Program Change Request

Date Submitted: 11/20/25 1:58 pm

Viewing: SC-BS-BIOL : Biology, BS

Last approved: 04/04/25 12:33 pm

Last edit: 01/13/26 9:30 am

Changes proposed by: jbazaz

Catalog Pages Using this Program

Biology, BS

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

Yes

Requestor:

In Workflow

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

Approval Path

1. 11/20/25 7:51 pm Geraldine Grant (ggrant1): Approved for BIOL Program Chair
2. 11/24/25 12:24 pm Gregory Craft (gcraft): Approved for SC Curriculum Committee
3. 12/01/25 9:24 am Jennifer Bazaz Gettys (jbazaz): Rollback to SC Curriculum Committee for SC Assistant Dean

History

1. Oct 23, 2017 by clmig-jwehrheim
2. Dec 5, 2017 by clmig-jwehrheim
3. Mar 1, 2018 by Jennifer Bazaz

Gettys (jbazaz)
4. Mar 8, 2018 by rzachari
5. Mar 16, 2018 by rzachari
6. Dec 4, 2018 by Jennifer Bazaz Gettys (jbazaz)
7. Feb 1, 2019 by Jennifer Bazaz Gettys (jbazaz)
8. Mar 4, 2019 by Tory Sarro (vsarro)
9. Jan 16, 2020 by Jennifer Bazaz Gettys (jbazaz)
10. Mar 24, 2020 by Jennifer Bazaz Gettys (jbazaz)
11. Apr 2, 2020 by jriemen
12. Oct 30, 2020 by Tory Sarro (vsarro)
13. Mar 4, 2021 by Jennifer Bazaz Gettys (jbazaz)
14. Oct 1, 2021 by Jennifer Bazaz Gettys (jbazaz)
15. May 10, 2022 by Jennifer Bazaz Gettys (jbazaz)
16. Apr 13, 2023 by Jennifer Bazaz Gettys (jbazaz)
17. Apr 4, 2025 by Jennifer Bazaz Gettys (jbazaz)

Name	Extension	Email
Val Olmo	5302	volmo@GMU.EDU

Effective Catalog: 2025-2026

Program Level: Undergraduate

Program Type: Bachelor's

Degree Type: Bachelor of Science

Title: Biology, BS

Banner Title: Biology, BS

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):

	Associated Concentrations	Registrar's Office Use Only: Concentration Code
1	Bioinformatics	BNF
2	Biopsychology	BP
3	Biotechnology and Molecular Biology	BTMB
4	Environmental and Conservation Biology	ESCB
5	Microbiology	MIB

Registrar/IRR Use Only – Concentration CIP Code

College/School: College of Science

Department / Academic Unit: Biology

Jointly Owned Program?	No
Is there an embedded degree as part of a program?	

Justification

What: Updating the Writing Intensive course and updating related credit counts.
Why: This new course was recently approved by the Writing Across the Curriculum Committee.

What: Moved BIOL 214 to the core.
Why: To remain compliant with the Honors in Biology program, we've moved it from the Math requirement to a core requirement.

What: Revising newly decoupled lecture/labs.
Why: To aid degree evaluations.

What: Adding headers to sections.
Why: o aid degree evaluations.

Total Credits Required:	Total credits: minimum 120
Registrar's Office Use Only - Program Code:	SC-BS-BIOL
Registrar/IRR Use Only – Program CIP Code	26.0101 - Biology/Biological Sciences, General.

Admission Requirements: Admissions

University-wide admissions policies can be found in Undergraduate Admissions Policies.
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.
Important information and departmental policies are listed in the Department of Biology.
BIOL 400 News Views: Selected Topics(Mason Core) ~~BIOL 308 Foundations of Ecology and Evolution(Mason Core)~~ or MLAB 300 Science Writing(Mason Core) meet the writing intensive requirement for this major.
For policies governing all undergraduate degrees, see AP.5 Undergraduate Policies.

