

## Specialization in Ecology

### First year

BIOL 1506 Biology I  
 BIOL 1507 Biology II  
 CHMI 1006 General Chemistry I <sup>1</sup>  
 CHMI 1007 General Chemistry II  
 MATH 1036 Calculus I <sup>2</sup>

MATH 1037 Calculus II *or*  
 MATH 1057 Linear Algebra I

PHYS 1006 Introductory Physics I *or*  
 PHYS 1206 Physics for Life Sciences I (recommended)

PHYS 1007 Introductory Physics II *or*  
 PHYS 1207 Physics for Life Sciences II (recommended)

*+ 6 credits in Social Sciences and Humanities*

### Second year

BIOL 2007 Genetics  
 BIOL 2026 Introduction to Microbiology  
 BIOL 2126 Cell Biology  
 BIOL 2306 Diversity of Plants  
 BIOL 2726 Diversity of Animals  
 BIOL 2356 Principles of Ecology  
 CHMI 2426 Organic Chemistry I  
 STAT 2126 Introduction to Statistics *or*  
 STAT 2246 Statistics for Scientists  
*+ 6 credits in Social Sciences or Humanities*

### Third year

BIOL 3327 Experimental Methods in Biology  
*+ 15 credits from Ecology List A below*  
*+ 15 credits from Ecology List B below*  
*+ 6 credits from any discipline*

### Fourth year

BIOL 4016 Field Camp and Report *or* equivalent <sup>3</sup>  
 BIOL 4035 Research and Seminar <sup>4</sup>  
*+ 15 credits among the Ecology List A below*  
*+ 15 credits among the Ecology List B below*  
*+ 6 credits from any discipline*

**Ecology List A**<sup>5</sup>

BIOL 2706 Vertebrate Form and Function  
 BIOL 3006 Evolutionary Biology  
 BIOL 3306 Vascular Plant Systematics  
 BIOL 3316 Plant Form and Function  
 BIOL 3317 Plant Ecophysiology  
 BIOL 3336 Plant Ecology  
 BIOL 3706 General Entomology  
 BIOL 3746 Animal Ecology  
 BIOL 3756 Vertebrate Physiology<sup>6</sup>  
 BIOL 4756 Freshwater Biology  
 CHMI 2227 Biochemistry I

**Ecology List B**<sup>5</sup>

BIOL 3026 Applied and Environmental Microbiology  
 BIOL 3056 Mineral Exploitation and the Biosphere  
 BIOL 3067 Winter Ecology  
 BIOL 3346 Ethnobotany  
 BIOL 3376 Restoration Ecology I: Concepts and Principles  
 BIOL 3386 Mycology  
 BIOL 3807 Applied Entomology  
 BIOL 3927 Forest Entomology  
 BIOL 3977 Biodiversity and Conservation  
 BIOL 4056 General Limnology  
 BIOL 4066 Quantitative Ecology  
 BIOL 4216 Ontario University Program in Field Biology I  
 BIOL 4217 Ontario University Program in Field Biology II  
 BIOL 4316 Advanced Plant Ecophysiology  
 BIOL 4336 Plant Geography  
 BIOL 4366 Soil Biology  
 BIOL 4376 Biology of Liverworts, Mosses and Lichens  
 BIOL 4386 Wetland Ecology and Conservation  
 BIOL 4717 Animal Behaviour  
 BIOL 4747 Herpetology  
 BIOL 4777 Wildlife Management  
 BIOL 4797 Environmental Physiology  
 BIOL 4807 Advanced Genetics  
 BIOL 4907 Fisheries Science for Stressed Ecosystems  
 GEOL 2406 Paleobiology I  
 PHIL 2215 Environment Ethics

<sup>1</sup> Applicants lacking 12U-level Chemistry or the equivalent must complete CHMI 1041 prior to taking CHMI 1006.

<sup>2</sup> Applicants with a grade of less than 60% in 12U-level Calculus or the equivalent must complete MATH 1912 prior to taking MATH 1036.

<sup>3</sup> Students must consult their academic advisor for a suitable replacement for BIOL 4016.

<sup>4</sup> A minimum average of 75% is required in all Biology courses, otherwise students must take BIOL 4017 (Literature Review - 3 credits) and another senior biology course (additional 3 credits from List A or B).

<sup>5</sup> Students must take at least 24 credits of the 33 credits on List A in third and fourth year. Some courses are offered only every second year. Consult with your specialization advisor. Any remaining course can

*replace a course in Ecology List B.*

<sup>6</sup> *Students must take BIOL 2105, BIOL 2706 or an equivalent course before taking BIOL 3756 or obtain permission from the instructor.*