

Spring 2014 Biology Major with Neurobiology Option Courses

1. Mathematics

Subject	Number	Course Title	Credits
Math	217	Calc with Algebra & Trig II	5
Math	221	Calculus&Analytic Geometry	5
Statistics	301	Intro-Statistical Methods	3
Statistics	371	Intro Applied Stats-Life Sci	3

2. Chemistry

Subject	Number	Course Title	Credits
Chemistry	103	General Chemistry	4
Chemistry	104	General Chemistry	5
Chemistry	343	Intro Organic Chemistry	3
Chemistry	344	Intro Organic Chemistry Lab	2
Chemistry	345	Intmed Organic Chemistry	3

3. Physics

Subject	Number	Course Title	Credits
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

Subject Descr	Number	Course Title	Credits
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)

Subject Descr	Number	Course Title	Credits
Agron/Hort	338	Plant Breeding&Biotechnology	3
Biochem	501	Introduction-Biochemistry	3
Bmolchem	503	Human Biochemistry	3
Botany/Genetics/Zoology	466	General Genetics	3
Microbiology	470	Micro Genetics & Mol Machines	3

5. Intermediate/Advanced Courses (required)

Neurosci Training Prgm/Physiol/Zoology	524	Neurobi II:Intr-Brain&Behav	3
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5A. Cellular and Molecular Neurobiology

Subject	Number	Course Title	Credits	Lab/Week
NTP/Zoology	635	Neurobiology of Disease	2	
NTP	675	Molecular Mechanisms of Brain Damage	2	
Psychology	411	Epigenetics and the Brain	3	
Psychology	411	Neuropharmacology	3	

5B. Systems Neurobiology

Subject	Number	Course Title	Credits	Lab/Week
Anatomy/Neurosci Training Prgm/Physiology	630	Neuronal Mech-Sensatn & Memory	3	
Ed Psych	326	Mind, Brain and Education	3	
NTP	611	Systems Neuroscience	3	
Psych	414	Cognitive Psychology	3	
Psych	406	Psychology of Perception	3	
Psych	504	Affective Neuroscience	pending?	

5C. ECOLOGY

Subject	Number	Course Title	Credits	Lab/Week
Botany/ Forest & WL Ecol/Zoology	460	General Ecology	4	3
Envir St/Land Arc	361	Wetlands Ecology	3	
ENVIR ST/Zoology	510	Ecology of Fishes	3	
ENVIR ST/Zoology	511	Ecology of Fishes Lab	2	4
Envir Studies	651	Conservation Biology	3 (on-line)	
Forest & WL Ecol	379	Princ-Wildlife Management	3	

5D. EVOLUTION AND SYSTEMATICS

Subject	Number	Course Title	Credits	Lab/Week
Anthropology/Botany/Zoology	410	Evolutionary Biology	3	
Botany	401	Vascular Flora of Wisconsin	4	4
Microbiology	450	Divrsty, Ecol&Evolutn-Microorg	2	
Psychology	450	Animal Behavior-Primates	3	
Zoology	425	Behavioral Ecology	3	

5E. APPLIED BIOLOGY, AGRICULTURAL, AND NATURAL RESOURCES

Subject	Number	Course Title	Credits	Lab/Week
AAE/Agron/InterDis/Nutri Sci	350	World Hunger & Malnutrition	3	
Agronomy	300	Cropping Systems	3	
Agronomy/Hort	501	Principles-Plant Breeding	3	
Animal Sci/ Dairy Sci/Nutri Sci	311	Comparative Animal Nutritn	3	
Animal Sci/Dairy Sci	313	Animal Feeds&Diet Formulatr	1	2
Animal Sci/Dairy Sci	361	Intro to Animal & Vet Genetics	2	2
Animal Sci/Dairy Sci	363	Principles of Animal Breeding	2	2
Entomology	351	Principles-Econ Entomology	3	
Envir St/Pop Health	471	Intro-Environmental Health	3	
Food Sci	432	Principles-Food Preservation	3	
Forest & WL Ecol	410	Principles of Silviculture	3-4	3 optional
Forest & WL Ecol	306	Terr Vertbrt:Life Hist&Ecol	4	2
Forest & WL Ecol/Zoology	335	Hum/An Relatn:Bio&Phils Iss	3	
Hort/Patho Bio	500	Molecular Biology Techniques	3	2

Horticulture	372	Colloquium-Organic Agriculture	1	
Nutri Sci	332	Human Nutritional Needs	3	

5F. Other Lab Courses

Animal Sciences/Dairy Science	362	Veterinary Genetics	2	1
Biochemistry	651	Biochemical Methods	3	4
Biomolecular Chemistry	504	Human Biochemistry Lab	2	6
Microbiology	551	Physiol Dvrsty-Procryot Lab	2	6
Botany	500	Plant Physiology	4	3
Botany/Plant Pathology	332	Fungi	4	4
Entomolog/Zoology	302	Introduction to Entomology	4	3
Genetics	545	Genetics Laboratory	2	4
Kinesiology	314	Physiology of Exercise	4	2
Microbiology	304	Biology of Microorganisms Lab	2	4
Physiology	335	Physiology	5	2
Physiology	435	Fund of Human Physiology	5	3
Zoology	612	Comparative Physiology Lab	2	4
Zoology	521	Birds of Southern WI	3	3
Zoology	400	Mammology	3	*

6. Seminar

NTP	500	Undergrad Neurobiology Seminar	1
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CALS Capstone Courses: policy online at <http://biologymajor.wisc.edu/resources/cals-capstone/>

Subject Descr	Number	Course Title	Credits
Bmolchem	504	Human Biochemistry Lab	2
F & WL Ecol	599	Wildlife Research Capstone	3
Microbiology	551	Physiol Dvrsty-Procryot Lab	2
Physiology	435	Fund of Human Physiol	5
Zoology	612	Comparative Physiology Lab	2