

PHYSIOLOGY AND NEUROBIOLOGY (BS)

This B.S. program in Physiology and Neurobiology is intended to provide students with a foundational understanding of body and brain functions at the molecular, cellular, and systemic levels by synthesizing current and emerging ideas from research and medical science. Course offerings span comparative and model system physiology, nervous system function and development, endocrinology, cardiorespiratory physiology, and associated diseases. Additionally, we offer coursework and independent study based undergraduate research opportunities.

Requirements

The following courses are required to earn a B.S. degree in the College of Liberal Arts and Sciences:

Course	Title	Credits
BIOL 1107	Principles of Biology I	4
MATH 1131Q & MATH 1132Q	Calculus I and Calculus II	8

Select one of the following:

CHEM 1124Q & CHEM 1125Q & CHEM 1126Q	Fundamentals of General Chemistry I and Fundamentals of General Chemistry II and Fundamentals of General Chemistry III	
CHEM 1127Q & CHEM 1128Q	General Chemistry I and General Chemistry II	

Select one of the following:

PHYS 1201Q & PHYS 1202Q & PHYS 1230	General Physics I and General Physics II and General Physics Problems	
PHYS 1401Q & PHYS 1402Q	General Physics with Calculus I and General Physics with Calculus II	
PHYS 1601Q & PHYS 1602Q	Fundamentals of Physics I and Fundamentals of Physics II	

Undergraduate majors must complete at least 26 credits in PNB at the 2000 or higher level, including:

- All courses in the core group.
- At least three courses from the physiology and neurobiology groups, with at least one course from the physiology group and at least one course from neurobiology group.
- At least one course from the experiential group.
- At least one "W" course in PNB (which may be fulfilled from the experiential group), which will satisfy the writing in the major and information literacy competency requirements.

Core Group

Course	Title	Credits
PNB 2774 & PNB 2775 & PNB 2776	Enhanced Human Physiology and Anatomy I and Enhanced Human Physiology and Anatomy II and Enhanced Human Physiology and Anatomy Laboratory	10
PNB 3251	Biology of the Brain	3

Physiology Group

Course	Title	Credits
PNB 2250	Comparative Animal Physiology	3
PNB 3252	Physiological Model Systems	3
PNB 3265	Comparative Endocrinology	3
PNB 3270	Molecular Endocrinology	3
PNB 3350	Membrane Transport in Health and Disease	3
PNB 3500	Cardiorespiratory Physiology	2

Neurobiology Group

Course	Title	Credits
PNB 3253W	Current Topics in Molecular and Developmental Neurobiology	3
PNB 3255	Human Neuroanatomy	2
PNB 3260	Stem Cell Biology	3
PNB 3275	Biology of Synaptic Transmission	2
PNB 3700	Sensory Physiology	3
PNB 4400	Biology of Nervous System Diseases	3

Experiential Group

Course	Title	Credits
PNB 3178	Introduction to Drosophila Models in Physiology and Neurobiology Research	2
PNB 3179	Molecular Physiology in Drosophila Models	2
PNB 3120W	Public Communication of Physiology and Neurobiology	3
PNB 3180	Field Study in Physiology and Neurobiology	1-4
PNB 3263WQ	Investigations in Neurobiology	3
PNB 3264W	Molecular Principles of Physiology	4
PNB 4297W	Senior Research Thesis in Physiology and Neurobiology	3

Students who have not completed 26 credits in the PNB major after satisfying the above requirements may take additional course(s) from the above categories, or any other PNB course at the 2000 or higher level. However, no more than three credits of PNB 3180 Field Study in Physiology and Neurobiology, PNB 3296 Undergraduate Research in Physiology and Neurobiology, or PNB 4296 Honors Undergraduate Research In Physiology and Neurobiology may be applied toward the 26 credits-in-major requirement.

Related Courses

Course	Title	Credits
MCB 2000 or MCB 3010	Introduction to Biochemistry Biochemistry	4-5
MCB 2400 or MCB 2410	Human Genetics Genetics	3

Select one of the following:

CHEM 2443 & CHEM 2444	Organic Chemistry and Organic Chemistry	
CHEM 2241 & MCB 2210 or MCB 2215	Organic Chemistry and Cell Biology Honors Cell Biology	

There is a minor in Physiology and Neurobiology. A minor in Neuroscience is offered jointly by the Physiology and Neurobiology Department and the

Psychological Sciences Department. Both programs are described in the "Minors" section of this *Catalog*.

University General Education Requirements

Every student must meet a set of core requirements to earn a baccalaureate degree, in addition to those required by the student's major course of study and other requirements set by the student's school or college. For more information about these requirements, please see General Education Requirements (<https://catalog.uconn.edu/undergraduate/gen-ed-requirements/>).

College of Liberal Arts and Sciences Degree Requirements

Students must meet a set of requirements established by the college in addition to the University's General Education requirements. For more information, see the College of Liberal Arts and Sciences (<https://catalog.uconn.edu/undergraduate/liberal-arts-sciences/#requirementstext>) section of this catalog.