NEUROBIOLOGY, BS

REQUIREMENTS

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

All undergraduate students at the University of Wisconsin–Madison are required to fulfill a minimum set of common university general education requirements to ensure that every graduate acquires the essential core of an undergraduate education. This core establishes a foundation for living a productive life, being a citizen of the world, appreciating aesthetic values, and engaging in lifelong learning in a continually changing world. Various schools and colleges will have requirements in addition to the requirements listed below. Consult your advisor for assistance, as needed. For additional information, see the university Undergraduate General Education Requirements (http://guide.wisc.edu/undergraduate/ #requirementsforundergraduatestudytext) section of the *Guide*.

General Education

- Breadth–Humanities/Literature/Arts: 6 credits
- Breadth–Natural Science: 4 to 6 credits, consisting of one 4- or 5-credit course with a laboratory component; or two courses providing a total of 6 credits
 - Breadth–Social Studies: 3 credits
 - Communication Part A & Part B *
 - Ethnic Studies *
 - Quantitative Reasoning Part A & Part B *

* The mortarboard symbol appears before the title of any course that fulfills one of the Communication Part A or Part B, Ethnic Studies, or Quantitative Reasoning Part A or Part B requirements.

COLLEGE OF LETTERS & SCIENCE DEGREE REQUIREMENTS: BACHELOR OF SCIENCE (BS)

Students pursuing a Bachelor of Science degree in the College of Letters & Science must complete all of the requirements below. The College of Letters & Science allows this major to be paired with either the Bachelor of Arts or the Bachelor of Science degree requirements.

BACHELOR OF SCIENCE DEGREE REQUIREMENTS

- Mathematics Complete two courses of 3+ credits at the Intermediate or Advanced level in MATH, COMP SCI, or STAT subjects. A maximum of one course in each of COMP SCI and STAT subjects counts toward this requirement.
- Language Complete the third unit of a language other than English.

L&S Breadth	Complete: • 12 credits of Humanities, which must include at least 6 credits of Literature; and • 12 credits of Social Science; and • 12 credits of Natural Science, which must include 6 credits of Biological Science and 6 credits of Physical Science.
Liberal Arts and Science Coursework	Complete at least 108 credits.
Depth of Intermediate/ Advanced Coursework	Complete at least 60 credits at the Intermediate or Advanced level.
Major	Declare and complete at least one major.
Total Credits	Complete at least 120 credits.
UW-Madison Experience	Complete both: • 30 credits in residence, overall, and • 30 credits in residence after the 86th credit.
Quality of Work	 2.000 in all coursework at UW–Madison 2.000 in Intermediate/Advanced level coursework at UW–Madison

NON-L&S STUDENTS PURSUING AN L&S MAJOR

Non-L&S students who have permission from their school/college to pursue an additional major within L&S only need to fulfill the major requirements. They do not need to complete the L&S Degree Requirements above.

REQUIREMENTS FOR THE MAJOR

MATH, STATISTICS, CHEMISTRY & PHYSICS

С	ode	Title	Credits
Ν	lathematics (comp	olete one):	5
	MATH 211	Survey of Calculus	
	MATH 217	Calculus with Algebra and Trigonometry II	
	MATH 221	Calculus and Analytic Geometry 1	
S	tatistics (complet	e one):	3
	STAT 371	Introductory Applied Statistics for the Life Sciences	
	STAT/B M I 541	Introduction to Biostatistics	
G	eneral Chemistry	(complete one):	5-9
	CHEM 103 & CHEM 104	General Chemistry I and General Chemistry II	
	CHEM 109	Advanced General Chemistry	
	CHEM 115 & CHEM 116	Chemical Principles I and Chemical Principles II	
С	organic Chemistry	(complete one):	3-6
	CHEM 341	Elementary Organic Chemistry	
	CHEM 343 & CHEM 345	Organic Chemistry I and Organic Chemistry II	
P	hysics (complete o	one)	8-10
	PHYSICS 103 & PHYSICS 104	General Physics and General Physics	

2 Neurobiology, BS

	Physics
& PHYSICS 248	and A Modern Introduction to
PHYSICS 247	A Modern Introduction to Physics
& PHYSICS 208	and General Physics
PHYSICS 207	General Physics
& PHYSICS 202	and General Physics
PHYSICS 201	General Physics

Total Credits

24-33

BIOLOGY AND NEUROBIOLOGY

Complete 30 credits from General Biology, Neurobiology, Lab/Research Experience and Additional Elective (if required) sections.

