



UNIVERSITY OF MINNESOTA – COLLEGE OF BIOLOGICAL SCIENCES



NEUROSCIENCE MAJOR

REQUIREMENT	SEMESTER COURSE	COMMENTS	<input checked="" type="checkbox"/>
Freshman Writing Requirement	Writ 1301 or 1401		<input type="checkbox"/>
Writing Intensive Requirement	4 Writing intensive courses; at least two must be 3xxx or above including one in the major		<input type="checkbox"/>
LIBERAL EDUCATION REQUIREMENTS: Biological, Physical Sciences and Mathematical Thinking satisfied by major requirements.			
History and Social Sciences – at least 6 credits in the social sciences	Historical Perspective (at least 3 credits)		<input type="checkbox"/>
	Social Sciences		<input type="checkbox"/>
	Social Sciences		<input type="checkbox"/>
Arts and Humanities – at least 6 credits in the arts and humanities with one course from each group	Literature		<input type="checkbox"/>
	Other Humanities		<input type="checkbox"/>
Designated Themes – At least 3 credits in each area	Citizenship and Public Ethics		<input type="checkbox"/>
	Cultural Diversity		<input type="checkbox"/>
	Environment		<input type="checkbox"/>
	International Perspectives		<input type="checkbox"/>
MAJOR REQUIREMENTS:			
Quantitative and Physical Sciences			
Quantitative Requirement	Math 1271		<input type="checkbox"/>
	Math 1272 or Stat 3011 or CSci 1901 or CSci 3003		
General Chemistry	Chem 1021		<input type="checkbox"/>
	Chem 1022		<input type="checkbox"/>
Organic Chemistry	Chem 2301		<input type="checkbox"/>
	Chem 2302		<input type="checkbox"/>
	Chem 2311 (Laboratory)		<input type="checkbox"/>
Physics: choose one track	Phys 1301W and Phys 1302W (preferred) or Phys 1201W and Phys 1202W		<input type="checkbox"/>

GENERAL AND ORGANISMAL BIOLOGY: Choose Track 1 or Track 2			
TRACK 1: General Biology Plus one of the following:	Biol 1001 and Biol 1002W		<input type="checkbox"/>
Animal Biology	Biol 2012 or Biol 3211+2005 or Phsl 3051+Biol 2005 or Phsl 3061+Biol 2005		<input type="checkbox"/>
OR			
TRACK 2: General Biology	Biol 1009		<input type="checkbox"/>
Animal Biology	Biol 2012 or Biol 3211+2005 or Phsl 3051+Biol 2005 or Phsl 3061+Biol 2005		<input type="checkbox"/>
Plus one of the following:			
Plant Biology	Biol 3002 + 3005W; or Biol 3007W or Biol 2022		<input type="checkbox"/>
Microbiology	MicB 3301 or VBS 2032		<input type="checkbox"/>
BIOLOGY CORE:			
Ecology/Evolution/Animal Behavior (select one)	Ecology: Biol 3407/3408W/3807		<input type="checkbox"/>
	Evolution: Biol 3409		<input type="checkbox"/>
	Animal Behavior: Biol 3411/3811		<input type="checkbox"/>
Biochemistry	BioC 3021 or BioC 4331		<input type="checkbox"/>
Genetics	Biol 4003		<input type="checkbox"/>
Cell Biology	Biol 4004		<input type="checkbox"/>
NEUROSCIENCE REQUIREMENTS:			
Introduction to Neuroscience I	NSci 3101 (Fall)		<input type="checkbox"/>
Introduction to Neuroscience II	NSci 3102W (Spring) OR NSci 4100 (Fall)		<input type="checkbox"/>
Neurobiology Lab	NSci 4105 (Fall)		<input type="checkbox"/>
Directed Research (2 credits min) or Classroom Experience	Nsci 4994 or Nsci 4794W or Nsci 4167		<input type="checkbox"/>
Upper Division Major Electives: Choose a minimum of 9 credits from groups A-C with at least 1 course in each group	Group A		<input type="checkbox"/>
	Group B		<input type="checkbox"/>
	Group C		<input type="checkbox"/>
	Additional Course (if needed)		<input type="checkbox"/>
Additional electives to reach 120 credits for the degree	All students need 120 credits to graduate, so additional credits may be needed. Many students have room for electives such as languages, prerequisites for professional school programs and graduate school, additional courses in the major, more research, courses that apply toward double majors or minors, or courses for personal enrichment.		<input type="checkbox"/>

NEUROSCIENCE MAJOR CHECKLIST PS 7.21.09

NEUROSCIENCE MAJOR ELECTIVES

MAJOR ELECTIVE COURSES	SEMESTER COURSE	TITLE	TERM	COMMENTS	<input checked="" type="checkbox"/>
Group A: Cell and Molecular Neurobiology	NSci 4100**	Development of the Nervous System (3 cr)	F		<input type="checkbox"/>
	NSc 5201*	Computational Neuroscience (3 cr)	F		
	NSc 5461*	Cellular and Molecular Neuroscience (4 cr)	F		
	GCD 4034	Molecular Genetics (3 cr)	S		
	GCD 5036	Molecular Cell Biology (3 cr)	F		
	EEB 5221*	Molecular and Genomic Evolution (3 cr)	S	biennial-even years	
	PHCL 4001	Mechanisms of Drug Action (2cr)	F		
Group B: Neural Systems and Behavior	NSci 3102W**	Introduction to Neuroscience II	S		<input type="checkbox"/>
	NSci 4100**	Development of the Nervous System (3 cr)	F		
	NSc 5202	Theoretical Neuroscience (3 cr)	S		
	NSc 5462*	Neuroscience Principles of Drug Abuse (2 cr)	S	biennial-odd years	
	NSc 5561*	Systems Neuroscience (4 cr)	F		
	NSc 5661*	Behavioral Neuroscience (3 cr)	S		
	Nsc 5667	Neurobiology in Disease (2-3 cr)	F		
	EEB 5321	Evolution of Social Behavior (3 cr)	F		
	EEB 5327	Behavioral Ecology (3 cr)	S	offered at varying terms	
	Psy 5036W	Computational Vision (3 cr)	F	biennial-even years	
	Psy 5038W	Introduction to Neural Networks (3 cr)	F		
	Psy 5061	Neurobiology of Behavior (3 cr)	F	biennial-odd years	
Group C: The Scientific Method: History and Philosophy	HMed 3001W	Health Care in History I (3 cr) (HP, IP)	F		<input type="checkbox"/>
	HMed 3002W	Health Care in History II (3 cr) (HP, IP)	S		
	HSci 3211	Biology and Culture in the 19th and 20th Centuries (3 cr) (HP)	F		
	HSci 3242	The Darwinian Revolution (3 cr)	S		
	Phil 3601W	Scientific Thought (4 cr) (OH)	F, S, SS		
	Phil 4607	Philosophy of the Biological Sciences (3 cr)	F	rarely offered	
	Psy 2801	Introduction to Psychological Measurement and Data Analysis (3 cr)	F, S, SS		
	Stat 3011	Introduction to Statistical Analysis (4 cr)	F, S, SS		
Stat 3021	Introduction to Probability and Statistics (3cr)	F, S, SS			

* Registration requires instructor permission; ** NSCI 4100 & 3102W can not be used to meet multiple requirements in the major.

Note: Substitute courses for groups A, B, and C must be approved by the Director of Undergraduate Studies for Neuroscience and the CBS Scholastic Committee (requires a petition from CBS Student Services, 229 Snyder Hall).