

Spring 2017 Biology Major Courses - Updated 12/15/16				
1. Mathematics			Credits	
Math	217	Calc with Algebra & Trig II	5	
Math	221	Calculus&Analytic Geometry	5	
Math	222	Calculus&Analytic Geometry	4	
Statistics	301	Intro-Statistical Methods	3	
Statistics	371	Intro Applied Stats-Life Sci	3	
2. Chemistry				
Chemistry	103	General Chemistry I	4	
Chemistry	104	General Chemistry II	5	
Chemistry	343	Intro Organic Chemistry	3	
Chemistry	344	Intro Organic Chemistry Lab	2	
Chemistry	345	Intmed Organic Chemistry	3	
3. Physics				
Physics	103	General Physics	4	
Physics	104	General Physics	4	
Physics	201	General Physics	5	
Physics	202	General Physics	5	
Physics	207	General Physics	5	
Physics	208	General Physics	5	
4. Introductory Biology				
Biology/Zoology	101	Animal Biology	3	
Biology/Zoology	102	Animal Biology Laboratory	2	
Biology/Botany	130	General Botany	5	
Biology/Botany/Zoology	151	Introductory Biology	5	
Biology/Botany/Zoology	152	Introductory Biology	5	
Biocore	383	Cellular Biology	3	
Biocore	384	Cellular Biology Lab	2	
Biocore	587	Biological Interactions	3	
Foundational Courses (not required if completing Biocore)				
Agron/Hort	338	Plant Breeding & Biotechnology	3	
Biochem	501	Introduction-Biochem	3	
Biochem	508	General Biochemistry II	3	
Genetics	466	Principles of Genetics	3	
Genetics	468	General Genetics II	3	
Microbiology	470	Micro Genetics & Mol Machines	3	
5A. Cellular and Subcellular Biology			Credits	
Agronomy/Hort	338	Plant Breeding & Biotechnology	3	Approved Lab
Agronomy/Botany/Hort	340	Plant Cell Culture & Genetic Engineering	4	Y
An Sci/Dy Sci	362	Veterinary Genetics	2	N
Biochem	501	Introduction to Biochemistry	3	
Biochem	508	General Biochemistry II	3	
Biochem/Nutr Sci	510	Biochemical Principles of Human & Animal Nutrition	3	
Biochem	551	Biochemical Methods	4	Y
Biochem/MM&I	575	Biology of Viruses	2	
Biochem/Pharm	620	Eukaryotic Molecular Biology	3	
Biochem/Botany	621	Plant Biochemistry	3	

Biochem	625	Coenzymes & Cofactors in Enzymology	2	
BMolChem	504	Human Biochemistry Laboratory	2	Y
Bmolchem/Microbio	668	Microbiology at Atomic Resolution	3	
Botany/Entom/PI Path	505	Plant-Microbe Interactions: Molecular & Ecological Aspects	3	
Genetics	466	Principles of Genetics	3	
Genetics/Md Genet/Zoology	562	Human Cytogenetics	2	
Genetics/Microbio	607	Advanced Microbial Genetics	3	
Microbio	470	Microbial Genetics & Molecular Machines	3	
Microbio/Soil Sci	523	Soil Microbiology & Biochemistry	3	
MM&I	341	Immunology	3	
NTP/Physiol/Zoology	616	Lab Course in Neurobiology & Behavior	4	Y
NTP/Zoology	655	Modeling Neurodevelopmental Disease	3	
Psych	411	Epigenetics & the Brain	3	
Zoology	400	General Molecular Biology	3	
Zoology	470	Introduction to Animal Development	3	
Zoology	604	Computer-based Gene & Disease/Disorder Research Lab	2	Y
5B Organismal Biology				
Anatomy/Kinesiology	329	Human Anatomy-Kinesiology	2	Y
Anatomy/NTP/Phmcol-M/Physiol/Psych	611	Systems Neuroscience	4	
Anatomy/NTP/Physiol	630	Neuronal Mechanisms for Sensation & Memory in Cerebral Cortex	3	
An Sci/Dy Sci	373	Animal Physiology	3	
An Sci/F&W Ecol/Zoology	520	Ornithology	3	
An Sci/F&W Ecol/Zoology	521	Birds of Southern Wisconsin	3	Y
Botany/PI Path	332	Fungi	4	Y
Botany	500	Plant Physiology	4	Y
Entom/MM&I/Path-Bio/Zoology	350	Parasitology	3	
Entom/Zoology	302	Introduction to Entomology	4	Y
Genetics	545	Genetics Laboratory	2	Y
Kines	314	Physiology of Exercise	4	Y
Kines	861	Principles of Motor Control & Learning	3	
Microbio	303	Biology of Microorganisms	3	
Microbio	304	Biology of Microorganisms Laboratory	2	Y
Microbio	526	Physiology of Microorganisms	3	
MM&I	410	Medical Mycology	2	
Nutr Sci	431	Nutrition in the Life Span	3	
Path	404	Pathophysiologic Principles of Human Disease	3	
Physiol	335	Physiology	5	Y
Physiol	435	Fundamentals of Human Physiology	5	Y
Psych	406	Psychology of Perception	3-4	
Psych	454	Behavioral Neuroscience	3	
Psych	501/581	Hormones, Brain & Behavior	4	