General Biology		
Code	Title	Credits
Choose one of these	e three sequences:	
Introductory Biology		10
ZOOLOGY/ BIOLOGY/ BOTANY 151	Introductory Biology	
Zoology/ Biology/ Botany 152	Introductory Biology	
Biology Core Curricul	um	16-18
BIOCORE 381	Evolution, Ecology, and Genetics	
BIOCORE 383	Cellular Biology	
BIOCORE 485	Principles of Physiology	
BIOCORE 587	Biological Interactions	
Plus two from:		
BIOCORE 382	Evolution, Ecology, and Genetics Laboratory	
BIOCORE 384	Cellular Biology Laboratory	
BIOCORE 486	Principles of Physiology Laboratory	
Animal Biology		10
ZOOLOGY/ BIOLOGY 101	Animal Biology	
ZOOLOGY/ BIOLOGY 102	Animal Biology Laboratory	
BOTANY/ BIOLOGY 130	General Botany	
Neurobiology		
Code	Title	Credits
Required Neurobiolog	ly Courses	
ZOOLOGY/ PSYCH 523	Neurobiology	3
PSYCH 454	Behavioral Neuroscience	3
ZOOLOGY 500	Undergraduate Neurobiology Seminar	1
Distributed Neuroscie courses	nce Coursework–choose three	9

		Seminar	
Di co	istributed Neuroscie ourses	nce Coursework–choose th	ree
	ANAT&PHY 335	Physiology ¹	
	ANAT&PHY 435	Fundamentals of Human F 1	Physiology
	AN SCI/	Animal Physiology	

