THE UNIVERSITY OF RHODE ISLAND

Interdisciplinary Neuroscience – BS **Effective Fall 2026**
120 Credits Total
General Education Courses (40 cr.) **Class of 2030**

ABOUT THE INTERDISCIPLINARY NEUROSCIENCE BS DEGREE:
The B.S. program in interdisciplinary neuroscience will provide students with foundational knowledge of the nervous system including a broad array of areas such as development of the nervous system, brain structure and function, cellular and molecular biology, medicinal neuroscience, neuroethics, research methods, as well as knowledge of neurodegenerative disease and psychological/psychiatric disorders. The undergraduate program offers three major options (tracks): a B.S. degree with a major in Clinical Neuroscience from the College of Health Sciences, a B.S. degree with a major in Molecular Neuroscience from the College of Environment and Life Sciences, and a B.S. degree with a major in Medicinal Neuroscience from the College of Pharmacy. The option for different neuroscience majors is unique and makes this URI major truly distinct with regard to undergraduate education. Please note students may only earn a Neuroscience degree in one track due to the overlapping of preparation and core courses needed for the major.

GENERAL EDUCATION GUIDELINES: General Education is 40 credits. Each of the twelve outcomes (A1-D1) must be met by at least 3 credits. A single course may meet more than one outcome but cannot be double counted towards the 40 credit total. At least one course be a Grand Challenge (G). No more than twelve credits can have the same course code (note – HPR course may have more than 12 credits). General education courses may also be used to meet requirements of the major or minor when appropriate.

General Education Credit Count At least 40 cr., No more than 12 credits with the same course code. (Note: Not all boxes need to be filled to add to 40 credits)				
Course	**Cr.**		**Course**	**Cr.**
BIO101	3			
BIO103	1			
BIO102	3			
BIO104	1			
CHM101	3			
COM100	3			
MTH103 (N/A if placed in MTH131)	3 (or N/A)			
MTH 131	3			
WRT104 OR 106	3			
PHY111	3			
PHY185	1			
PSY113	3			
			Total Gen. Ed. Credits	≥ 40

General Education Outcome Audit	
	Course
KNOWLEDGE	
A1. STEM CHM101, MTH103, MTH131	BIO101, 103
A2. Social & Behavioral Sciences	PSY113
A3. Humanities	
A4. Arts & Designs	
COMPETENCIES	
B1. Write effectively	WRT104 or 106
B2. Communicate effectively	COM100
B3. Mathematical, statistical, or computational strategies	MTH103/131
B4. Information literacy	WRT104 or 106
RESPONSIBILITIES	
C1. Civic knowledge & responsibilities	COM100
C2. Global responsibilities	
C3. Diversity and inclusion	
INTERGRATE & APPLY	
D1. Ability to synthesize	NEU 410
GRAND CHALLENGE	
G. Check that at least one course of your 40 credits is an approved “G” course	

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Preparation Courses (required for all Neuroscience tracks) **(40- 43 cr.)**

Preparation Courses (*these courses also fulfill 23-26 cr. of general education requirements)	**Course**	**Grade**	**Cr.**		**Semester**
General Biology *A1	BIO101		3		FR F
General Biology Lab *A1	BIO103		1		FR F
General Biology II *A1	BIO102		3		FR SP
General Biology II Lab *A1	BIO104		1		FR SP
Human Anatomy & Physiology I	BIO220		3		SOPH F
Human Anatomy & Physiology I Lab	BIO221		1		SOPH F
Human Anatomy & Physiology II	BIO222		3		SOPH SP
Human Anatomy & Physiology II Lab	BIO223		1		SOPH SP
General Chemistry I *A1	CHM101		3		FR F
General Chemistry I Lab	CHM102		1		FR F
General Chemistry II	CHM112		3		FR SP
General Chemistry II Lab	CHM114		1		FR SP
Organic Chemistry I or Intro to Organ Chemistry**	CHM227 OR 124**		3	Pre-Health students should take CHM227	SOPH F
Applied Precalculus I (if needed) and Applied Calculus I *A3	MTH103/131		3		FR F OR SP
General Psychology *A2	PSY113		3		SOPH F OR SP
Communication *B2, C1	COM100		3		FR F
Research Writing or Writing to Inform *B1, B4	WRT104 OR 106		3		FR SP
Introduction to URI	URI101		1		FR F
PREPARATION COURSES SUBTOTAL			**40-43**		

*Course approved for General Education
**As noted above, Pre-Med or Pre-Health students should take CHM227. If students take CHM124 first, they can count CHM227 in their track courses.

