

# PSYCHOLOGY, BACHELOR OF SCIENCE (BS) - CONCENTRATION IN NEUROSCIENCE

Neuroscience breakthroughs are responsible for advancements in memory, sleep science, understanding mental health, developing mental health treatments and so much more.

Neuroscience is an interdisciplinary degree with a wide range of career opportunities. Neuroscience graduates aren't confined to one career path, which makes for an exciting postgraduate experience. The Neuroscience concentration prepares students for graduate study in Neuroscience, medical school, careers in the pharmaceutical, biotech, and other industries, and much more.

At SRU, there are countless opportunities to network and get involved with other students on campus. Our Psychology Club allows you to meet faculty, students, and professionals in the field. We also feature our own chapter of Nu Rho Psi, an honor society for Neuroscience majors.

## Program Learning Outcomes

- **Scientific Literacy & Research Foundations:** Learn scientific literacy and fundamental and organizing principles in psychology and neuroscience.
- **Breadth of Knowledge & Making Connections:** Develop breadth of knowledge about neuroscience from multiple scientific perspectives and learn about the interdisciplinary nature of neuroscience by making connections between the disciplines.
- **Depth of Knowledge, Technical Expertise and Advanced Research:** Advance depth of knowledge in neuroscience related fields and independent research ability.

## Neuroscience Core Competencies:

- Independent and critical thinkers; self-motivated learners
- Basic knowledge in Neuroscience/Biology/Chemistry/Psychology
- Ability to think creatively and integratively
- Quantitative skills
- Scientific inquiry/analytical skills/research skills
- Communication skills

## Related Links

Psychology - Neuroscience, BS Program Page (<https://www.sru.edu/academics/majors-and-minors/psychology-neuroscience/>)

Psychology Department Page (<https://www.sru.edu/academics/colleges-and-departments/ches/departments/psychology/>)

Professional Licensure/Certification Page (<https://www.sru.edu/students/student-consumer-information/professional-licensure/>)

## Curriculum Guide

### GPA Requirement

Major GPA: 2.0 or higher

Overall GPA: 2.0 or higher

### Summary\*

Code	Title	Hours
	Rock Studies 2 Requirements	44
	Other Basic Requirements	0-3
	Computer Competency	0-3
	Major/Concentration Requirements	56-57
	Electives	20

\* All undergraduate degree programs require a minimum of 120 credits. Some courses meet multiple requirements, but are only counted once toward the 120 credit total required to graduate.

### Rock Studies 2 Requirements

Code	Title	Hours
<b>The Rock</b>		
SUBJ 139	Foundations of Academic Discovery <sup>1</sup>	3
ENGL 102	Critical Writing	3
ENGL 104	Critical Reading	3
STAT 152	Elementary Statistics I	3
Select one of the following:		3
COMM 200	Civil Discourse: Theory & Practice	
PHIL 110	Ethics and Civil Discourse	
POLS 235	Civil Discourse and Democracy	
Subtotal		15
<b>Integrated Inquiry</b>		
<i>Creative and Aesthetic Inquiry</i>		
Select 3 Credits ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
<i>Humanities Inquiry</i>		
Select 3 Credits ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
<i>Social Science Inquiry</i>		
Select 3 Credits ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
<i>Physical &amp; Natural Sciences Inquiry</i>		
BIOL 104		4
CHEM 107 & CHEM 111	General Chemistry I and General Chemistry I Lab	4
Subtotal		17
<b>Thematic Thread</b>		
Select 12 Credits ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> ) <sup>2</sup>		12
<b>Total Hours</b>		<b>44</b>

<sup>1</sup> Course offered in multiple subjects; cannot take course in first major subject.

<sup>2</sup> One course from each category; six credits must be 300-level or above; no more than 4 credits from one subject area; specific courses required in first major, regardless of prefix of course, cannot be used to satisfy thread requirements; any course with same prefix as first major cannot be used to satisfy thread requirements, even if it is not a course in the first major.

## Basic Math Requirement

Check with your adviser or a current degree audit report to see if you have been exempted from this course. The credit earned in this course will not be counted toward the 120 credit hour minimum needed to earn a degree.

