



**FLORIDA  
ATLANTIC  
UNIVERSITY**

**NEW/CHANGE PROGRAM REQUEST  
Undergraduate Programs**

UUPC Approval 11-8-21  
 UFS Approval \_\_\_\_\_  
 Banner Posted \_\_\_\_\_  
 Catalog \_\_\_\_\_

Department N/A  
 College Wilkes Honors College

**Program Name**  
 Concentration in Neuroscience

- New Program  
 Change Program

**Effective Date**  
 (TERM & YEAR)  
 Fall 2021

**Please explain the requested change(s) and offer rationale below or on an attachment**

Cellular Neuroscience track (Track 1):

- 1) Add BSC 1011/L H Biodiversity + Lab (4 cr) to the required courses
- 2) Replace BSC 4915 (3 cr) and BSC 4970 (3 cr) with IDS 4970 Honors Thesis (6 cr total)
- 3) Say "PHY 2049 or PHY 2054" to give students an option to take College Physics 2 without taking Calculus 2.
- 4) Make MAC 2312 Honors Calculus 2 optional (needed only if taking PHY 2049)
- 5) Add the following courses to the Cellular Neuroscience Electives:  
 BSC 4905 H Neuroscience Journal Club, PCB 4253 H Developmental Biology, PCB 4024 H Molecular Cell Biology, PCB 4832C Neurophysiology, MCB 3020/L H Microbiology, PCB 4233 Immunology, PSB 4243 H Neuroscience of Addiction, BSC 4915 H DIR in Biology
- 6) New total number of credits for the Cellular Neuroscience track (track 1) is 74-78 (depending on if students take Calculus 2 or not)

Continues on the next page.

**Faculty Contact/Email/Phone**

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 561-799-8205

**Consult and list departments that may be affected by the change(s) and attach documentation**

**Approved by**


Department Chair William O'Brien  
 College Curriculum Chair Carmen Canete Quesada  
 College Dean Terje Hill  
 UUPC Chair Dan Meeroff  
 Undergraduate Studies Dean Edward Pratt  
 UFS President \_\_\_\_\_  
 Provost \_\_\_\_\_

Digitally signed by William O'Brien  
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 Date: 2021.04.20 16:00:00 -0400

**Date**

4/20/21  
4/19/21  
4/20/21  
11-8-21  
11-8-21  
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Email this form and attachments to [mjenning@fau.edu](mailto:mjenning@fau.edu) one week before the UUPC meeting so that materials may be viewed on the UUPC website prior to the meeting.