Important Program Requirements

- Students may not apply more than 4 credits of lower-level BIOL prefixed courses (or equivalent transfer credit at the 100 to 200-level) toward the BS without Concentration electives if taken before the successful completion of BIOL 213 Cell Structure and Function and BIOL 215 Cell Structure and Function Laboratory .
- Biology majors must earn a minimum grade of 'C' in all Core Courses under the "Biology Core Courses" header. A grade of 'C' or better must be earned in BIOL 213 Cell Structure and Function and BIOL 215 Cell Structure and Function Laboratory in order to advance to other core requirements.
- Students may **not** count BIOL 124 Human Anatomy and Physiology I and/or BIOL 125 Human Anatomy and Physiology II toward any Biology, BS requirement.
- Students may count BIOL 303 Animal Biology and/or BIOL 304 Plant Biology as biology electives.
- At least 44 credits must be taken from the "Biology Core Courses" header and all listed "Biology Elective" coursework (with or without a concentration).
- ~~At least 44 credits must be in biology core and elective coursework.~~
- BIOL 493 Honors Research in Biology, BIOL 495 Directed Studies in Biology, and BIOL 497 Special Problems in Biology do not satisfy the requirements of the BS degree which state that students must complete at least two upper division courses that include a laboratory. The courses do, however, count as non-laboratory electives.
  - The total limit for BIOL 493 Honors Research in Biology, BIOL 495 Directed Studies in Biology, and BIOL 497 Special Problems in Biology combined is 6 credits toward the 44 credits required for the BS.

Several optional concentrations are available; details on each can be found in the Requirements tab.

Teacher Licensure

Students majoring in biology who wish to pursue a career teaching secondary school may consider applying for the Secondary Education - Biology (6-12) Undergraduate Certificate offered by the College of Education and Human Development as an option in seeking an initial Virginia teaching license.

Other routes to licensure include the Biology, BA or BS/Curriculum and Instruction, Accelerated MEd (Secondary Education Biology Concentration) or select traditional Master's programs. Please contact the College of Education and Human Development for more information.

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

Students must complete the program with a minimum GPA of 2.00.

All students must complete the *Biology Core Courses* and the *Supporting Core Courses* listed below. While a concentration is not required (see the *BS without Concentration*), students may elect to declare a concentration (requirements listed below).

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

~~Students must complete the program with a minimum GPA of 2.00.~~

~~All students must complete the Biology Core Courses and the Supporting Core Courses listed below. Students then elect to complete the BS degree either with a concentration or without a concentration.~~

Biology Core Courses

BIOL 102	Introductory Biology I-Survey of Biodiversity and Ecology(Mason Core)	4
BIOL 103	Introductory Biology II-Survey of Cell and Molecular Biology(Mason Core)	4
& BIOL 105	and Introductory Biology II Laboratory(Mason Core)	
BIOL 213	Cell Structure and Function	4
BIOL 214	Biostatistics for Biology Majors	4
BIOL 308	Foundations of Ecology and Evolution(Mason Core)	4
& BIOL 338	and Foundations of Ecology and Evolution Laboratory(Mason Core)	
or BIOL 300	BioDiversity	
BIOL 311	General Genetics	4
BIOL 400	News Views: Selected Topics(Mason Core) [1]	3
Total Credits		27

[1] Fulfills writing intensive requirement.

Supporting Core Courses

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)	
CHEM 313	Organic Chemistry I	5
& CHEM 315	and Organic Chemistry Lab I	
Physics		
Select one sequence from the following:		8
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)	
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)	
Mathematics		

~~BIOL 214~~	~~Biostatistics for Biology Majors~~	~~4~~
Select one from the following: [1]		3-4
MATH 111	Linear Mathematical Modeling(Mason Core)	
MATH 113	Analytic Geometry and Calculus I(Mason Core)	
MATH 123 & MATH 124	Calculus with Algebra/Trigonometry, Part A and Calculus with Algebra/Trigonometry, Part B(Mason Core)	
Computer Science		**3**
CDS 130	Computing for Scientists(Mason Core) [2]	
Any course(s) that fulfill the Mason Core: Information Technology Requirement		
Total Credits		27-28

1
Students expecting to enter a health professions school or a graduate program are strongly encouraged to complete MATH 113 Analytic Geometry and Calculus I(Mason Core).

2
Recommended by the Department of Biology.

BS without Concentration

This program provides a sound liberal arts education with substantial experience in quantitative and analytical thought. The BS without Concentration option provides students with the flexibility to explore and prepare for a career in a wide variety of disciplines, including: teaching, health sciences, environmental management, microbiology, molecular biology, biotechnology, genetics, wildlife management, fisheries biology, and marine science.

