ADVANCED COURSES
FOR IB MAJOR & MINOR

A1 ORGANISMAL AND EVOLUTIONARY BIOLOGY

IB 335	Plant Systematics*	4hrs
IB 360	Evolution and Human Health	3hrs
IB 362	Marine Biology	3hrs
IB 368	Vertebrate Natural History	4hrs
IB 401	Introduction to Entomology*	3-4hrs
(4hrs requires additional project)		
IB 461	Ornithology* (Birds)	4hrs
IB 462	Mammalogy* (Mammals)	4hrs
IB 463	Ichthyology* (Fishes)	4hrs
IB 464	Herpetology*	4hrs
IB 471	Fungal Diversity & Ecology	4hrs

A2 BEHAVIOR, ECOLOGY, AND THE ENVIRONMENT

IB 329	Animal Behavior	3hrs
IB 361	Ecology and Human Health	3hrs
IB 405	Ecological Genetics	3hrs
IB 430	Animal Behavior Lab*	3hrs
IB 431	Behavioral Ecology	3hrs
IB 432	Genes and Behavior	3hrs
IB 439	Biogeography	3hrs
IB 440	Plants and Global Change	3hrs
IB 443	Evolutionary Ecology	3hrs
IB 444	Insect Ecology**	3-4hrs
(3hrs will not fulfill ADV lab requirement)		
IB 451	Conservation Biology*	4hrs
IB 452	Ecosystem Ecology	3hrs
IB 453	Community Ecology	3hrs
IB 481	Vector-borne Diseases*	4hrs
IB 482	Insect Pest Management*	4hrs
IB 485	Environ Toxicology & Health	4hrs
IB 486	Pesticide Toxicology	3-4hrs
IB 494	Theoretical Biology + Models*	4hrs

A3 ANATOMY, PHYSIOLOGY, AND MOLECULAR BIOLOGY

IB 303	Anatomy*	4hrs
IB 364	Genomics and Human Health	3hrs
IB 420	Plant Physiology	3hrs
IB 421	Photosynthesis	3hrs
IB 426	Env and Evol Physl of Animals	3hrs
IB 427	Insect Physiology*	4hrs
IB 434	Physical Principles in Biology *	3hrs
IB 435	Critical Evaluation of Herbal Remedies	3hrs
IB 472	Plant Molecular Biology	1hrs
IB 473	Plant Genomics	1hrs

ADDITIONAL APPROVED COURSES
NOT APPROVED FOR IB MINOR

IB 348	Fish and Wildlife Ecology	3hrs
IB 411	Bioinspiration (online)	3hrs
IB 416	Population Genetics	3-4hrs
IB 436	Evolutionary Neuroscience	3-4hrs
IB 442	Evolution of Infectious Disease	3hrs
IB 467	Principles of Systematics	4hrs
IB 468	Insect Classification and Evolution*	4hrs
IB 476	Applied GIS to Environmental Studies	3hrs
IB 478	Advanced Plant Genetics	3hrs
IB 480	Bioinspired Design	3-4hrs
(4hrs requires additional project)		
IB 483	Insect Pathology	3hrs
IB 484	Paleoclimatology	4hrs
IB 487	Math Modeling in Life Sciences	3-4hrs
(ANSC 448, STATS 458)		
IB 491	Biological Modeling	3hrs
IB 492	Science Communication Skills	2hrs
MCB 300	Microbiology	3hrs
MCB 314	Introduction to Neurobiology	3hrs
MCB 450	Introductory Biochemistry	3hrs

Advanced courses from this list totaling a minimum of 14 hrs at the 300– to 400– level are required.

Course selection must include:

1) One course from two of the following three areas:
   - **Area I:** Organismal and Evolutionary Biology
   - **Area II:** Behavior, Ecology, and the Environment
   - **Area III:** Integrative Anatomy, Physiology, and Molecular Biology
2) One course with a laboratory and/or field component.

( ) = Number of credit hours
* = Course with laboratory and/or field component
** = Course may be taken with or without laboratory
A = Area

NOTE: Students working toward a minor in IB are restricted to IB Area courses only for completing their advanced hour requirement

ADVANCED COURSES
PREREQUISITES FOR AREAS

	COURSE	IB 150/ MCB 150	IB 202	IB 203	IB 204	IB 302	HRS	SEMESTER	OTHER
AREA ONE	IB 335 Plant Systematics						4	SP	
	IB 360 Evolution and Human Health	X			X	X	3	FA	MCB 250 or 244
	IB 362 Marine Biology						3	FA	
	IB 368 Vertebrate Natural History	X		X			4	FA EVEN	
	IB 401 Introduction to Entomology	X					3-4	FA	
	IB 461 Ornithology	X		X			4	SP	
	IB 462 Mammalogy	X	X	X			4	FA ODD	
	IB 463 Ichthyology	X			X	x	4	FA EVEN	
	IB 464 Herpetology	X			X	X	4	SP ODD	
	IB 471 Fungal Diversity & Ecology	X			X	X	4	FA EVEN	
AREA TWO	IB 329 Animal Behavior						3	SP	
	IB 361 Ecology & Human Health			X			3	SP	
	IB 405 Evolution of Traits & Genomes	X			X		3	SP ODD	
	IB 430 Animal Behavior Lab						3	FA	IB 329
	IB 431 Behavioral Ecology						3	FA	IB 329
	IB 432 Genes & Behavior	x			X		3	SP	
	IB 439 Biogeography	X					3	SP EVEN	
	IB 440 Plants & Global Change						3	SP EVEN	
	IB 444 Insect Ecology	X					3-4	FA EVEN	
	IB 451 Conservation Biology	X		X			4	SP	
	IB 452 Ecosystem Ecology						3	FA EVEN	GEN CHEM 1&2
	IB 453 Community Ecology	X		X			3	SP ODD	
	IB 481 Vector-borne Diseases	X					4	SP EVEN	IB 401
	IB 482 Insect Pest Management	X					4	FA ODD	
	IB 485 Environ Toxicology & Health						3		GEN CHEM
	IB 486 Pesticide Toxicology						3-4		GEN CHEM
	IB 494 Theoretical Biology & Models	X		X	X	X	4	SP EVEN	MATH 220
AREA THREE	IB 303 Anatomy	X					4	FA	
	IB 364 Genomics and Human Health	X			X		3	SU	
	IB 420 Plant Physiology	X					3	SP ODD	CHEM 232/233
	IB 421 Photosynthesis	X					3	FA ODD	IB 420, MCB 450, BIOP 401
	IB 426 Env and Evol Physl of Animals						3	FA EVEN	CHEM 232/233X
	IB 427 Insect Physiology	X	X				4	SP EVEN	IB 401
	IB 434 Physical Principles in Biology	X	X				3	SP	PHYS 101
	IB 435 Critical Eval of Herbal Remedies						3	SP	
	IB 472 PLant Molecular Biology	X			X		1	FA EVEN	
	IB 473 Plant Genomics				X		1	FA EVEN	