Program Change Request

Date Submitted: 04/18/23 8:49 pm

Viewing: SC-BS-NEUR : Neuroscience, BS

Last approved: 02/09/22 1:52 pm

Last edit: 04/18/23 8:49 pm

Changes proposed by: gscott21

Catalog Pages Using this Program Neuroscience, BS

No Longer
Anticipated closure
date (i.e., calendar
Rationale for

Are you completing this form on someone else's behalf?

Yes

Requestor:

Name	Extension	Email
Wendy Lewis	3-6239	glewis13@gmu.edu

Effective Catalog: 2023-2024

Program Level: Undergraduate

Program Type: Bachelor's

Degree Type:

In Workflow

1. **NEUR Chair**
2. SC Curriculum Committee
3. SC Associate Dean
4. Assoc Provost-Undergraduate
5. Registrar-Programs

History

1. Nov 22, 2017 by clmig-jwehrheim
2. Feb 1, 2019 by Jennifer Bazaz Gettys (jbazaz)
3. May 1, 2019 by Tory Sarro (vsarro)
4. Mar 3, 2020 by Jennifer Bazaz Gettys (jbazaz)
5. Sep 21, 2020 by Jennifer Bazaz Gettys (jbazaz)
6. Mar 4, 2021 by Ginny Scott (gscott21)

Bachelor of Science

Title: Neuroscience, BS

Approval Criteria

1. What was the process used within your acad
3. What evidence was used to identify need/dema
a. Have you ensured there are no other existing bad
b. Has CPE confirmed the proposed badge does not
c. Has the instructor(s) for this badge experience been
d. Is there a contact hour minimum?
e. Is an assessment required?
f. Does this badge provide a benefit for current or
5. Is this badge co-sponsored with another organization, association, or unit? (If you would like an
a. What is the organization, program, or department

Earning Criteria

Course:
Badge:
Participant:
Payment:
Portfolio:
Presentation:
Assessment:
Credential:
Education
Other:
Project:
Professional
Schedule/Registration:
Volunteer:

Skills Tag

Skills Tag

Badge Attributes

Please select one from each category:
Achievement Type:
Mastery Level:
Time Commitment:
Cost:

7. Apr 12, 2021 by Tory Sarro (vsarro)
8. May 3, 2021 by Tory Sarro (vsarro)
9. Feb 9, 2022 by Ginny Scott (gscott21)

Industry Standards:

Recommendations:

Issuance information and Pricing

Pricing: See https://cpe.gmu.edu/digitalbadgepricing/ for more information

Estimated Number of Badges Expected to be Issued:

Notes:

- All badge requests will be routed to CPE for review and approval. Please allow 7
- A Mason Digital Credentials Advisory Group may be developed to review badge development on an annual basis to determine which badges are underutilized and may need to be archived. Earners for any archived badges will always retain
- To view examples of all active badges at Mason, please see:

Banner Title:	Neuroscience, BS
Is this a retitling of an existing program?	
Existing Program Title:	
Registrar/OAPI Use Only – SCHEV Status	Approved
Registrar's Office Use Only – Program Start Term	
Registrar/OAPI Use Only – SCHEV Letter	
Registrar/OAPI Use Only – SACSCOC Status	
Concentration(s):	
INTO Major(s):	

Registrar/IRR Use Only – Concentration CIP Code	
College/School:	College of Science
Department / Academic Unit:	Interdisciplinary Neuroscience Program
Jointly Owned Program?	No
Participating	
Participating	
Justification	Changing the text and header in the major electives section to clarify that the list includes pre-approved courses, and additional courses can be approved by an advisor. Why: The previous text was confusing, easily misinterpreted, and conflicted with the header. Part of the text referred to the list as a sample and suggested that all courses might require individual approval, but the header suggested that only courses from the list could be used.

Catalog Published Information

Total Credits Required:	Total credits: minimum 120
Registrar's Office Use Only - Program Code:	SC-BS-NEUR
Registrar/IRR Use Only – Program CIP Code	26.1501 - Neuroscience.
Admission Requirements:	

Admissions

University-wide admissions policies can be found in the Undergraduate Admissions Policies section of this catalog.