Code	Title	Hours
Complete one of the following:		0-3
Meet required minimum SAT or ACT math score OR		
ESAP 110	Beginning Algebra	
<b>Total Hours</b>		<b>0-3</b>

## Computer Competency

Code	Title	Hours
Demonstrate "computer competency" by one of the following:		0-3
Pass Computer Competency Exam OR		
Select one of the following at SRU or another post-secondary institution:		
CPSC 100	Introduction to Computing for Liberal Arts	
CPSC 110	Computer Concepts	
CPSC 130	Introduction to Computing and Programming	
PE 202	Technology for Wellness	
<b>Total Hours</b>		<b>0-3</b>

## DIVERSITY, EQUITY, AND INCLUSION REQUIREMENT

Students must take and pass a course with the Diversity, Equity, and Inclusion (DEI) designation prior to graduation. Students can meet this requirement by taking any DEI - designated course in any program at any time during their undergraduate career.

## Major/Concentration Requirements

- 28 major credits must be taken at SRU or PASSHE
- 28 major credits must be taken at the 300 level or above
- Overall, 48 credit hours must be completed at the 300 or 400 level
- Students who do not meet minimum standards will be dismissed from the program. All dismissals are permanent.

Code	Title	Hours
<b>Goal 1: Scientific Literacy &amp; Foundations</b> <sup>1</sup>		
Must earn a grade of 'C' or higher in PSYC 105, PSYC 231, and PSYC 232.		
Must earn a grade of 'B' or higher in PSYC 311.		
PSYC 105	Introduction to Psychology	3
PSYC 231	Psychological Science I: Research Methods	3
PSYC 232	Psychological Science II: Statistical Applications	3
PSYC 311	Introduction to Behavioral Neuroscience	4
<b>Subtotal</b>		<b>13</b>
<b>Goal 2: Depth of Knowledge &amp; Making Connections</b> <sup>1</sup>		
<i>Core Courses</i>		
PSYC 244	Developmental Psychology	3
PSYC 276	Introduction to Abnormal Psychology	3
<i>Neuroscience Content Courses (select two courses)</i>		6-7
PSYC 233	Sensation & Perception	

PSYC 303	Learning	
PSYC 321	Drugs and Behavior	
PSYC 334	Health Psychology	
PSYC 338	Cognitive Psychology	
<i>Interdisciplinary Core Courses</i>		
BIOL 250	Genetics with Lab	4
CHEM 201	Organic Chemistry I	3
<b>Subtotal</b>		<b>19-20</b>
<b>Goal 3: Depth of Knowledge, Technical Expertise &amp; Research</b> <sup>1</sup>		
<i>Neuroscience Content Courses (select three courses)</i>		9
PSYC 471	Psychopharmacology	
PSYC 473	Hormones and Behavior	
PSYC 476	Clinical Neuroscience	
PSYC 477	Developmental Neuroscience	
<i>Research Capstone</i>		
Students must register for two semesters		
PSYC 451	Research Capstone Internship	6
PSYC 451	Research Capstone Internship	6
<i>Interdisciplinary Electives</i>		
Select one of the following:		3
BIOL 330	Microbiology/Lab	
BIOL 335	Cell Biology/Lab	
BIOL 370	Molecular Biology with Lab	
<b>Subtotal</b>		<b>24</b>
<b>Total Hours</b>		<b>56-57</b>

<sup>1</sup> Courses count for 50% of Major requirements and Major GPA

\* Some courses may require pre-requisites. Please see course descriptions to determine if there are any pre-requisites for that specific course.

## Electives

Code	Title	Hours
CHEM 108 & CHEM 112	General Chemistry II and General Chemistry II Lab	4
STAT 252	Introduction to Statistical Modeling	3
PSYC 355	Topical Seminar in Neuroscience	1

## Writing Competency Requirements

Code	Title	Hours
Writing in Psychology #1		
Writing in Psychology #2		
Writing in Psychology #3		
Professional Competencies Paper		

## Elective Recommendations based on Student Goals

Students can choose from many of the following recommended electives to fulfill their requirements for the interdisciplinary elective for the neuroscience concentration and/or for their remaining credits after meeting their rock studies 2 and major requirements.

