Program Change Request

Date Submitted: 09/14/22 12:20 pm

Viewing: SC-BA-BIOL : Biology, BA

Last approved: 07/14/22 1:57 pm

Last edit: 09/14/22 12:20 pm

Changes proposed by: jbazaz

Catalog Pages Using this Program

Biology, BA

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

Yes

Requestor:

In Workflow

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

Approval Path

1. 09/14/22 4:07 pm Geraldine Grant (ggrant1): Approved for BIOL Program Chair

History

1. Oct 23, 2017 by clmig-jwehrheim
2. Mar 16, 2018 by rzachari
3. Dec 4, 2018 by Jennifer Bazaz Gettys (jbazaz)
4. Feb 1, 2019 by Jennifer Bazaz Gettys (jbazaz)
5. Mar 11, 2019 by Tory Sarro (vsarro)
6. Feb 10, 2020 by Jennifer Bazaz Gettys (jbazaz)
7. Mar 24, 2020 by Jennifer Bazaz Gettys (jbazaz)

8. Apr 2, 2020 by jriemen
9. Oct 30, 2020 by Tory Sarro (vsarro)
10. Mar 4, 2021 by Jennifer Bazaz Gettys (jbazaz)
11. Oct 1, 2021 by Jennifer Bazaz Gettys (jbazaz)
12. May 10, 2022 by Jennifer Bazaz Gettys (jbazaz)
13. May 17, 2022 by Tory Sarro (vsarro)
14. Jul 14, 2022 by Tory Sarro (vsarro)

Name	Extension	Email
Deborah Polayes	1050	dpolayes

Effective Catalog:	2023-2024
Program Level:	Undergraduate
Program Type:	Bachelor's
Degree Type:	Bachelor of Arts
Title:	Biology, BA
Banner Title:	Biology, BA
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	Biological Illustration	BIOI
2	Biological Health	BIOH

Registrar/IRR Use Only – Concentration CIP Code

College/School: College of Science

Department / Academic Unit: Biology

Jointly Owned Program? No

Justification

What: Making clearer the non-concentration option and its requirements.

Why: To ease advising and make sure DegreeWorks represents what is required.

What: Removing GEOL 103 from the Natural Science list.

Why: Students fulfill their lab requirements via BIOL and CHEM.

Total Credits Required: Total credits: minimum 120

Registrar's Office Use Only - Program Code: SC-BA-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 the Undergraduate Admissions Policies section of this catalog. To apply for this program, please complete the George Mason University Admissions Application.

For students interested in taking the Biological Health concentration, it is advised that they have already obtained a bachelor's degree; this concentration is primarily intended for students who are interested in changing their careers to one with a biology foundation. The BA's other concentration, or the Biology, BS are great options for students early in their undergraduate studies.

Program-Specific Policies:

Policies

Students must fulfill all Requirements for Bachelor's Degrees, including the Mason Core. Students in this bachelor's program must also complete the additional College Requirements for the BA Degree (see Requirements).
The writing intensive requirement is fulfilled by BIOL 308 Foundations of Ecology and Evolution. Transfer students who have transferred in BIOL 308 Foundations of Ecology and Evolution but did not meet the writing intensive requirement may take MLAB 300 Science Writing to meet the writing intensive requirement.
Post-baccalaureate students entering this program are advised to explore the Application for a Second Bachelor's Degree and the AP. 5.3.3 sections of this catalog.
Important information and departmental policies are listed with the Department of Biology.
For policies governing all undergraduate programs, see AP.5 Undergraduate Policies.

Important Program Requirements

Students must complete the degree requirements with:

- A minimum GPA of 2.00 in the BIOL courses listed in the degree program
- A minimum GPA of 2.00 in the supporting courses listed in the degree program

Additionally:

- Students may apply no more than 4 credits of BIOL 102 Introductory Biology I-Survey of Biodiversity and Ecology (Mason Core) or BIOL 103 Introductory Biology II-Survey of Cell and Molecular Biology (Mason Core) and BIOL 105 Introductory Biology II Laboratory (Mason Core) toward elective credit (or equivalent transfer credit at the 100 to 200-level) if taken before the successful completion of BIOL 213 Cell Structure and Function.
- Biology majors must earn a minimum grade of 'C' in all of the biology core courses. A grade of 'C' or better must be earned in BIOL 213 Cell Structure and Function in order to advance to other core requirements.
- Students may repeat BIOL 213 Cell Structure and Function once, but a second time only with permission of the Department of Biology.
- Students may **not** count BIOL 124 Human Anatomy and Physiology and/or BIOL 125 Human Anatomy and Physiology toward any biology major requirement.
- Students who take BIOL 300 BioDiversity may **not** count BIOL 303 Animal Biology and/or BIOL 304 Plant Biology toward any biology major requirement.
- BIOL 308 Foundations of Ecology and Evolution meets the writing intensive requirement for this major. Transfer students who have transferred in BIOL 308 Foundations of Ecology and Evolution but did not meet the writing intensive requirement may take MLAB 300 Science Writing to meet the writing intensive requirement.
- 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 BA degree which state that students must complete at least one upper division course that includes 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 3 credits toward 32 credits for the BA.

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 undergraduate advisor in 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.
Biology, BA majors are required to complete the following coursework with the option of also completing a concentration.

Biology Core Courses

BIOL 213	Cell Structure and Function	4
BIOL 214	Biostatistics for Biology Majors	4
BIOL 300	BioDiversity 2	4
BIOL 308	Foundations of Ecology and Evolution 1,2	5
BIOL 311	General Genetics	4
Total Credits		21

1 Fulfills the writing intensive requirement.
Transfer students who have transferred in BIOL 308 but did not meet the writing intensive requirement may take MLAB 300 to meet the writing intensive requirement.