To apply for this program, please complete the George Mason University Admissions Application.

Program-Specific Policies:

Policies

Students must fulfill all Requirements for Bachelor's Degrees, including the Mason Core.

NEUR 410 Current Topics in Neuroscience or NEUR 411 Seminar in Neuroscience fulfill the writing intensive requirement.

For policies governing all undergraduate programs, see AP.5 Undergraduate Policies.

Degree Requirements:

Students should refer to the Admissions & Policies tab for specific policies related to this program.

Foundation Courses

Biology		
BIOL 213	Cell Structure and Function	4
Select one from the following: 1,2		3-4
BIOL 311	General Genetics	
BIOL 322	Developmental Biology	
BIOL 326	Animal Physiology	
BIOL 425	Human Physiology	
BIOL 430	Advanced Human Anatomy and Physiology I	
Chemistry		
CHEM 211	General Chemistry I (Mason Core)	4
& CHEM 213	and General Chemistry Laboratory I (Mason Core)	
CHEM 212	General Chemistry II (Mason Core)	4
& CHEM 214	and General Chemistry Laboratory II (Mason Core)	
Mathematics		
Select one option (4 or 6 credits) from the following:		4-6
MATH 113	Analytic Geometry and Calculus I (Mason Core)	

MATH 123	Calculus with Algebra/Trigonometry, Part A	
& MATH 124	and Calculus with Algebra/Trigonometry, Part B (Mason Core)	
Statistics		
Select one course (3 or 4 credits) from the following:		3-4
BIOL 214	Biostatistics for Biology Majors	
STAT 250	Introductory Statistics I (Mason Core)	
PSYC 300	Statistics in Psychology	
MATH 352	Statistics	
Physics		
Select one of the following sequences:		8
PHYS 243	College Physics I (Mason Core)	
& PHYS 244	and College Physics I Lab (Mason Core)	
& PHYS 245	and College Physics II (Mason Core)	
& PHYS 246	and College Physics II Lab (Mason Core)	
PHYS 160	University Physics I (Mason Core)	
& PHYS 161	and University Physics I Laboratory (Mason Core)	
& PHYS 260	and University Physics II (Mason Core)	
& PHYS 261	and University Physics II Laboratory (Mason Core)	
Psychology 1,3		
PSYC 100	Basic Concepts in Psychology (Mason Core)	3
PSYC 375	Brain and Sensory Processes	3
PSYC 376	Brain and Behavior	3
Computer Science		
CDS 130	Computing for Scientists (Mason Core)	3
Core Courses in Neuroscience 1		
NEUR 327	Cellular Neuroscience	4
& NEUR 328	and Cellular Neuroscience Lab	
NEUR 335	Developmental and Systems Neuroscience	3
Technical Writing 1,2,4		
NEUR 410	Current Topics in Neuroscience	3
or NEUR 411	Seminar in Neuroscience	

Required Psychology Lab Course 1		
PSYC 373	Biopsychology Laboratory	2
Total Credits		54-58

1Students must earn a minimum grade of 1.67 (C-) in these courses.

2The course chosen to fulfill this requirement cannot be applied as a Major Elective.

3Transfer students who have earned transfer credit for PSYC 372 Biopsychology may substitute this course for PSYC 375 Brain and Sensory Processes.

4Either course fulfills the writing intensive requirement.

Major Electives

Students should consult with an advisor to choose ~~appropriate~~ elective **courses.** ~~courses, which must be approved by the director of the program.~~ **The list below includes pre-approved courses. Elective courses not on the list must be approved by an advisor.** ~~A sample of possible electives is givenbelow.~~Only courses not already taken in the degree will apply as electives, with the exception of seminar and topics courses; a different topic must be addressed in the second instance of a seminar or topics course. Students may apply no more than 6 credits of courses with a grade of 'D' to this **requirement.** ~~requirement.~~