Students pursuing the BS without Concentration option must complete the curriculum requirements listed below:

Biology Electives		
~~Select 20 credits from the following:~~ [1]		~~20~~
Select 17 credits from the following: [1]		17
Non-laboratory Courses		
BIOL 101	Biology Freshman Seminar	
BIOL 177	Introductory Ecology for Environmental Engineers	
BIOL 302	Alternative Careers in Biology	
BIOL 305	Biology of Microorganisms	
BIOL 309	Oceanography	
or EVPP 309	Oceanography	

or GEOL 309	Oceanography
BIOL 312	Biostatistics for Bioinformatics
BIOL 318	Conservation Biology
BIOL 322	Developmental Biology
BIOL 326	Animal Physiology
BIOL 331	Invertebrate Zoology
BIOL 334	Vertebrate Paleontology
or GEOL 334	Vertebrate Paleontology(Mason Core)
BIOL 336	Invertebrate Paleontology
or GEOL 312	Invertebrate Paleontology
BIOL 344	Plant Diversity and Evolution
BIOL 345	Plant Ecology
BIOL 350	Freshwater Ecosystems
or EVPP 350	Freshwater Ecosystems
BIOL 377	Applied Ecology
or EVPP 377	Applied Ecology
BIOL 382	Introduction to Virology
BIOL 385	Biotechnology and Genetic Engineering
BIOL 404	Medical Microbiology
BIOL 408	Mushrooms, Molds and Society
or EVPP 408	Mushrooms, Molds and Society
BIOL 412	Phage Genomics
BIOL 413	Histotechniques
BIOL 417	Selected Topics in Molecular and Cellular Biology
BIOL 420	Vaccines
BIOL 421	Genetics of Human Diseases
BIOL 423	Biology of Obesity and Weight Loss
BIOL 425	Human Physiology

BIOL 426	Mechanisms of Aging
BIOL 427	Conservation Medicine
or EVPP 427	Conservation Medicine
BIOL 429	Biological Foundations of Pharmacology
BIOL 432	Clinical Applications in Human Physiology
BIOL 435	Selected Topics in Biology
BIOL 443	Tropical Ecology
BIOL 449	Marine Ecology
BIOL 450	Marine Conservation
BIOL 452	Immunology
BIOL 454	Marine Mammal Biology and Conservation
BIOL 457	Reproductive Strategies
BIOL 460	Infectious Diseases Wildlife
or EVPP 460	Infectious Diseases of Wildlife
BIOL 472	Introductory Animal Behavior
BIOL 482	Introduction to Molecular Genetics
BIOL 483	General Biochemistry
EVPP 419	Marine Mammal Biology and Conservation
EVPP 421	Marine Conservation
EVPP 449	Marine Ecology
EVPP 451	Fungi and Ecosystems
CONS 472	Introduction to Animal Behavior
CONS 480	Primate Behavior, Ecology and Conservation
Upper-level Laboratory Courses	
BIOL 303	Animal Biology
BIOL 304	Plant Biology
BIOL 305	Biology of Microorganisms
& BIOL 306	and Biology of Microorganisms Laboratory [2]

BIOL 322	Developmental Biology
& BIOL 323	and Environmental Effects on Embryonic Development
BIOL 377	Applied Ecology
& BIOL 378	and Applied Ecology Laboratory
BIOL 385	Biotechnology and Genetic Engineering
& BIOL 486	and Molecular Biology and Biotechnology Laboratory
BIOL 401	Phage Discovery
BIOL 405	Microbial Genetics
BIOL 407	Microbial Diversity
BIOL 430	Advanced Human Anatomy and Physiology I
BIOL 431	Advanced Human Anatomy and Physiology II
BIOL 437	Ornithology
or EVPP 437	Ornithology
BIOL 438	Mammalogy
or EVPP 438	Mammalogy
BIOL 439	Herpetology
or EVPP 439	Herpetology
BIOL 440	Field Biology
or CONS 440	Ecology Field Skills
BIOL 443	Tropical Ecology
& BIOL 444	and Tropical Ecology Laboratory
BIOL 452	Immunology
& BIOL 453	and Immunology Laboratory
BIOL 465	Histology
BIOL 472	Introductory Animal Behavior
& BIOL 473	and Introductory Laboratory in Animal Behavior
BIOL 485	Cell Signaling Laboratory
EVPP 441	Protist Diversity and Ecology
CONS 332	Insect Biology
CONS 402	Applied Conservation

