

Pathway to Careers in Zoology and Ecology BS in Biology



A BS in Biology from Young Harris offers diverse concentrations in zoology, botany, and aquatic ecology. The program offers mentored research and proximity to biologically relevant ecosystems. This pathway details the steps to take in developing a competitive application to graduate school, based on the observations of faculty who have successfully mentored students who were accepted into related programs. Please note that these requirements and recommendations are based on a variety of programs throughout the region.

Recommendations for receiving graduate assistantships:

- Undergraduate research and experience outside of the institution
- Work experience in the discipline, including full-time work, internships, and volunteering
- Leadership, community, and service experience
- Familiarity with software such as Microsoft Office, data analysis programs, and geographic information systems
- Strong written and verbal communication skills

Common prerequisites for admission to graduate programs in Zoology and Ecology:

- Faculty approval from within the program to which you are applying
- Letters of recommendation
- Recent GRE exam score
- Competitive GPA, higher than 3.0
- Resume/CV including education background, research, and work experience
- Statement of Purpose articulating areas of interest, career objectives, and potential research questions
- Advanced coursework related to the discipline of interest, typically including 24 hours of biology, 9 hours of math, 16 hours of chemistry, and 8 hours of physics

For more information, visit www.yhc.edu/academics/math-science/

Graduate assistantships allow students to work within their departments while receiving stipends and tuition waivers. Teaching assistants teach introductory-level courses and labs, and complete a research thesis with a faculty mentor. These positions provide experience for students who may later teach in higher education. Research assistants conduct research in support of an ongoing project with a faculty mentor. These positions allow students to work with funding agencies and programs, and participate in additional research.

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Freshman (1st) Year Recommended Courses

- BIOL 1107 Introductory Biology I
- BIOL 1108 Introductory Biology II
- CHEM 1211 General Chemistry I
- CHEM 1212 General Chemistry II

Spring: Apply to summer internship positions or volunteering opportunities.

Summer: Begin collecting relevant field and lab experiences through paid summer internships or volunteer work.

Junior (3rd) Year Recommended Courses

- BIOL 3101 Genetics
- BIOL 3102 Cell Biology
- BIOL 3201 Conservation Biology
- BIOL 4101 Ecology
- Additional BIOL coursework as offered*

Spring: Schedule and prepare for GRE exam so that it is completed by application deadlines. Apply to summer internship and fellowship programs. Discuss possible undergraduate research opportunities with faculty.

Summer: Continue to gain experience through internships, fellowships, and volunteer work.

Courses in Zoology:

BIOL 3440 Animal Nutrition
BIOL 3701 Animal Behavior
BIOL 3801 Vertebrate Zoology
BIOL 3805 Invertebrate Zoology
BIOL 3807 Comparative Anatomy
BIOL 4701 Animal Physiology

Courses in Aquatic Ecology:

BIOL 3105 Limnology
BIOL 3301 Marine Biology
BIOL 3705 Ichthyology
BIOL 4205 Fisheries Science

Courses in Botany:

BIOL 3208 Native Flora of North Georgia
BIOL 3301 General Botany
BIOL 3401 Dendrology
BIOL 4201 Plant Anatomy and Morphology
BIOL 4301 Plant Physiology

Sophomore (2nd) Year Recommended Courses

- CHEM 2211 Organic Chemistry I
- CHEM 2212 Organic Chemistry II
- PHYS 1111 College Physics I
- PHYS 1112 College Physics II
- MATH 2000 Elementary Statistics

Spring: Apply to summer internships and fellowships, such as REUs (Research Experiences for Undergraduates, sponsored by the National Science Foundation). Application deadlines are often in January and February and require a letter of recommendation from a faculty member.

Summer: Participate in a summer internship or fellowship or continue volunteering.

Senior (4th) Year Recommended Courses

- BIOL 4980 Independent Research
- BIOL 4990 Senior Research Capstone
- Additional BIOL coursework as offered*

Fall: Conduct independent research with a faculty member. Search out graduate opportunities at universities and contact professors about research opportunities. Apply to graduate schools by the end of the semester.

Spring: Present undergraduate research at a conference. Continue to search out opportunities. Interview for graduate assistantship positions. Apply to internships, fellowships, and temporary or full time positions.

*Many BIOL 3000+ courses are offered once every two years. Students should enroll in any relevant course when offered during the junior and senior years. For more information, contact Department Chair Dr. Andrea Kwiatkowski (alkwiatkowski@yhcc.edu).