5C. Ecology				
Botany/F&W Ecol/Zoology	460	General Ecology	4	Y
Envir St/Zoology	510	Ecology of Fishes	3	
Envir St/Zoology	511	Ecology of Fishes Lab	2	Y
Envir St/Land Arc	361	Wetlands Ecology	3	
F&W Ecol	379	Principles of Wildlife Management	3	
F&W Ecol/Land Arc/Zoology	565	Principles of Landscape Ecology	2	
Microbio	375	The Microbiome of Plants, Animals & Humans	3	
PI Path	375	Plant Microbiomes	4	Y
5D. Evolution & Systematics				
Anthro/Botany/Zoology	410	Evolutionary Biology	3	
Botany	305	Plant Morphology & Evolution	4	Y
Botany	422	Plant Geography	3	
Entom	432	Taxonomy & Bionomics of Immature Insects	4	Y
Entom/Genetics/Zoology	624	Molecular Ecology	3	
Genetics	468	General Genetics II	3	
Microbio	450	Diversity, Ecology & Evolution of Microorganisms	2	
Psych	450	Primates and Us	3	
Zoology	300	Invertebrate Biology & Evolution	3	
Zoology	301	Invertebrate Biology & Evolution Lab	2	Y
5E. Applied Biology, Agriculture & Natural Resources				
AAE/Agronomy/Inter-Ag/Nutr Sci	350	World Hunger & Malnutrition	3	
Agronomy	300	Cropping Systems	3	
Agronomy/Hort/PI Path	360/375	Genetically Modified Crops: Science, Regulation & Controversy	2	
Agronomy	377	Cropping Systems of the Tropics	3	
Agronomy/Hort	501	Principles of Plant Breeding	3	
An Sci/Dy Sci/Nutr Sci	311	Comparative Animal Nutrition	3	
An Sci/Dy Sci	313	Animal Feeds & Diet Formulation	1	N
An Sci/Dy Sci	361	Introduction to Animal & Veterinary Genetics	2	N
An Sci/Dy Sci	363	Principles of Animal Breeding	2	N
Biology/Genetics	522	Evolution Seminar Series	1	
Botany	575	Principles & Applications of Forensic Botany	3	N
Botany/PI Path	575/375	Frontiers in Plant Biology	1	
Envir St/Geog/PI Path/Urb R PI	400/475 /375/ 590	Food Systems, Sustainability, & Climate Change	3	Y
Entom	351	Principles of Economic Entomology	3	
Entom/Zoology	371	Medical Entomology	3	Y
Envir St/Pop Hlth	471	Introduction to Environmental Health	3	
F&W Ecol	306	Terrestrial Vertebrates: Life History & Ecology	4	Y
F&W Ecol	410	Principles of Silviculture	3-4	
Genetics/Hort	550	Molecular Approaches for Potential Crop Improvement	3	

Hort	372	Colloquium in Organic Agriculture	1	
Hort/Path-Bio	500	Molecular Biology Techniques	3	Y
Microbio/Soil Sci	425	Environmental Microbiology	3	
Nutr Sci	332	Human Nutritional Needs	3	
Zoology	500	Undergrad Neurobiology Seminar	1	
Capstone (CALs only)				
BMolChem	504	Human Biochemistry Laboratory	2	Y
Botany/F&W Ecol/Zoology	460	General Ecology	4	Y
Envir St/Zoology	511	Ecology of Fishes Lab	2	Y
		Physiological Diversity of Prokaryotes Lab		
Microbio	551		2	Y
		Fundamentals of Human Physiology		
Physiol	435		5	Y