 <b>FLORIDA ATLANTIC UNIVERSITY</b>	<b>NEW/CHANGE PROGRAM REQUEST</b> <b>Undergraduate Programs</b>	UUPC Approval <u>11-8-21</u> UFS Approval _____ Banner Posted _____ Catalog _____
	Department <i>N/A</i> College Wilkes Honors College	
<b>Program Name</b> Concentration in Neuroscience	<input type="checkbox"/> New Program <input checked="" type="checkbox"/> Change Program	<b>Effective Date</b> (TERM & YEAR) Fall 2021
<b>Please explain the requested change(s) and offer rationale below or on an attachment</b> <p style="text-align: center;">Cognitive and Behavioral Neuroscience track (Track 2):</p> <ol style="list-style-type: none"> <li>1) Replace PSY 4971 (6 cr) by IDS 4970 Honors Thesis (6 cr)</li> <li>2) Remove PCB 3703/L H Human Morphology and Function 1 + Lab from the required courses</li> <li>3) Change CLP 4144 to CLP 4143 (new number by the state)</li> <li>4) Say "PSY 4933 or ISC 4933" to add Math and Science Seminar (1 cr) as an alternative to PSY 4933</li> <li>5) Add the following courses to the Neuroscience Electives: PSB 4243 H Neuroscience of Addiction, PSB 4810 Neurobio of Learn and Memory, EXP 3202 H Sensation and Perception, BSC 4905 H Neuroscience Journal Club</li> <li>6) Remove the following courses from the Neuroscience Electives: PCB 3063 H Genetics, PCB 4102 H Cell Biology, ZOO 4742 H Princ of Human Neuroanatomy</li> <li>7) Add the following courses to the Psychology Electives: DEP 4464 H Psychology of Aging, DEP 4463C H Lab in Cognitive Aging</li> <li>8) Create a new category of electives called "Biology Electives 6-8 cr" that includes the following courses: BSC1011/L H Biodiversity &amp; Lab, PCB 3063 H Genetics, PCB 4102 H Cell Biology, PCB 4024 H Molecular Cell Biology, MCB 3020/L H Microbiology &amp; Lab, PCB 4253 H Developmental Biology, PCB 3703/L Human Morph 1 &amp; Lab, BSC 2085/L Anatomy and Physiology 1 &amp; Lab, ZOO 4742 H Princ of Human Neuroanatomy</li> <li>9) Require students to choose 2 courses from each of the 3 categories (Neuroscience, Psychology and Biology)</li> <li>10) The new total of credits for Cognitive and Behavioral Neuroscience track (Track 2) is 59-61.</li> </ol>		
<b>Faculty Contact/Email/Phone</b> Dr. Gregory Macleod macleodg@fau.edu 561-799-8205	<b>Consult and list departments that may be affected by the change(s) and attach documentation</b>	
<b>Approved by</b> Department Chair <u>William O'Brien</u> College Curriculum Chair <u>Carmen Canete Quesada</u> College Dean <u>Terje Hill</u> UUPC Chair <u>Dan Meeroff</u> Undergraduate Studies Dean <u>Edward Pratt</u> UFS President _____ Provost _____	<small>Digitally signed by William O'Brien          DN: cn=William O'Brien, o=Florida Atlantic University, ou=Wilkes Honors College, email=obrien@fau.edu, c=US          Date: 2021.04.20 16:17:59 -0400</small>	<b>Date</b> <u>4/20/21</u> <u>4/19.2021</u> <u>4/20/21</u> <u>11-8-21</u> <u>11-8-21</u> _____ _____

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October 7, 2021

To: FAU Honors Council  
From: Wilkes Honors College of FAU  
Date: October 7, 2021  
Subject: Changes to the Neuroscience Concentration

Thank you for your feedback on the Neuroscience Concentration.

1. The changes are now typed, and courses that are being added are highlighted in green. We will make sure that all submissions in the future are types.
2. The major changes are
  - a. The addition of BSC 1011 and BSC 1011L to the Cellular Core. These are being added because they are prerequisites to other courses.
  - b. The addition of courses to the neuroscience electives for both the Cellular Track and the Behavioral Track.
  - c. The creation of a new Biology Electives section for the Behavioral Track and the shift of courses to this category.
3. The two tracks have different numbers of credits because they serve different students. The Cellular Track has more credits. It is heavily used by the premed students. Many of the courses in the Cellular Track, such as PCB 3703 Honors Human Morphology, require many prerequisites. For example, PCB 3703 requires BSC 1010, BSC 1010L, BSC 1011, BSC 1011L CHM 2045, CHM 2045L, CHM 2046 and CHM 2046L.

# CONCENTRATION IN NEUROSCIENCE

## Advisory Board:

Dr. Lucia Carvelli | Dr. Erik Duboue | Dr. Julie Earles | Dr. Johanna Kowalko |  
Laura Vernon | Dr. Kevin Lanning | Dr. Greg Macleod | Dr.



Neuroscience students study the molecular, cellular, structural, and functional aspects of the nervous system. Neuroscience is an interdisciplinary field of study that combines biology, psychology, chemistry, and other fields in an attempt to understand how the nervous system works. The neuroscience concentration will lead students through the fundamentals of the field, spanning the breadth from molecular signaling to human cognition and behavior. The core curriculum will give students the base knowledge necessary to explore the interdisciplinary field. The concentration is composed of two tracks—(1) Cellular Neuroscience and (2) Neuroscience, Cognition, and Behavior--each designed to meet the needs of students with diverse interests while providing rigorous, multidisciplinary preparation for medical school and graduate programs in areas such as neuroscience, biology, psychology, and behavioral medicine.