DY SCI 373

BIOCHEM 501	Introduction to Biochemistry ¹
BIOCHEM 508	General Biochemistry II ¹
BIOCHEM/	Molecular Control of Metabolism
NUTR SCI 645	and Metabolic Disease '
B M E 520	Stem Cell Bioengineering '
B M E 602	Special Topics in Biomedical
	Neuroengineering)
CS&D 210	Neural Basis of Communication
CS&D 503	Neural Mechanisms of Speech,
	Hearing and Language
ED PSYCH 326	Mind, Brain and Education
ED PSYCH 506	Contemporary Issues in Educational Psychology (Brain & Behavioral
	Development)
GENETICS 520	Neurogenetics
KINES 531	Neural Control of Movement
ZOOLOGY 616	Behavior
NTP/ NEURODPT 610	Cellular and Molecular Neuroscience
NTP/NEURODPT/ PSYCH 611	Systems Neuroscience
NTP/ NEURODPT 629	Molecular and Cellular Mechanisms of Memory
NTP/ NEURODPT 640	Computational Neuroscience: From Single Cells to Whole Brain Models
	Matha da fan Naunaina aina
NTP/	Methods for Neuroimaging
MED PHYS 651	Research
NTP/ MED PHYS 651 NTP 666	Research Neuroscience of Consciousness and its Disorders
NTP MED PHYS 651 NTP 666 NTP 670	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System
NTP 666 NTP 670 NTP 675	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System Special Topics (Functional Brain Imaging of Cognitive Disorders)
NTP 666 NTP 670 NTP 675 NTP 675	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System Special Topics (Functional Brain Imaging of Cognitive Disorders) Special Topics (Molecular Mechanisms of Brain Damage)
NTP 666 NTP 670 NTP 675 NTP 675 NTP 675	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System Special Topics (Functional Brain Imaging of Cognitive Disorders) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Trauma and Physiology Therapy)
NTP/ MED PHYS 651 NTP 666 NTP 670 NTP 675	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System Special Topics (Functional Brain Imaging of Cognitive Disorders) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Trauma and Physiology Therapy) Special Topics
NTP 666 NTP 666 NTP 670 NTP 675 NTP 675 NTP 675 NTP 675	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System Special Topics (Functional Brain Imaging of Cognitive Disorders) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Trauma and Physiology Therapy) Special Topics (Neuroendocrinology)
MEP PHYS 651 MED PHYS 651 NTP 666 NTP 670 NTP 675 NTP 675 NTP 675 NTP 675 NTP 675	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System Special Topics (Functional Brain Imaging of Cognitive Disorders) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Trauma and Physiology Therapy) Special Topics (Neuroendocrinology) Special Topics (Reproductive Neuroendocrinology)
NTP MED PHYS 651 NTP 666 NTP 670 NTP 675	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System Special Topics (Functional Brain Imaging of Cognitive Disorders) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Trauma and Physiology Therapy) Special Topics (Reproductive Neuroendocrinology) Special Topics (Reproductive Neuroendocrinology) Special Topics (Brain Mapping in Health and Disease: Applications)
NTP MED PHYS 651 NTP 666 NTP 670 NTP 675 NTP 675	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System Special Topics (Functional Brain Imaging of Cognitive Disorders) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Trauma and Physiology Therapy) Special Topics (Reproductive Neuroendocrinology) Special Topics (Reproductive Neuroendocrinology) Special Topics (Brain Mapping in Health and Disease: Applications) Basic Sleep Mechanisms and Sleep Disorders: from Neurobiology to
NTP MED PHYS 651 NTP 666 NTP 670 NTP 675	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System Special Topics (Functional Brain Imaging of Cognitive Disorders) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Trauma and Physiology Therapy) Special Topics (Trauma and Physiology Therapy) Special Topics (Reproductive Neuroendocrinology) Special Topics (Reproductive Neuroendocrinology) Special Topics (Brain Mapping in Health and Disease: Applications) Basic Sleep Mechanisms and Sleep Disorders: from Neurobiology to Sleep Medicine
 NTP 670 NTP 670 NTP 675 	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System Special Topics (Functional Brain Imaging of Cognitive Disorders) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Trauma and Physiology Therapy) Special Topics (Trauma and Physiology Therapy) Special Topics (Reproductive Neuroendocrinology) Special Topics (Reproductive Neuroendocrinology) Special Topics (Brain Mapping in Health and Disease: Applications) Basic Sleep Mechanisms and Sleep Disorders: from Neurobiology to Sleep Medicine
MTP 666 MED PHYS 651 NTP 666 NTP 670 NTP 675 NTP 675 NTP 675 NTP 675 NTP 675 NTP 675 NTP 675 NTP 675 NTP 675 PHARMACY 632 PHM SCI 310	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System Special Topics (Functional Brain Imaging of Cognitive Disorders) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Trauma and Physiology Therapy) Special Topics (Reproductive Neuroendocrinology) Special Topics (Reproductive Neuroendocrinology) Special Topics (Brain Mapping in Health and Disease: Applications) Basic Sleep Mechanisms and Sleep Disorders: from Neurobiology to Sleep Medicine Neuroscience of Psychedelics Drugs and Their Actions
MEP PHYS 651 MED PHYS 651 NTP 666 NTP 670 NTP 675 NTP 675 NTP 675 NTP 675 NTP 675 NTP 675 NTP 675 NTP 675 NTP 677 PHARMACY 632 PHM SCI 310 PHM SCI 521	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System Special Topics (Functional Brain Imaging of Cognitive Disorders) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Trauma and Physiology Therapy) Special Topics (Trauma and Physiology Therapy) Special Topics (Reproductive Neuroendocrinology) Special Topics (Reproductive Neuroendocrinology) Special Topics (Brain Mapping in Health and Disease: Applications) Basic Sleep Mechanisms and Sleep Disorders: from Neurobiology to Sleep Medicine Neuroscience of Psychedelics Drugs and Their Actions Pharmacology I
NTP MED PHYS 651 MED PHYS 651 NTP 666 NTP 670 NTP 675 PHARMACY 632 PHM SCI 310 PHM SCI 414	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System Special Topics (Functional Brain Imaging of Cognitive Disorders) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Trauma and Physiology Therapy) Special Topics (Trauma and Physiology Therapy) Special Topics (Reproductive Neuroendocrinology) Special Topics (Reproductive Neuroendocrinology) Special Topics (Brain Mapping in Health and Disease: Applications) Basic Sleep Mechanisms and Sleep Disorders: from Neurobiology to Sleep Medicine Neuroscience of Psychedelics Drugs and Their Actions Pharmacology I Psychology of Perception
NTP MED PHYS 651 NTP 666 NTP 670 NTP 675 PHARMACY 632 PHM SCI 310 PHM SCI 521 PSYCH 406 PSYCH 414 PSYCH 505	Research Neuroscience of Consciousness and its Disorders Stem Cells and the Central Nervous System Special Topics (Functional Brain Imaging of Cognitive Disorders) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Molecular Mechanisms of Brain Damage) Special Topics (Trauma and Physiology Therapy) Special Topics (Reproductive Neuroendocrinology) Special Topics (Reproductive Neuroendocrinology) Special Topics (Brain Mapping in Health and Disease: Applications) Basic Sleep Mechanisms and Sleep Disorders: from Neurobiology to Sleep Medicine Neuroscience of Psychedelics Drugs and Their Actions Pharmacology I Psychology of Perception Cognitive Psychology

