 350H, 355, 360, 365, 370)

Recommended Courses

Four courses in chemistry, including one semester in organic chemistry. Those applying to graduate school may need to include physical chemistry or biochemistry. Two courses in physics. Two courses in math: statistics, calculus. Independent research is strongly recommended.

THE MINOR

A Minor in Biological Sciences (five courses) consists of the following: 1) Two Introductory Courses (BISC 110, 110P, 112, 112Y, 116) and (BISC 111, 111T, 113, 113Y) 2) Two 200-level courses, each of which must be in a different group as described in Majors. 3) One 300-level courses, excluding BISC 350 and 350H. 4) Four of the five courses must be taken at Wellesley College and chemistry is recommended.

STUDENT RESEARCH

Because biology is best learned by doing we strongly encourage students to get involved in research. Our faculty are active researchers who welcome student collaborators into their labs. Numerous research opportunities are available during the academic year and in the summer. Interested students should begin by contacting individual faculty members directly to learn more about the specific research opportunities available in their laboratories.

STUDY ABROAD

Yes, you can be a Biology major and study abroad! With a little planning a semester or even a year abroad can be compatible with a biology major. Please arrange a meeting with the department chair to discuss your options.