### There are two tracks:

Track one: Cellular Neuroscience

Track Two: Neuroscience, Cognition, and Behavior

## Courses

**Commented [JE1]:** Courses that are being added are highlighted in green.

## Track one

### Neuroscience - Cellular Neuroscience

#### Advising sheet

Course#	Course Title	Credits
<b>NEURO CORE</b>		
PSY 1012	Honors General Psychology	3
BSC 1010	Honors Biological Principles	3
BSC 1010L	Honors Biological Principles Lab	1
<b>BSC 1011</b>	<b>Honors Biodiversity</b>	<b>3</b>
<b>BSC 1011L</b>	<b>Honors Biodiversity Lab</b>	<b>1</b>
PCB 3703	Honors Human Morphology 1	3
PCB 3703L	Honors Morphology and Function 1 Lab	1
CHM 2045	Honors General Chemistry 1	3
CHM 2045L	Honors General Chemistry 1 Lab	1
CHM 2046	Honors General Chemistry 2	3
CHM 2046L	Honors General Chemistry 2 Lab	1
STA 2023	Honors Statistics	3
<b>IDS 4970</b>	<b>Honors Thesis (two semesters)</b>	

**Commented [JE2]:** Replaced BSC 4915 and BSC 4970 Thesis

#### Additional required courses

Course#	Course Title	Credits
MAC 2311	Honors Calculus 1	4
MAC 2312*	Honors Calculus 2	4

Course#	Course Title	Credits
CHM 2204	Honors Organic Chemistry 1	3
CHM 2204L	Honors Organic Chemistry 1 Lab	1
CHM 2205	Honors Organic Chemistry 2	3
CHM 2205L	Honors Organic Chemistry 2 Lab	1
PHY 2048	Honors General Physics 1	4
PHY 2048L	Honors General Physics 1 Lab	1
PHY 2049*	Honors General Physics 2	4
<b>or PHY 2054</b>	<b>or College Physics 2</b>	
PHY 2049L*	Honors General Physics 2 Lab	1
BCH 3033	Honors Biochemistry	3
PCB 3063	Honors Genetics	4
PCB 4102	Honors Cell Biology	4
	<b>Cellular Neuroscience Electives</b> (selected from list below)	<b>9</b>
	<b>TOTAL</b> 74-78	<b>74-78</b>

\*Students may substitute College Physics II (PHY 2054) and College Physics II Lab (PHY 2054L) for PHY 2049/L, in which case MAC 2312 would not be required. But Calculus-based Physics is highly recommended.

## Cellular Neuroscience Electives (select 3)

Course#	Course Title	Credits
PCB 4843C	Practical Cell Neuroscience	3
ZOO 4742	Honors Principles of Human Neuroanatomy	3
<b>BSC 4905</b>	<b>Honors Neuroscience Journal Club</b>	<b>1</b>
BSC 4930	Honors CRISPR Tech Lab	3

Course#	Course Title	Credits
BSC 4930	Honors Developmental Neurobiology	3
BSC 4930	Honors Neurophysiology	3
BSC 4930	Honors Sensory Systems	3
BSC 4930	Honors Systems Neuroscience	3
MCB 3020/L	Honors Microbiology and Lab	4
PCB 4024	Honors Molecular Cell Biology	3
PCB 4233	Immunology	3
PCB 4253	Honors Developmental Biology	3
PCB 4832C	Neurophysiology	3
PSB 3340	Honors Behavioral Neuroscience	3
PSB 3441	Honors Drugs and Behavior (psychopharmacology)	3
PSB 4243	Honors Neuroscience of Addiction	3
PCB 4842	Cellular Neuroscience	3
BSC 4915	Honors Directed Independent Research in Biology	1-3
Other electives approved by your neuroscience faculty advisor		

**Commented [JE3]:** Replaced BSC Honors Science of Addiction

## Track Two

## Neuroscience - Neuroscience, Cognition, and Behavior

### Advising sheet

Course#	Course Title	Credits
	NEURO CORE	
PSY 1012	Honors General Psychology	

**Commented [JE4]:** Removed PCB 3703 Honors Human Moph 1 and Lab from this section and inserted into a separate biology section

