Program Change Request

Date Submitted: 03/17/25 11:19 am

Viewing: SC-BS-NEUR : Neuroscience, BS

Last approved: 04/26/24 4:55 pm

Last edit: 03/17/25 11:19 am

Changes proposed by: jbazaz

Catalog Pages Using this Program

Neuroscience, BS

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

No

Effective Catalog:	2025-2026
Program Level:	Undergraduate
Program Type:	Bachelor's
Degree Type:	Bachelor of Science
Title:	Neuroscience, BS
Banner Title:	Neuroscience, BS
Registrar/OAPI Use Only – SCHEV Status	Approved
Registrar's Office Use Only – Program Start Term	
Registrar/OAPI Use Only – SCHEV Letter	

In Workflow

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

Approval Path

1. 03/17/25 11:21 am Saleet Jafri (sjafri): Approved for NEUR Chair

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)
7. Apr 12, 2021 by Tory Sarro (vsarro)
8. May 3, 2021 by Tory Sarro (vsarro)

9. Feb 9, 2022 by Ginny Scott (gscott21)
10. May 24, 2023 by Ginny Scott (gscott21)
11. Jun 1, 2023 by Tory Sarro (vsarro)
12. Apr 26, 2024 by Ginny Scott (gscott21)

Registrar/OAPI Use Only – SACSCOC Status

Concentration(s):

Registrar/IRR Use Only – Concentration CIP Code

College/School: College of Science

Department / Academic Unit: Interdisciplinary Neuroscience Program

Jointly Owned Program? No

Justification

What: Updating the Writing Intensive (WI) course.

Why: We've made adjustments such that the department now only has one WI course.

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 (Mason Core) fulfills ~~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 [1]	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	Introduction to 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	5
& 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 (Mason Core)~~	
NEUR 411	Seminar in Neuroscience (Mason Core)	3
Required Psychology Lab Course [1]		
PSYC 373	Biopsychology Laboratory	2
Total Credits		55-59

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

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

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

4 This course fulfills the writing intensive requirement.

Major Electives

Students should consult with an advisor to choose elective courses. The list below includes pre-approved courses. Elective courses not on the list must be approved by an advisor. 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.

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.

Select 22 credits of major electives. The list below includes pre-approved courses. Elective courses not on the list must be approved by an advisor.		22
BENG 101	Introduction to Bioengineering	
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	Environmental Effects on Embryonic Development	
BIOL 326	Animal Physiology	
BIOL 417	Selected Topics in Molecular and Cellular Biology (when the 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 (Mason Core)
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
NEUR 355	Cross-Cultural Studies in Scientific Inquiry (Mason Core)
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 (Mason Core) [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 (Mason Core)	
PSYC 309	Sensation, Perception, and Information Processing (Mason Core)	
PSYC 317	Cognitive Psychology	
PSYC 441	Criminal Behavior: Psychological and Neurological Aspects	
PSYC 472	Current Topics in Brain and Behavior	
Total Credits		22

[1] This course fulfills the writing intensive requirement.

Retroactive Requirements Updates:

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 (Mason Core)	
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.

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Program Outcomes

Additional Program Information

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

Courses offered via distance (if applicable):

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

Does any portion of this program occur off-campus?

No

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

No

Related Departments

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

No

Are you adding or removing a licensure component?

No

Additional SCHEV & SACSCOC Information

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

Percentage of total credits containing new course content. ("New course content" is defined by SACSCOC as content that is not currently included in an existing approved degree/certificate program at the same instructiona 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

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

Will any additional faculty be required?

No

Will any additional financial resources be needed?

No

Additional library/learning resources needed?

No

Have you reached out to the Libraries to determine whether there are adequate resources to support your program? If not, please email Meg Meiman, Associate University Librarian for Learning, Research, and Engagement at mmeiman2@gmu.edu.

OAPI Use Only – Determination of SACSCOC Impact

Comments or Notes

Green Leaf Program Designation

Is this a Green Leaf program? No

Does this program cover material which crosses into another department?

No

Additional Attachments

SCHEV Proposal

Executive Summary

Reviewer Comments

Additional Comments

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

%wi_required.eschtml%

Key: 609