

BIOLOGY UPPER YEAR COURSES, INSTRUCTORS, CONCENTRATIONS & PREREQUISITES

Last update: 2026-05-08

Concentrations: Students can choose one of six areas of concentration to be included in their official academic record and to appear on any transcript issued.

The **health** concentration provides a broad education in biology while introducing concepts and techniques appropriate for those interested in post graduate programs such as medicine, dentistry, veterinary science, pharmacy, audiology, optometry, occupational therapy, physiotherapy, speech pathology. Students are responsible for ensuring course selection fulfills any course requirements for their intended postgraduate program of study.

The other concentrations (**ecology, cell and molecular biology, animal biology, and aquatic biology**) prepare students for other post graduate programs as well as a variety of future careers (and not only in biology).

Students interested in experiential learning involving self-guided inquiry and discovery should consider the courses indicated in the **Discovery** column.

Students interested in expanded opportunities for self-guided inquiry, discovery, or research during their undergraduate degree as well as any students planning to pursue a postgraduate **Master's degree** are advised to obtain research experience by completing an **Honours degree (Biol 475 & 493)** or to organize a Directed Studies project (**Biol 499**) under supervision of a suitable faculty member. Please consult the Chair or Student Coordinators for details.

Course	Title	Instructor	Concentrations						Discovery	Prerequisites
			Health	Ecology	Cell/ Molecular	Animal	Aquatic			
304	Vertebrate physiology	Not Offered 2026-2027	x		x	x		x	BIOL 201 or BIOL 251/252	
305	Evolution	Biernaskie		x	x	x			One of BIOL 201, 202, 203, 205	
308	Biology of populations	Not Offered 2026-2027		x		x			BIOL 203 or permission of instructor	
311	Coastal marine ecology	Scrosati		x		x	x	x	BIOL 203	
315	Introductory microbiology	McNichol	x	x	x	x		x	BIOL 204 or 205; CHEM 221 and 222 or 255	
331	Statistical methods	Check Timetable	x	x	x				STAT 101 or 224 or 231	
333	Cognitive Neuroscience	Not Offered 2026-2027	x						PSYC 221, 222 or 231, 232 or permission of instructor	
334	Plants and Human Health	Schuegraf	x	x					BIOL 111, 112 and any two of BIOL 201, 202, 203, 204, 205, 251 or 252	
335	Developmental biology	Bishop	x		x	x			BIOL 201; BIOL 204 or 205	
340	Fisheries and Aquaculture	Not Offered 2026-2027				x	x		AQUA 101 and 102 or BIOL 203 or permission of instructor	
342	Invertebrate zoology	Not Offered 2026-2027		x		x	x		BIOL 201	
343	Comparative Anatomy of Vertebrates	Lauff	x	x		x	x		BIOL 201	
360	Global change biology	Not Offered 2026-2027		x		x	x		One of BIOL 201, 202 or 203	
374	Human neuropsychology	Check Timetable	x						6 credits PSYC at the 200 level	
381	ST: Cancer biology	Galway			x	x			BIOL 204 or 205; BIOL 201 or BIOL 251/252	
391	Junior seminar	Perry							Non-Credit Career Development; Recommended for Majors; Required for Honours	
395	Cell biology	Villarobos	x		x				BIOL 201; one of BIOL 204, 205, or 297; 6 credits CHEM at the 200 level	
399	Biological research experience	Bishop / Perry						x	Average of 70% across BIOL 111 and 112 or permission of instructor	
405	Comparative endocrinology	Rodela	x		x	x		x	BIOL 251 and 252 or BIOL 304	
406	Animal Minds	Gregg	x			x			Permission of instructor	
414	Native Microbiota: Ecosystem Profiling	McNichol		x	x		x	x	BIOL 315 or permission of instructor	
452	Bioinformatics	Bishop	x		x	x		x	BIOL 205 or permission of instructor	
453	Advanced behavioural neuroscience I	Check Timetable	x			x			Minimum average 70 and one of PSYC 230, 231, or 232	
454	Advanced behavioural neuroscience II	Check Timetable	x			x			Minimum average 70 and one of PSYC 230, 231, or 232	
475	Accessing the biological literature	Perry							Restricted to Honours students; Honours thesis	
480	Evolutionary Medicine	Perry	x		x				BIOL 204 or 205 and one of BIOL 201 or BIOL 251/252	
481	ST: Biotechnology	Villarobos							BIOL 204 or 205	
484	Animal behaviour	Perry	x	x		x		x	B201 or PSYC 230	
491	Senior seminar	Perry							Non-Credit Career Development; Recommended for Majors; Required for Honours	
493	Honours thesis	Perry							Restricted to Honours students; Honours thesis	
499	Directed studies	Faculty						x	Pre-approved faculty guided, research project	