CONS 404	Biodiversity Monitoring	
CONS 405	Landscape and Macrosystems Ecology	
CONS 406	Small Population Management	
Additional Science Courses		
Students are encouraged to consult with a biology faculty advisor to determine which option (A, B, or C) best meets their career goals. Select one from the following options		3-8
Option A:		
CHEM 314 & CHEM 318	Organic Chemistry II and Organic Chemistry Lab II	
Option B:		
One 3 credit chemistry course at the 300 or 400-level (not CHEM 314)		
Option C:		
GEOL 101 & GEOL 103	Physical Geology(Mason Core) and Physical Geology Lab(Mason Core) (Natural Science courses)	
GEOL 102 & GEOL 104	Historical Geology(Mason Core) and Historical Geology Laboratory(Mason Core)	
Total Credits		20-25

[1] Of which, at least 13 credits must be upper division, and at least two of the upper division courses must include a laboratory.

[2] This lecture and lab combination can be taken together or separately.

Concentration in Bioinformatics (BNF)

The highly interdisciplinary field of bioinformatics has emerged as a powerful modern science. There is a great demand for undergraduate and graduate-level trained individuals with a background in bioinformatics in industry as well as in academia.

~~**Computer Science**~~		~~**3**~~
Biology Electives for the Bioinformatics Concentration		**23**
Required Computer Science		
CDS 230	Modeling and Simulation I	
~~**Bioinformatics**~~		~~**6**~~

Required Bioinformatics		
BINF 401	Bioinformatics and Computational Biology I	
BINF 402	Bioinformatics and Computational Biology II	
~~**Biology**~~		~~**14**~~
Required Biology		
BIOL 305 & BIOL 306	Biology of Microorganisms and Biology of Microorganisms Laboratory	
BIOL 312	Biostatistics for Bioinformatics	
or PSYC 300	Statistics in Psychology	
or STAT 354	Probability and Statistics for Engineers and Scientists II	
BIOL 401	Phage Discovery	
BIOL 412	Phage Genomics	
Additional Science Courses		**3-8**
Select one from the following options: [1]		
Option A:		
CHEM 314 & CHEM 318	Organic Chemistry II and Organic Chemistry Lab II	
Option B:		
~~One 3 credit chemistry course at the 300 or 400-level~~ [2]		
One 3 credit chemistry course at the 300 or 400-level (not CHEM 314)		
Option C:		
GEOL 101 & GEOL 103	Physical Geology(Mason Core) and Physical Geology Lab(Mason Core)	
GEOL 102 & GEOL 104	Historical Geology(Mason Core) and Historical Geology Laboratory(Mason Core)	
Total Credits		26-31

[1] Students are encouraged to consult with a biology advisor to determine which option (A, B, or C) best meets their career goals.

[2] ~~CHEM 314%7C does not fulfill this requirement.~~

Concentration in Biopsychology (BP)

The biopsychology concentration consists of a selection of courses designed to address the needs and interest of students who wish to study biology in more depth while simultaneously exploring psychology and neurobiology. This concentration will help prepare students for the MCAT section related to psychology and provide veterinary students with a background in animal learning/behavior.

~~**Biopsychology Courses**~~		
Biology Electives for the Biopsychology Concentration		**19-21**
Biopsychology Required Courses		
BIOL 430	Advanced Human Anatomy and Physiology I	
BIOL 431	Advanced Human Anatomy and Physiology II	
PSYC 372	Biopsychology	
PSYC 373	Biopsychology Laboratory	
Additional Psychology/Neuroscience Course		
Select 3-4 credits from the following:		
PSYC 304	Principles of Learning(Mason Core)	
PSYC 376	Brain and Behavior	
PSYC 406	Psychology of Communication(Mason Core)	
NEUR 327	Cellular Neuroscience	
NEUR 335	Developmental and Systems Neuroscience	
~~**Additional Biology Courses**~~		
~~Select 3-4 credits, not previously taken, from the Biology Electives listed under the BS without Concentration option (above).~~		~~3-4~~
Additional Biology Courses		
Select 3-4 credits, not previously taken, from the Biology Electives listed under the BS without Concentration option (above).		
Additional Chemistry Courses		**3-5**
Select one from the following options: [1]		
Option A:		
CHEM 314 & CHEM 318	Organic Chemistry II and Organic Chemistry Lab II	
Option B:		

One chemistry course at the 300 or 400-level [2]	
Total Credits	22-26

1 Students are encouraged to consult with a biology faculty advisor to determine which option best meets their career goals.