2 Post-baccalaureate students in the Biological Health concentration may be excused from taking BIOL 300 and BIOL 308.

Biology Electives

Complete 11 credits of additional biology courses 1,2		11

1 For the Biological Illustration concentration students and students with no declared concentration, at least 7 credits must be upper division, and at least one of these upper division courses must include a laboratory.

2 For the Biological Health concentration, all 11 credits must be in upper division courses, and at least one course must include a laboratory.

Chemistry

CHEM 211	General Chemistry I (Mason Core)	4
& CHEM 213	and General Chemistry Laboratory I (Mason Core) (Natural Science course)	
CHEM 212	General Chemistry II (Mason Core)	4
& CHEM 214	and General Chemistry Laboratory II (Mason Core) (Natural Science course)	
Total Credits		8

Math

Select one from the following:		3-6
MATH 111	Linear Mathematical Modeling (Mason Core) (Quantitative Reasoning courses)	
or 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)	
Total Credits		3-6

Computer Science

Select one from the following:		3
CDS 130	Computing for Scientists (Mason Core) 1	
Any course(s) that fulfills the Mason Core: Information Technology requirement		
Total Credits		3

1 Recommended by the Department of Biology

BA without Concentration

Students who are interested in ~~Biological Illustration (BIOI)This optional concentration consists of~~ a **career in secondary science education,** ~~selection of courses designed to address the needs and interests of students who wish to study biology and simultaneously have the aptitude to draw, animate,~~ or **in the business of biology are well suited** ~~design art~~ for **this degree option.** ~~textbooks, videos, papers, etc.~~

Natural Science

Select 6 credits from the following Mason Core: Natural Science Courses:		**6**
ASTR 103	**Astronomy (Mason Core)**	
ASTR 111	**The Solar System (Mason Core)**	
ASTR 113	**Stars, Galaxies, and the Universe (Mason Core)**	
GEOL 101	**Physical Geology (Mason Core)**	
GEOL 102	**Historical Geology (Mason Core)**	
PHYS 160	**University Physics I (Mason Core)**	
PHYS 243	**College Physics I (Mason Core)**	
PHYS 245	**College Physics II (Mason Core)**	
PHYS 260	**University Physics II (Mason Core)**	
Total Credits		6

Concentration in Biological Illustration (BIOI)

This optional concentration consists of a selection of courses designed to address the needs and interests of students who wish to study biology and simultaneously have the aptitude to draw, animate, or design art for textbooks, videos, papers, etc. This concentration has significant biology, chemistry, and physics components like

all biology majors, and includes art classes that will prepare students for the opportunity to use their love of biology and art in one degree.

Natural Science		
~~Choose 6-7 credits from the following Mason Core: Natural Science Courses~~		~~6-7~~
Choose 6 credits from the following Mason Core: Natural Science Courses		**6**
ASTR 103	Astronomy (Mason Core)	
ASTR 111	The Solar System (Mason Core)	
ASTR 113	Stars, Galaxies, and the Universe (Mason Core)	
GEOL 101	Physical Geology (Mason Core)	
GEOL 102	Historical Geology (Mason Core)	
PHYS 160	University Physics I (Mason Core)	
PHYS 243	College Physics I (Mason Core)	
PHYS 245	College Physics II (Mason Core)	
PHYS 260	University Physics II (Mason Core)	
Art and Visual Technology		
AVT 180	New Media in the Creative Arts (Mason Core)	3
AVT 222	Drawing I (Mason Core)	3
AVT 385	EcoArt (Mason Core)	3
or AVT 497	Senior Project (Mason Core)	
Choose 12 additional art credits from the following courses:		12
AVT 323	Drawing II	
AVT 324	Figure Drawing	
AVT 327	Illustration	
AVT 328	Mixed Media	
AVT 382	2D Experimental Animation	
AVT 383	3D Experimental Animation	
AVT 422	Drawing III	
Total Credits		27

Concentration in Biological Health (BIOH)

This concentration is specially designed for students who have a previous four-year degree and wish to change careers to pursue a profession in the health sciences. Students are encouraged to work closely with an advisor on their program of study as it relates to their transfer coursework.

Additional Chemistry		
CHEM 313	Organic Chemistry I	5
& CHEM 315	and Organic Chemistry Lab I	
CHEM 314	Organic Chemistry II	4-5
& CHEM 318	and Organic Chemistry Lab II	
or BIOL 483	General Biochemistry	
Physics		

PHYS 243	College Physics I (Mason Core)	4
& PHYS 244	and College Physics I Lab (Mason Core)	
PHYS 245	College Physics II (Mason Core)	4
& PHYS 246	and College Physics II Lab (Mason Core)	
Total Credits		17-18

Note for Students Expecting to Enter Graduate or Professional School

Students expecting to enter graduate or professional school are strongly encouraged to complete:

MATH 113	Analytic Geometry and Calculus I (Mason Core)	8
& MATH 114	and Analytic Geometry and Calculus II	
CHEM 313	Organic Chemistry I	5
& CHEM 315	and Organic Chemistry Lab I	
CHEM 314	Organic Chemistry II	5
& CHEM 318	and Organic Chemistry Lab II	
PHYS 243	College Physics I (Mason Core)	4
& PHYS 244	and College Physics I Lab (Mason Core)	
PHYS 245	College Physics II (Mason Core)	4
& PHYS 246	and College Physics II Lab (Mason Core)	

Retroactive Requirements Updates:

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

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 toward 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

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: 16