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Core Courses (required for all Neuroscience tracks) **(31-36 cr.)**

Core Courses (*these courses also fulfill4 cr. of General Education requirements)	**Course**	**Grade**	**Cr.**	**Semester Offered**	**Suggested Semester**
Foundations of Neuroscience	NEU101		3	FALL & SPRING	FR SP
Neuroscience Seminar	NEU110		1	FALL	SOPH OR JR F
Neuroethics and Diversity	NEU210		3	SPRING	SOPH SP
Neuroscience Research Methods	NEU262		4	SPRING	SOPH OR JR SP
Neuroscience Professional Development	NEU230		1	FALL	SOPH OR JR F
Cellular & Molecular Neuroscience	NEU301		3	FALL	JR F
Developmental Neurobiology	NEU310		3	SPRING	JR SP
Clinical Neuroscience	NEU320		3	FALL	JR F
Introduction to the Principles of Pharmacology	BPS/NEU 321		3	FALL	JR F
Biostatistics OR Introductory Statistics	STA307 OR STA308		4		JR F OR SP
General Physics I *A1,B3	PHY111		3		SOPH F OR SP
General Physics I Lab *A1,B3	PHY185		1		SOPH F OR SP
Experiential Neuroscience *D1	NEU410 OR ITR302 & 304		3-6		SR F OR JR SP
Neuroscience Journal Club	NEU 460		1	FALL & SPRING	SR F
CORE COURSES SUBTOTAL			**31-36**		

- ITR 302 & 304 will total 6 credits and cannot be taken for fewer. ITR approval is required by INP Director and Academic Advisor.
- NEU 410 can be taken for 3-6 credits – varies on the hours worked in the lab/office setting. This course cannot be repeated.
- Either NEU 410 or ITR 302/304 will need approval from INP Administration. Emails will be sent out to students regarding the requirements and approval process.
- To transfer out of University College for Academic Success and enter the student's selected degree granting college, students must complete a minimum of 56 credits of the following courses with a 2.0 GPA average: BIO 101/103, BIO 102/104, BIO 220/221, BIO 222/223, CHM 101/102, CHM 112/114, CHM 124 or 227, PHY 111/185, MTH 103/131, PSY 113, COM 100, WRT 104 or 106, URI 101, NEU 101, NEU 110, NEU 210, and NEU 230.

MOLECULAR NEUROSCIENCE MAJOR TRACK REQUIREMENTS

Preparation and Core classes required

Molecular Neuroscience Major Course List: Choose 15 credits from the following list.				
Course Code	Course Name	Credits	Semester	Grade
CSC/DSP 310	Programming for Data Science	4		
CMB 311	Biochemistry	3		
CMB/BIO 352	Genetics	4		
CMB/BIO 341	Cell Biology	3		
BIO/CMB 437	Fundamentals of Molecular Biology	3		
CMB 460	Experimental Approaches in Molecular and Cell Biology	3		
*CHM 227**	*Organic Chemistry I*	3	**Required for pre-health. Can only be counted if student takes CHM 124 first. Otherwise, it will count for the Prep coursework.*	
CHM 228 & 226	Organic Chemistry II & Lab	5	Required for pre-health.	
PHY 112	Physics II Lecture & Lab	4	Required for pre-health.	
Track Subtotal		**15**		
Molecular Neuroscience Major Electives List: Choose a minimum of 3 credits from the following list.				
CMB 333	Immunology and Serology	3		
CMB 312 or 412	Advanced Biochemistry Lab	2		
CMB 320	Computational Biology	3		
CMB 353	Genetics Laboratory	1		
CMB 435	Introduction to the Biology and Genetics of Cancer	3		
CMB 482	Proteins and Enzymes: Mechanisms of Disease	3		
Track Subtotal		**3+**		

CLINICAL NEUROSCIENCE MAJOR TRACK REQUIREMENTS

Preparation and Core classes required

Clinical Neuroscience Major Course List: Choose 15 credits from the following list.				
Course Code	Course Name	Credits	Semester	Grade
PSY 232	Developmental Psychology	3		
PSY 254	Behavior Problems and Personality Disorders	3		
PSY 301	Research Methods and Design in the Behavioral Sciences	4		
PSY 381	Physiological Psychology	3		
PSY 385	Perception	3		
PSY 434	Psychological Testing	3		
HDF 357	Family and Community Health	3		
KIN 300	Physiology of Exercise	3		
MUS 438	Music, Mind, and Body	3		
*CHM 227**	*Organic Chemistry I*	3	**Required for pre-health. Can only be counted if student takes CHM 124 first. Otherwise, it will count for the Prep coursework.*	
CHM 228 & 226	Organic Chemistry II & Lab	5	Required for pre-health.	
PHY 112 & 186	Physics II Lecture & Lab	4	Required for pre-health.	
Track Subtotal		**15**		
Clinical Neuroscience Major Electives List: Choose a minimum of 3 credits from the following list.				
CMB 210	Biochemical Aspects of Nutrition and Physiology	3		
CMD 494	Autism and Pervasive Developmental Disorders	3		
CMD 495	Snapshots of Experimental Methods in Neuroscience	3		
BPS 313	Principles of Medicinal Chemistry	2		
BPS 401	Pharmaceutical Pharmacology I	3		
PSY 276G	“High Society”: The Use of Psychoactive Drugs	3		
PSY 460	The Substance Troubled Person	3		
PHP 336G	Exploring Interdisciplinary Healthcare Solutions for Opioid Use Disorder	3		
PHP 405	Epidemiology in Health Care	4		
PHP 555	Advanced Neuropsychiatric Pharmacotherapy	3		
Track Subtotal		**3+**		