Students intending to pursue a doctorate in neuroscience or a medical degree are advised to take CHEM 313 Organic Chemistry I and **CHEM 315 Organic Chemistry Lab I, and consult an advisor for other elective recommendations.**

~~CHEM 315 Organic Chemistry Lab I.~~

Select 23 credits of major electives. The list below includes pre-approved courses. Elective courses not on the list must be approved by an advisor.		23
BENG 101	Introduction to Bioengineering	
BENG 313	Physiology for Engineers	
BENG 434	Computational Modelling of Neurons and Networks	
BIOL 305	Biology of Microorganisms	
BIOL 306	Biology of Microorganisms Laboratory	
BIOL 311	General Genetics	
BIOL 322	Developmental Biology	
BIOL 323	Lab for Developmental Biology	
BIOL 326	Animal Physiology	
BIOL 417	Selected Topics in Molecular and Cellular Biology (when topic is Foundations of the Mammalian Brain)	
BIOL 420	Vaccines	
BIOL 425	Human Physiology	
BIOL 426	Mechanisms of Aging	

BIOL 429	Biological Foundations of Pharmacology
BIOL 430	Advanced Human Anatomy and Physiology I
BIOL 431	Advanced Human Anatomy and Physiology II
BIOL 432	Clinical Applications in Human Physiology
BIOL 452	Immunology
BIOL 453	Immunology Laboratory
BIOL 471	Evolution
BIOL 482	Introduction to Molecular Genetics
BIOL 483	General Biochemistry
BIOL 484	Cell Signaling and Disease
BIOL 515	Developmental Neurobiology
CDS 301	Scientific Information and Data Visualization
CHEM 313	Organic Chemistry I
CHEM 314	Organic Chemistry II
CHEM 315	Organic Chemistry Lab I
CHEM 318	Organic Chemistry Lab II
CHEM 321	Quantitative Chemical Analysis
CHEM 463	General Biochemistry I
CHEM 464	General Biochemistry II
CHEM 465	Biochemistry Lab
MATH 114	Analytic Geometry and Calculus II
or MATH 116	Analytic Geometry and Calculus II (Honors)
MATH 203	Linear Algebra
MATH 213	Analytic Geometry and Calculus III
MATH 214	Elementary Differential Equations
NEUR 405	RS: Laboratory Methods in Behavioral Neuroscience
NEUR 406	Zebrafish Neurodevelopment Laboratory
NEUR 407	Lab Investigations Using Voltage Clamp Electrophysiology
NEUR 410	Current Topics in Neuroscience (when not used to fulfill the technical writing requirement) 1
NEUR 411	Seminar in Neuroscience 1
NEUR 422	Glutamatergic Systems

NEUR 424	Sleep and Circadian Rhythms (Mason Core)
NEUR 440	Independent Study in Neuroscience
NEUR 450	Honors Thesis Proposal
NEUR 451	Honors Thesis
NEUR 461	Special Topics in Neuroscience
NEUR 473	Current Neuroscience Research in Germany (Mason Core)
NEUR 480	Biological Bases of Alzheimer's Disease
PHYS 262	University Physics III (Mason Core)
PHYS 263	University Physics III Laboratory (Mason Core)
PSYC 304	Principles of Learning
PSYC 309	Sensation, Perception, and Information Processing
PSYC 317	Cognitive Psychology
PSYC 441	Criminal Behavior: Psychological and Neurological Aspects
PSYC 472	Current Topics in Brain and Behavior
Total Credits	23

1 Fulfills the writing intensive requirement.

Retroactive Requirements Updates:

Effective 2020-2021:

Course credits were noted incorrectly in 20-21 and 21-22 and have been fixed effective April 2021. The following edits should be in effect for catalog year 2020-2021:

Under “Foundation Courses,” the selection of biology courses totals **3-4 credits** as BIOL 322, 326, and 425 are 3 credit courses.

This will make the **total for the foundation 53-57 credits**, and the Mason Core and Electives section: In order to meet a minimum of 120 credits, **this degree requires an additional 39-43 credits.**

Plan of Study:

Honors Information:

Honors in the Major

Highly-qualified students may apply to graduate with honors in the major.