2 CHEM 314 Organic Chemistry II alone does not fulfill this requirement.

Concentration in Biotechnology and Molecular Biology (BTMB)

The biotechnology and molecular biology concentration consists of a selection of courses that provide essential skills to students who seek employment in the field or wish to include an applied component in their undergraduate training in biology.

~~**Biotechnology Courses**~~		
Biology Electives for the Biotechnology and Molecular Biology Concentration		**20-21**
Biotechnology Required Courses		
BIOL 305 & BIOL 306	Biology of Microorganisms and Biology of Microorganisms Laboratory	
BIOL 385	Biotechnology and Genetic Engineering	
BIOL 483	General Biochemistry	
~~**Additional Biology Courses**~~		
~~Select 9-10 credits from the following, at least one of the courses must include a laboratory:~~		~~9-10~~
Additional Biology Courses		
Select 5-8 credits from the following, at least one of the selections must be chosen from the Laboratory Courses section:		
Laboratory Courses:		
BIOL 405	Microbial Genetics	
BIOL 452 & BIOL 453	Immunology and Immunology Laboratory	
BIOL 465	Histology	
BIOL 486	Molecular Biology and Biotechnology Laboratory	
Non-laboratory Courses:		

~~BIOL 314~~	~~Introduction to Research Design and Analysis~~
BIOL 382	Introduction to Virology
BIOL 401	Phage Discovery
BIOL 411	Advanced General Genetics
BIOL 412	Phage Genomics
~~BIOL 417~~	~~Selected Topics in Molecular and Cellular Biology~~ [~~1~~]
BIOL 418	Current Topics in Microbiology [1]
BIOL 420	Vaccines
BIOL 421	Genetics of Human Diseases
BIOL 422	Stem Cell Biology and Regenerative Medicine
BIOL 482	Introduction to Molecular Genetics
BIOL 484	Cell Signaling and Disease
BIOL 497	Special Problems in Biology [1]
Additional Chemistry Courses	**5**
CHEM 314 & CHEM 318	Organic Chemistry II and Organic Chemistry Lab II
Total Credits	25-26

[1] Registration for BIOL 417 Selected Topics in Molecular and Cellular Biology, BIOL 418 Current Topics in Microbiology, or BIOL 497 Special Problems in Biology is subject to approval by the Director of Undergraduate Studies and the Chair of the Department of Biology.

Concentration in Environmental and Conservation Biology (ESCB)

This concentration is offered to students seeking a biology degree that focuses on ecology and organismal biology and prepares them for graduate work or employment in environmental and conservation fields, such as natural resources management, fisheries, forestry, water quality management, aquatic and wetland ecology, and conservation biology. The concentration is staffed and supported by the Department of Environmental Science and Policy.

~~**Environmental and Conservation Biology**~~	
Biology Electives for the Environmental and Conservation Biology Concentration	**20**
Required Environmental and Conservation Biology	

BIOL 318	Conservation Biology	
BIOL 377	Applied Ecology	
~~**Biology Electives**~~		
~~Select 14 credits from the following:~~ [1]		~~14~~
Additional Biology [1]		
Non-laboratory Courses:		
Select 3-4 credits from the following:		
BIOL 309	Oceanography	
or EVPP 309	Oceanography	
or GEOL 309	Oceanography	
BIOL 314	Introduction to Research Design and Analysis	
BIOL 326	Animal Physiology	
BIOL 351	Conservation Seminar	
BIOL 352	Monitoring and Assessment of Biodiversity	
BIOL 355	Ecological Engineering and Ecosystem Restoration	
BIOL 379	RS: Ecological Sustainability(Mason Core)	
BIOL 443	Tropical Ecology	
BIOL 446	Ecological and Evolutionary Physiology	
BIOL 449	Marine Ecology	
BIOL 450	Marine Conservation	
BIOL 454	Marine Mammal Biology and Conservation	
BIOL 457	Reproductive Strategies	
BIOL 459	Fungi and Ecosystems	
BIOL 468	Vertebrate Natural History	
BIOL 480	The Diversity of Fishes	
BIOL 497	Special Problems in Biology [3]	
Laboratory Courses:		
Select 8 credits from the following:		