	PSYCH 513	Hormones, Brain, and Behavior	ZOOLOGY 604	Computer-based Gene and Disease/Disorder Research Lab
	1 51 611 601	(Neural Basis of Cognitive Control)	ZOOLOGY 612	Comparative Physiology Laboratory
	PSYCH 601	Current Topics in Psychology (Neuropsychology and	ZOOLOGY/ NEURODPT 616	Lab Course in Neurobiology and Behavior
		Development)	2. Directed Study-3 of	credits from: ³
	PSYCH 603	Epigenetics and the Brain	ANATOMY 699	Independent Study
	PSYCH 606	Hormones and Behavior	ANESTHES 699	Independent Study
	PSYCH 612	Neuropharmacology	BIOCHEM 699	Special Problems
	ZOOLOGY 400	Topics in Biology (Brain	BIOLOGY 699	Directed Studies
	7001001/400		B M E 399	Independent Study
	200L0GY 400	lopics in Biology (Music and the Brain)	BMOLCHEM 699	Special Research Problems
	7001067 400	Topics in Riology (Neuropal Coll	CBE 699	Advanced Independent Studies
	2001001400	Biology in Health & Disease)	CHEM 699	Directed Study
	7001 0GY 400	Topics in Biology (Neuroscience and	COMP BIO 699	Directed Study
		Society)	CRB 699	Independent Study
	ZOOLOGY 400	Topics in Biology (Neural Movement	CS&D 699	Directed Study
	ZOOLOGY 400	Health & Disease) Topics in Biology (Neuroanatomy	ED PSYCH 470	Research Experience in Educational Psychology
		and Systems)	ED PSYCH 699	Independent Reading Undergrad
	ZOOLOGY 400	Topics in Biology (Cell Biology:	FAM MED 699	Directed Study
		Neurons and Neural Circuits)	GENETICS 699	Special Problems
	ZOOLOGY 470	Introduction to Animal Development	H ONCOL 699	Independent Study in Human Cancer Biology
	ZOOLOGY 555	Laboratory in Developmental	KINES 399	Independent Study
		Biology	KINES 699	Independent Study
	ZOOLOGY 603	Endocrinology	MED PHYS 699	Independent Reading or Research
	ZOOLOGY 604	Computer-based Gene and Disease/Disorder Research Lab	MEDICINE 699	Independent Study
			MED SC-V 669	Small Animal Cardiology Rotation
	ZOOLOGY 611	Comparative and Evolutionary	M M & I 699	Directed Study
	ZOOLOGY/	Biology of Mind	MOL BIOL 699	Directed Studies in Molecular Biology
	PSYCH 619	No	NEURSURG 699	Neurosurgery: Directed in Study in Research
	NTP 620	Neuroethology Seminar	NEUROL 699	Directed Research in Neurology
	7001.067.625	Development of the Nervous	NEURODPT 699	Directed Study
	2002001 025	System	NUTR SCI 699	Special Problems
	ZOOLOGY 655	Modeling Neurodevelopmental	OBS&GYN 699	Directed Study
		Disease	ONCOLOGY 699	Special Research Problems
	ZOOLOGY/	Behavioral Neuroendocrinology	OPHTHALM 699	Directed Study
	NEURODPT/	Seminar	PATH 699	Independent Study
	PSYCH 674		PATH-BIO 699	Directed Study
Lab/Research Experience		PEDIAT 699	Independent Study	
С	hoose one option fro	om the 3 listed: Neuroscience Laboratory Course, or	PHMCOL-M 699	Independent Study

PHM SCI 699

PHYSIOL 699

POP HLTH 699

PSYCHIAT 699

SURGERY 699

SURG SCI 699

ZOOLOGY 699

PSYCH 621

PSYCH 699

Advanced Independent Study

Mentored Research and Seminar

Independent Work

Directed Study

Directed Study

Independent Study

Independent Study

Directed Studies in Zoology

Independent Reading

Choose one option from the 3 listed: Neuroscience Laboratory Course, or Directed Study, or Honors/Senior Thesis.