Eligibility

To be eligible for admission, neuroscience majors must have completed at least 60 credits and have a minimum cumulative GPA of 3.25 and a minimum GPA of 3.25 in neuroscience courses.

Honors Requirements

If accepted, students must take a sequence of three courses, which culminates in the successful completion and presentation of an independent honors thesis.

NEUR 410	Current Topics in Neuroscience	3
or NEUR 411	Seminar in Neuroscience	
NEUR 450	Honors Thesis Proposal	2-3
NEUR 451	Honors Thesis	3-4
Total Credits		8-10

To graduate with honors, students must earn a minimum GPA of 3.50 in their honors courses, maintain a minimum cumulative GPA of 3.25, and complete an honors thesis.

Accelerated Description/Dual Degree Description:

INTO-Mason Requirements:

College Requirements & Policies:

Department / Academic Unit Requirements & Policies:

Program Outcomes

Additional Program Information

This information is required by the Office of Accreditation and Program Integrity.

Courses offered via distance (if applicable):

Indicate whether students are able

What is the primary delivery format for the program? Face-to-Face Only

Does any portion of this program occur off-campus?

No

Off-campus details:

Are you working with a vendor / other collaborators to offer your program?

No

Please explain:

Related Departments

Could this program prepare students for any type of professional licensure, in Virginia or elsewhere?

No

Please explain:

Are you adding or removing a licensure component?

No

Please explain:

Additional SCHEV & SACSCOC Information

Is the content of the new program closely related to that of an existing approved program at the same instructional level (i.e., baccalaureate, master's, doctoral)?

Which existing approved program(s)?

Is this new program considered to be "advancing the degree level of a currently approved program" (i.e. existing content is at lower degree level, new content is at the higher degree level)?

Which existing approved program(s)?

Is this new program considered to be "lowering the degree level of a currently approved program" (i.e. existing content is at higher degree level, new content is at the lower degree level)?

Which existing approved program(s)?

Is this a re-opening of a program that was closed to admission within the last five years?

Date of Program Closure

What are the methods of delivery for the program?

Does this program include a course/credit-based competency-based education delivery option?

Is this change a simple retitling of an existing program, with no other changes, to any existing program content, curriculum requirements, etc?

No

Does this change represent a repackaging of content in an existing approved degree/certificate program at the same instructional level (i.e., baccalaureate, master's, or doctoral)?

No

Which existing approved program(s)?

Percentage of total credits containing new course content. ("New course content" is defined by SACSCOC as content that is not currently included in a existing approved degree/certificate program at the same instructional level. Do not exclude gen ed credits in calculations for undergraduate programs.)

0%-24%

Does this change include the addition of a distance education or face-to-face method of delivery for this program?

No

What is the new method of delivery?

Does this change include the addition of a course/credit-based competency-based education delivery option?

No

Will any additional equipment/facilities be needed?

No

Description of institutional impact:

Will any additional faculty be required?

No

Description of institutional impact:

Will any additional financial resources be needed?

No

Description of institutional impact:

Additional library/learning resources needed?

No

Description of institutional impact:

OAPI Use Only – Determination of SACSCOC Impact

Comments or Notes

Green Leaf Program Designation

Is this a Green Leaf program? No

Green Leaf Designation

Sustainability-focused academic programs require at least one green leaf course. Either that course is itself sustainability-focused or else the program requires a set of sustainability-related courses with aggregated substance equivalent to a sustainability-focused course.

Relationship to Existing Courses

Relationship to Existing Programs

List sustainability-focused courses currently required in the degree

Sustainability-related academic programs either require at least one sustainability-related course or else offer any green leaf course as an option or elective.*

List sustainability-related courses currently required in the degree program:

Does this program cover material which crosses into another department?

No

Impacted Departments

Additional Attachments

SCHEV Proposal

Executive Summary

Reviewer Comments

Additional Comments

Is this course required of all students in this degree program?

%wi_required.eschtml%

Attached Document %attach_document.eschtml%

Key: 609