BIOL 331	Invertebrate Zoology
BIOL 332	Insect Biology
BIOL 344	Plant Diversity and Evolution
BIOL 345	Plant Ecology
BIOL 350	Freshwater Ecosystems
BIOL 357	Ecology Field Skills
BIOL 378	Applied Ecology Laboratory
BIOL 437	Ornithology
BIOL 438	Mammalogy
BIOL 439	Herpetology
BIOL 440	Field Biology
BIOL 331	Invertebrate Zoology
BIOL 472	Introductory Animal Behavior
Additional Science Courses	**3-8**
~~Select one from the following options: [2]~~	~~3-8~~
Select one from the following options: [1]	
Option A: [2]	
CHEM 314	Organic Chemistry II
& CHEM 318	and Organic Chemistry Lab II
Option B:	
One chemistry course at the 300 or 400-level [2]	
Option C:	
GEOL 101	Physical Geology(Mason Core)
& GEOL 103	and Physical Geology Lab(Mason Core)
GEOL 102	Historical Geology(Mason Core)
& GEOL 104	and Historical Geology Laboratory(Mason Core)
Total Credits	23-28

1 Students are encouraged to consult with a biology faculty advisor to determine which option best meets their career goals.

2

CHEM 314 Organic Chemistry II alone does not fulfill this requirement.

3 Registration in BIOL 497 Special Problems in Biology is subject to approval by the Director of Undergraduate Studies and the Chair of the Department of Biology.

~~4 Registration in BIOL 497 Special Problems in Biology is subject to approval by the Director of Undergraduate Studies and the Chairman of the Department of Biology.~~

Concentration in Microbiology (MIB)

This concentration offers lecture and laboratory courses in microbiology to prepare students for employment or advanced study in microbial genetics, physiology, diversity, and related fields.

~~**Microbiology Courses**~~		
Biology Electives for the Microbiology Concentration		**23**
Required Microbiology Courses		
BIOL 305 & BIOL 306	Biology of Microorganisms and Biology of Microorganisms Laboratory	
BIOL 405	Microbial Genetics	
BIOL 407	Microbial Diversity	
~~**Biology Electives**~~		
~~Select 11 credits from the following:~~		~~11~~
Additional Biology Courses		
Select 8 credits from the following:		
BIOL 314	Introduction to Research Design and Analysis	
BIOL 382	Introduction to Virology	
BIOL 385	Biotechnology and Genetic Engineering	
BIOL 401	Phage Discovery	
BIOL 404	Medical Microbiology	
BIOL 412	Phage Genomics	
BIOL 418	Current Topics in Microbiology	
BIOL 420	Vaccines	
BIOL 452	Immunology	
BIOL 453	Immunology Laboratory	

BIOL 459	Fungi and Ecosystems	
BIOL 483	General Biochemistry	
Additional Chemistry Courses		**5**
CHEM 314 & CHEM 318	Organic Chemistry II and Organic Chemistry Lab II	
Total Credits		28

Retroactive Requirements Updates: 2026-2027 catalog: Apply only the Biology Elective ~~biology elective~~ credit changes to catalog terms fall 2020 ~~2012~~ onward.

Plan of Study:

Honors Information: Honors in the Major

Admissions

Minimum requirements for invitation:

- GPA in biology courses must be 3.33 or better
- GPA in supporting requirements (math and other science) must be 3.00 or better
- Grade of 'B' or better in BIOL 213 Cell Structure and Function and BIOL 215 Cell Structure and Function Laboratory.

Students should apply for admission to the Honors Program during their first or second year at the university. Contact the Department of Biology for information on applying.

Retention Requirements

Students in honors biology must maintain a biology GPA of 3.33 or better and a supporting GPA of 3.00 or better from the time they have accumulated 30 hours and thereafter. Students who fall below this standard will be given a one semester probationary period in which to bring their GPA back up to the minimum standard.

Requirements to Graduate with Biology Honors

Students are required to take 6 to 8 credits in honors courses in BIOL including three semesters of BIOL 494 Honors Seminar in Biology or two semesters of BIOL 494 Honors Seminar in Biology and one semester of BIOL 493 Honors Research in Biology. BIOL 498 Research Seminar may count towards one of the semester requirements of BIOL 494 Honors Seminar in Biology. The GPA requirements are as follows:

- Minimum 3.33 GPA in honors biology courses
- Minimum 3.33 GPA in biology requirements
- Minimum 3.00 GPA in supporting requirements
- Minimum 3.00 GPA overall

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 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

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

Jennifer Bazaz Gettys (jbazaz) (12/01/25 9:24 am): Rollback: Will be voted on in Dec.

Additional Comments

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

%wi_required.eschtml%

Key: 17