Code		Title	Credits
1. Neuroscience Labor		ratory Course–one course: ²	
	BIOCORE 486	Principles of Physiology Laboratory	
	ANAT&PHY 435	Fundamentals of Human Physiology	
	NTP/ NEURODPT 640	Computational Neuroscience: From Single Cells to Whole Brain Models	
	ZOOLOGY 555	Laboratory in Developmental Biology	

3. Honors/Senior Thesis (two semesters):

ZOOLOGY 681 & ZOOLOGY 682	Senior Honors Thesis
azoozoo1 002	
ZOOLOGY 691	Senior Thesis
& ZOOLOGY 692	and Senior Thesis
B M E 389	Honors in Research
& B M E 489	and Honors in Research

Additional Electives (if needed)

Students may take additional credits from the list of Distributed Neuroscience Coursework, Independent/Directed study, or the following list, to attain 30 credits in the major:

Code	Title	Credits
ANAT&PHY 337	Human Anatomy	
ANAT&PHY 338	Human Anatomy Laboratory	
AN SCI/ DY SCI 362	Veterinary Genetics	
AN SCI/ DY SCI 434	Reproductive Physiology	
AN SCI/ F&W ECOL/ ZOOLOGY 520	Ornithology	
AN SCI 610	Quantitative Genetics	
ANATOMY 329	Human Anatomy-Kinesiology	
BIOCHEM 507	General Biochemistry I	
BIOCHEM/ NUTR SCI 510	Nutritional Biochemistry and Metabolism	
BIOCHEM 601	Protein and Enzyme Structure and Function	
BIOCHEM/ GENETICS/ MICROBIO 612	Prokaryotic Molecular Biology	
BIOCHEM/ GENETICS/ MD GENET 620	Eukaryotic Molecular Biology	
BIOCHEM 625	Mechanisms of Action of Vitamins and Minerals	
F&W ECOL 401	Physiological Animal Ecology	
GENETICS 466	Principles of Genetics	
GENETICS 545	Genetics Laboratory	
GENETICS/ MD GENET 565	Human Genetics	
GENETICS/ BIOCHEM/ MD GENET 620	Eukaryotic Molecular Biology	
KINES 200	Introductory Neuroscience	
KINES 227	Introduction to Clinical Anatomy of Human Movement	
KINES 314	Physiology of Exercise	
M M & I 301	Pathogenic Bacteriology	
M M & I 341	Immunology	
M M & I/ENTOM/ PATH-BIO/ ZOOLOGY 350	Parasitology	
M M & I/ BIOCHEM 575	Biology of Viruses	

MICROBIO 303	Biology of Microorganisms
MICROBIO 304	Biology of Microorganisms Laboratory
MICROBIO 330	Host-Parasite Interactions
MICROBIO 450	Diversity, Ecology and Evolution of Microorganisms
MICROBIO 470	Microbial Genetics & Molecular Machines
MICROBIO/ SOIL SCI 523	Soil Microbiology and Biochemistry
MICROBIO 526	Physiology of Microorganisms
MICROBIO 527	Advanced Laboratory Techniques in Microbiology
MICROBIO 551	Capstone Research Project in Microbiology
MICROBIO 607	Advanced Microbial Genetics
PATH-BIO/ M M & 1 528	Immunology
PL PATH/M M & I/ ONCOLOGY 640	General Virology-Multiplication of Viruses
MICROBIO/ BMOLCHEM 668	Microbiology at Atomic Resolution
NTP/NEURODPT/ PSYCH 611	Systems Neuroscience
NTP 660	Neuroscience & Public Policy Seminar
NUTR SCI 431	Nutrition in the Life Span
NUTR SCI 631	Clinical Nutrition I
ONCOLOGY 401	Introduction to Experimental Oncology
ONCOLOGY/ M M & I/ PL PATH 640	General Virology-Multiplication of Viruses
PHM SCI 558	Laboratory Techniques in Pharmacology and Toxicology
PSYCH 449	Animal Behavior
PSYCH 450	Primate Psychology: Insights into Human Behavior
PSYCH 505	Depth Topic in Biological Science (Comparative Psychology: What Animals Think)
ZOOLOGY/ ANTHRO/ BOTANY 410	Evolutionary Biology
ZOOLOGY 425	Behavioral Ecology
ZOOLOGY 430	Comparative Anatomy of Vertebrates
ZOOLOGY 470	Introduction to Animal Development
ZOOLOGY/ GEOSCI 541	Paleobiology
ZOOLOGY/ GEOSCI 542	Invertebrate Paleontology
ZOOLOGY 570	Cell Biology