## Recommended Electives for Psychology (Biology Concentration)

Code	Title	Hours
BIOL 216	Anatomy and Physiology I with Lab	3
BIOL 217	Anatomy and Physiology II with Lab	3

BIOL 340	Vertebrate Anatomy with Lab <sup>1</sup>	3
BIOL 330	Microbiology/Lab <sup>2</sup>	3
BIOL 335	Cell Biology/Lab <sup>2</sup>	3
BIOL 325	Biometry with Lab	3
BIOL 370	Molecular Biology with Lab	3
BIOL 410	Animal Physiology with Lab <sup>3</sup>	3
BIOL 470	Histology with Lab <sup>4</sup>	3

<sup>1</sup> additional pre-requisite BIOL 212 General Zoology/Lab

<sup>2</sup> additional pre-requisite CHEM 201 Organic General Chemistry I

<sup>3</sup> additional pre-requisites include BIOL 212 General Zoology/Lab & CHEM 201 Organic Chemistry I

<sup>4</sup> additional pre-requisite includes BIOL 212 General Zoology/Lab)

### Recommended Electives for Psychology (Chemistry Concentration)

Code	Title	Hours
CHEM 201 & CHEM 211	Organic Chemistry I and Organic Chemistry Laboratory I	4
CHEM 202 & CHEM 212	Organic Chemistry II and Organic Chemistry Laboratory II	4
CHEM 335 & CHEM 336	Biochemistry I and Biochemistry Laboratory I	4
CHEM 337 & CHEM 338	Biochemistry II and Biochemistry Laboratory II	4

### Recommended Electives for Psychology (Biostatistics Concentration)

Code	Title	Hours
HLTH 312	Data Management for Health Science	3
HLTH 313	Biostatistics	3
STAT 252	Introduction to Statistical Modeling	3
STAT 254	Nonparametric Statistics	3
STAT 256	Statistical Computing	3

### Recommended Electives for Pre-Professional Concentration (e.g., pre-med, pre-vet) Concentration

Code	Title	Hours
PHYS 201	Elements of Physics I with Lab	4
PHYS 202	Elements of Physics II/ Lab	4
CHEM 201 & CHEM 211	Organic Chemistry I and Organic Chemistry Laboratory I	4
CHEM 202 & CHEM 212	Organic Chemistry II and Organic Chemistry Laboratory II	4
CHEM 335 & CHEM 336	Biochemistry I and Biochemistry Laboratory I	4
CHEM 337 & CHEM 338	Biochemistry II and Biochemistry Laboratory II	4

### Recommended Electives for Physician Assistant Concentration

Code	Title	Hours
BIOL 216	Anatomy and Physiology I with Lab	3
BIOL 217	Anatomy and Physiology II with Lab	3
BIOL 330	Microbiology/Lab <sup>1</sup>	3
HCAM 250 or EXSC 250	Medical Terminology for Healthcare Administrators Medical Terminology	3

<sup>1</sup> Additional pre-requisite CHEM 201 Organic Chemistry I

### Additional Recommendations for Rock Studies 2 Courses

Code	Title	Hours
BIOL 300	Social and Ethical Issues in Genetics	3
CDEV 201	Interpersonal and Group Dynamics	3
COMM 314	Interpersonal Communication	3
INDP 201	Principles of Sociology	3
INDP 202	Introduction to Anthropology	3
PHIL 123	Ethics	3
PHIL 325	Medical/Health Care Ethics	3

### Co-Curricular and Experiential Learning

Students are encouraged to explore additional curricular and co-curricular opportunities. There is a strong correlation between long-term student success and participation in the following types of programs and activities:

1. International Study Programs
2. High-Impact Practice (HIP) designated classes
3. Student-faculty research
4. Student leadership (Psi Chi, Psychology Club, Reflections Body Image Organization, Nu Rho Psi, Neuro Rocks)
5. Service-learning classes
6. Career education planning (Office of Career Education and Development)
7. Internships
8. Volunteering in local human services and mental health agencies
9. Job shadowing