Course#	Course Title	Credits
BSC 1010	Honors Biological Principles	3
BSC 1010L	Honors Biological Principles Lab	1
CHM 2045	Honors General Chemistry 1	3
CHM 2045L	Honors General Chemistry 1 Lab	1
CHM 2046	Honors General Chemistry 2	3
CHM 2046L	Honors General Chemistry 2 Lab	1
STA 2023	Honors Statistics	3
<b>IDS 4970</b>	<b>Honors Thesis (two semesters)</b>	
<b>Additional required courses</b>		
PSB 3340	Honors Behavioral Neuroscience	3
CLP 4143	Honors Psychopathology (Abnormal Psychology)	
EXP 3604	Honors Cognition	3
PSY 3213	Honors Research Methods in Psychology	3
PSY 3213L	Honors Research Methods in Psychology Lab	1
PSY 4933	Honors Advanced Writing in Psychology	1
<b>or ISC 4933</b>	<b>or Honors Math and Science Seminar</b>	
PSB 3441	Honors Drugs and Behavior (Psychopharmacology)	3
<b>Neuroscience Electives (see list below)</b>		
<b>Psychology Electives (see list below)</b>		6
<b>Biology Electives (see list below)</b>		
<b>TOTAL</b>		

**Commented [JE5]:** Replaces PSY 4970 thesis

**Commented [JE6]:** Number changed from CLP 4144

**Commented [JE7]:** Changed from 9-11

**Commented [JE8]:** New Section

**Commented [JE9]:** Changed from 60 - 62

**Commented [JE10]:** Removed PCB 3063 Genetics and PCB 4102 Cell Bio and put them into Biology Electives

**Commented [JE11]:** ZOO 4742 was moved to Biology electives

**Commented [JE12]:** Changed from 3 to 2

Neuroscience Electives (select 2)



Course#	Course Title	Credit
PCB 4843C	Practical Cell Neuroscience	3
<b>BSC 4905</b>	<b>Honors Neuroscience Journal Club</b>	<b>3</b>
BSC 4930	Honors Neurophysiology	3
BSC 4930	Honors CRISPR Tech Lab	3
BSC 4930	Honors Developmental Neurobiology	3
BSC 4930	Honors Sensory Systems	3
BSC 4930	Honors Systems Neuroscience	3
<b>EXP 3202</b>	<b>Honors Sensation and Perception</b>	<b>3</b>
PCB 4842	Cellular Neuroscience	3
<b>PSB 4243</b>	<b>Honors Neuroscience of Addiction</b>	<b>3</b>
PSB 4810	Neurobiology of Learning and Memory	3

**Commented [JE13]:** Replaced BSC 4930 Honors Science of Addiction

Other electives approved by your neuroscience faculty advisor

## Psychology Electives (select 2)

Course#	Course Title	Credits
CLP 4314	Honors Health Psychology	3
SOP 3004	Honors Principles of Social Psychology	3
DEP 3053	Honors Psychology of Human Development	3
<b>DEP 4463C</b>	<b>Honors Lab in Cognitive Aging</b>	<b>3</b>
<b>DEP 4464</b>	<b>Honors Psychology of Aging</b>	<b>3</b>
PPE <b>3003</b>	Honors Personality	3
PSY 4604	Honors History and Systems of Psychology	3

**Commented [JE14]:** Replaced PSY 4930 Honors Psychology of Adult Development

**Commented [JE15]:** Number changed from PPE 3063

**Other electives approved by your neuroscience faculty advisor**

Course#	Course Title	Credits
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**Biology Electives (select 2)**

Course#	Course Title	Credits
BSC 1011/L	Honors Biodiversity and Lab	4
BSC 2085/L	Anatomy and Physiology and Lab	4
MCB 3020/L	Honors Microbiology and Lab	4
PCB 3063	Honors Genetics	4
PCB 3703/L	Honors Human Morphology and Function and Lab	4
PCB 4024	Honors Molecular Cell Biology	3
PCB 4102	Honors Cell Biology	4
PCB 4253	Honors Developmental Biology	3
ZOO 4742	Honors Principles of Human Neuroanatomy	3