RESIDENCE AND QUALITY OF WORK

- 2.000 GPA in all major courses
- * 2.000 GPA on 15 upper-level major credits, taken in residence ⁴
- 15 credits in in the major, taken on the UW–Madison campus

HONORS IN THE MAJOR

Students may declare Honors in the Neurobiology Major in consultation with the Neurobiology undergraduate advisor(s).

HONORS IN THE MAJOR REQUIREMENTS

To earn Honors in the Major in Neurobiology, students must satisfy both the requirements for the major (above) and the following additional requirements:

- Earn a 3.300 University GPA
- Earn a 3.300 GPA for all major courses
- Complete 14 credits, taken for Honors, with individual grades of B or better, while in residence, to include:
 - Two courses from PSYCH 454, ZOOLOGY/PSYCH 523, and ZOOLOGY 500
 - One course from the Required Neuroscience or Distributed Neuroscience course lists (above), taken for honors credit
 - A two-semester Senior Honors Thesis⁵, for a total of 6 credits, from:

C	ode	Title	Credits
	BIOCHEM 681 & BIOCHEM 682	Senior Honors Thesis and Senior Honors Thesis	
	BIOLOGY 681 & BIOLOGY 682	Senior Honors Thesis and Senior Honors Thesis	
	B M E 389 & B M E 489	Honors in Research and Honors in Research	
	CHEM 681 & CHEM 682	Senior Honors Thesis and Senior Honors Thesis	
	CS&D 681 & CS&D 682	Senior Honors Thesis and Senior Honors Thesis	
	GENETICS 681 & GENETICS 682	Senior Honors Thesis and Senior Honors Thesis	
	H ONCOL 681 & H ONCOL 682	Senior Honors Thesis in Human Oncology 1 and Senior Honors Thesis in Human Oncology 2	
	NUTR SCI 681 & NUTR SCI 682	Senior Honors Thesis and Senior Honors Thesis	
	PSYCH 681 & PSYCH 682	Senior Honors Thesis and Senior Honors Thesis	
	ZOOLOGY 681 & ZOOLOGY 682	Senior Honors Thesis and Senior Honors Thesis	

FOOTNOTES

- ¹ Students may apply only one DNS course toward the elective requirement
- ² Lab courses may also count in the Distributed Neuroscience Coursework above.

- ³ Only Directed Study courses taken **after**-and not concurrent with-the completion of an Introductory Biology sequence are accepted in the major.
- ⁴ Major courses numbered 300–699 are considered upper-level.
- ⁵ The Senior Honors Thesis project must be approved by the Neurobiology Major Program Committee at least one month before beginning the first course (681). The project must focus on its relevance to a neuroscience-related topic. Please see the Neurobiology major website (https://neuromajor.wisc.edu/) for more information.

UNIVERSITY DEGREE REQUIREMENTS

	Total Degree	To receive a bachelor's degree from UW–Madison, students must earn a minimum of 120 degree credits. The requirements for some programs may exceed 120 degree credits. Students should consult with their college or department advisor for information on specific credit requirements.
	Residency	Degree candidates are required to earn a minimum of 30 credits in residence at UW–Madison. "In residence" means on the UW–Madison campus with an undergraduate degree classification. "In residence" credit also includes UW–Madison courses offered in distance or online formats and credits earned in UW–Madison Study Abroad/Study Away programs.
	Quality of Work	Undergraduate students must maintain the minimum grade point average specified by the school, college, or academic program to remain in good academic standing. Students whose academic performance drops below these minimum thresholds will be placed on academic probation.