MEDICINAL NEUROSCIENCE MAJOR TRACK REQUIREMENTS

Preparation and Core classes required

Medicinal Neuroscience Major Course List: Choose 15 credits from the following list.				
Course Code	Course Name	Credits	Semester	Grade
BPS 301	Biopharmaceutics	2		
BPS 306	Pharmacokinetics	2		
BPS 313	Principles of Medicinal Chemistry	2		
BPS 325	Human Drug Metabolism	2		
BPS 425	GMPs in Manufacturing of Pharmaceutical Products	3		
BPS 432	Neuropharmacology in the CNS	3		
BPS 446	Biotechnology, Biologics, & Biosimilars	3		
CMB 311	Biochemistry	3		
*CHM 227**	*Organic Chemistry I*	3	**Required for pre-health. Can only be counted if student takes CHM 124 first. Otherwise, it will count for the Prep coursework.*	
CHM 228 & 226	Organic Chemistry II & Lab	5	Required for pre-health.	
PHY 112 & 186	Physics II Lecture & Lab	4	Required for pre-health.	
Track Subtotal		**15**		
Medicinal Neuroscience Major Electives List: Choose a minimum of 3 credits from the following list.				
BIO/CMB 352	Genetics	4	Required for pre-health	
BPS 206	Foundations of Cannabis Studies	3		
BPS 312	Cannabis Chemistry & Pharmacognosy	3		
BPS 314	Cannabis Therapeutics	3		
BPS 315	Pharmaceutics II	4		
BPS 316	Cannabis Product Development	3		
BPS/PSY 436	Psychotropic Drugs & Therapy	3		
BPS/PHP 415	Immunology & Immunotherapeutics	3		
BPS 445	Natural Products	3		
BPS/PHP 405	Epidemiology in Health Care	4		
PHP 555	Advanced Neuropsychiatric Pharmacotherapy	3		
CSC/DSP 310	Programing for Data Sceince	4		
Track Subtotal		**3+**		
Recommended General Education Courses				
BPS 205G	The Challenged Brain	3		
PHP 207G	Introduction to Safety & Quality in Health Care	3		
PHP 336G	Exploring Interdisciplinary Healthcare Solutions in Opioid Use Disorder	3		

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GENERAL CURRICULUM MAP*

*See previous pages for 'Track' courses. Always consult the INP Academic Advisor for long-term planning and course choices.

Interdisciplinary Neuroscience Major

First-Year Fall	Credits	First-Year Spring	Credits
URI 101*	1	BIO 102/104	4
BIO 101/103	4	CHM 112/114	4
CHM 101/102	4	MTH 131 (if needed)	3
MTH 103 or 131	3	NEU 101 (Foundations)	3
COM 100	3	WRT 104 or 106	3
Total	**15**	**Total**	**17**
Sophomore Fall	Credits	Sophomore Spring	Credits
PSY 113	3	BIO 222/223	4
CHM 124 or 227**	3	NEU 210 Neuroethics	3
BIO 220/221	4	NEU 262 Research Methods	4
PHY 111/185	4	Gen Ed/Track/PHY 111/185	3-4
NEU 110 Seminar	1	Gen Ed/Track	3
NEU 230 Pro Dev	1	***Choose Track***	
Total	**16**	**Total**	**15-18**
Junior Fall	Credits	Junior Spring	Credits
NEU 301 Cellular	3	NEU 310 Neuro Dev	3
NEU 320 Clinical	3	STA 307 or 308 or Gen Ed	3-4
NEU 321 Pharmacology	3	***or*** NEU 262 Research Methods	4
STA 308	3	Gen Ed/Track	3
Gen Ed/Track	3	Gen Ed/Track	3
Total	**15-16**	**Total**	**16-18**
Senior Fall	Credits	Senior Spring	Credits
NEU 410 or ITR 302/304	1-6	Gen Ed/Track	3
NEU 460 or Gen Ed/Track	1-3	Gen Ed/Track	3
Track/Elective	3	Track/Elective	3
Track/Elective	3	Track/Elective	3
Track/Elective	3	NEU 410 or ITR 302/304	1-6
Total	**13-18**	**Total**	**13-18**

*Will be taught by INP Director or Academic Advisor.
**Pre-health students should take CHM 227. If students take CHM 124 first, they can count CHM 227 in their track courses.

Exactly which electives students take in a track will depend on their career goals.
ITR 302/304 will total 6 credits. NEU 410 credit hours are determined by hours worked in lab.