### Important Curriculum Guide Notes

This Curriculum Guide is provided to help SRU students and prospective students better understand their intended major curriculum. Enrolled SRU students should note that the My Rock Audit may place already-earned and/or in progress courses in different, yet valid, curriculum categories. Enrolled SRU students should use the My Rock Audit Report and materials and information provided by their faculty advisers to ensure accurate progress towards degree completion. *The information on this guide is current as of the date listed. Students are responsible for curriculum requirements at the time of enrollment at the University.*

PASSHE - Pennsylvania State System of Higher Education Institutions

PSYCHOLOGY - BS (6170)  
Concentration in Neuroscience (NEUR)  
This program is effective as of Summer 2022  
Revised 04.21.2022  
UCC 02.15.2022

### Recommended Four-Year Plan

Course	Title	Hours
<b>First Year</b>		
<b>Fall</b>		
PSYC 105	Introduction to Psychology	3
ENGL 102	Critical Writing	3
STAT 152	Elementary Statistics I	3
BIOL 114	Biology II: Foundations of Molecules, Genes and Cells with Lab	4

LIBR 110	Introduction to Library & Information Resources	1
ESAP 101	FIRST Seminar *	1
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
PSYC 231	Psychological Science I: Research Methods	3
Creative & Aesthetic Inquiry ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
ENGL 104	Critical Reading	3
Civil Discourse Requirement - select one		3
COMM 200	Civil Discourse: Theory & Practice	
PHIL 110	Ethics and Civil Discourse	
POLS 235	Civil Discourse and Democracy	
SUBJ 139	Foundations of Academic Discovery <sup>1</sup>	3
<b>Hours</b>		<b>15</b>

**Second Year****Fall**

PSYC 232	Psychological Science II: Statistical Applications	3
CHEM 107 & CHEM 111	General Chemistry I and General Chemistry I Lab	4
PSYC 276	Introduction to Abnormal Psychology	3
Humanities Inquiry ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
Free Elective (Neuro Recommended)		3
Declare a Thematic Thread <sup>2</sup>		
<b>Hours</b>		<b>16</b>

**Spring**

PSYC 311	Introduction to Behavioral Neuroscience	4
CHEM 108 & CHEM 112	General Chemistry II and General Chemistry II Lab	4
PSYC 244	Developmental Psychology	3
Free Elective (Neuro Recommended)		3
<b>Hours</b>		<b>14</b>

**Third Year****Fall**

Goal 2: Neuroscience Content Course #1		3
CHEM 201	Organic Chemistry I	3
Thematic Thread Requirement ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
Free Elective (Neuro Recommended)		3
Free Elective (Neuro Recommended)		3
<b>Hours</b>		<b>15</b>

**Spring**

Goal 2: Neuroscience Content Course #2		3
Goal 3: Neuroscience Content Course #1		3
BIOL 250	Genetics with Lab	4
Thematic Thread Requirement ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
Free Elective (Neuro Recommended)		3
<b>Hours</b>		<b>16</b>

**Fourth Year****Fall**

PSYC 451	Research Capstone Internship	6
Goal 3: Neuroscience Content Course #2		3
Major Interdisciplinary Elective		3
Thematic Thread Requirement ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
<b>Hours</b>		<b>15</b>

**Spring**

PSYC 451	Research Capstone Internship	6
Goal 3: Psych Neuro Content Course #3		3
Free Elective (Neuro Recommended)		3
Thematic Thread Requirement ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-quick-guide/</a> )		3
<b>Hours</b>		<b>15</b>
<b>Total Hours**</b>		<b>121</b>

<sup>1</sup> Course offered in multiple subjects; cannot take course in first major subject.

<sup>2</sup> Work with your Academic Adviser to declare a Thematic Thread by the end of your fall semester in your second year.

\* Students are encouraged to take ESAP 101 as a Free Elective.

\*\* This document is meant to serve as a guide. Some planners may show more than 120 credits because faculty have created flexibility in choosing courses. However, only 120 credits are required to obtain a degree. Please consult with your academic adviser and refer to your curriculum guide prior to registering for courses. This plan should be reviewed, and verified, by you and your academic adviser at least once each academic year.

Major Code: 6170

Concentration Code: NEUR

Revised: 05.25.2022