Program Approval Form

For approval of new programs and deletions or modifications to an existing program.

Action Requested:

- [ ] Create New (SCHEV approval required except for minors)
- [ ] Inactivate Existing
- [x] Modify Existing (check all that apply)
  - [ ] Title (SCHEV approval required except for minors)
  - [ ] **Concentration** (Choose one): [ ] *Add* [ ] *Delete* [ ] *Modify*
  - [x] Degree Requirements
  - [ ] Admission Standards/ Application Requirements
  - [ ] Other Changes: _____

Type (Check one)**:**

- [x] B.A. [ ] B.S. [ ] Minor
- [ ] M.A. [ ] M.S. [ ] M.Ed.
- [ ] Ph.D.
- [ ] Undergraduate Certificate*
- [ ] Graduate Certificate*
- [ ] Other:

College/School:	College of Science	**Department:**	BIOL		
Submitted by:	Jen Gettys	**Ext:**	3.5302	**Email:**	jbazaz@gmu.edu

Effective Term: Fall 2015

Please note: For students to be admitted to a new degree, minor, certificate or concentration, the program must be fully approved, entered into Banner, and published in the University Catalog.

Justification: (attach separate document if necessary)

Adding "Mason Core and Elective Credits" and "Mason Core" sections in order to have the catalog listing clearly show how the degree equals 120 credits and how the Mason Core requirements can be fulfilled.

	Existing	New/Modified
Program Title: (Required) Title must identify subject matter. Do not include name of college/school/dept.	Biology, BA	
Concentration(s):		
Admissions Standards / Application Requirements: (Required only if different from those listed in the University Catalog)		
Degree Requirements: Consult University Catalog for models, attach separate document if necessary using track changes for modifications	[Mason Core and Electives section not included]	See the bottom portion of the degree listing attached.
Courses offered via distance: (if applicable)		
TOTAL CREDITS REQUIRED:		

***For Certificates Only:** Indicate whether students are able to pursue on a [ ] **Full-time basis** [ ] **Part-time basis**

Approval Signatures

Department	Date	College/School	Date	Provost's Office	Date
				Required for Minors and Interdisciplinary Programs	

If this program may impact another unit or is in collaboration with another unit at Mason, the originating department must circulate this proposal for review by those units and obtain the necessary signatures prior to submission. Failure to do so will delay action on this proposal.

Unit Name	Unit Approval Name	Unit Approver's Signature	Date

For Graduate Programs Only

Graduate Council Member	Provost Office	Graduate Council Approval Date

For Registrar Office's Use Only: Received_____Banner_____Catalog_____

revised 6/7/12

Program Proposal Submitted to the College of Science Curriculum Committee (COSCC)

The form above is processed by the Office of the University Registrar. This second page is for the COSCC's reference. Please complete the applicable portions of this page to clearly communicate what the form above is requesting.

FOR ALL PROGRAMS (required)

Program Title: Biology, BA

Date of Departmental Approval: 3/11/2015

FOR INACTIVATED PROGRAMS (required if inactivating a program)

- Reason for Inactivation:

FOR MODIFIED PROGRAMS (required if modifying a program)

- Summary of the Modification: Adding "Mason Core and Elective Credits" and "Mason Core" sections.
- Text before Modification (title, degree requirements, etc.): Sections weren't included.
- Text after Modification (title, degree requirements, etc.): See attached.
- Reason for the Modification: In order to have the catalog listing clearly show how the degree equals 120 credits and how the Mason Core requirements can be fulfilled.

FOR NEW PROGRAMS (required if creating a new program)

- Reason for the New Program:
- Relationship to Existing Programs:
- Relationship to Existing Courses:
- Semester of Initial Offering:
- Insert Tentative SCHEV Proposal Below

Acalog ACMS™ 2015-2016 University Catalog {working}

Biology, BA

Banner Code: SC-BA-BIOL

This program of study is offered by the Department of Biology in the College of Science.

Students must fulfill all requirements for bachelor's degrees including the Mason Core.

Students in the Biology, BA must also complete additional College of Science Bachelor of Arts requirements.

Important information and departmental policies are listed in the Department of Biology section of this catalog.

Students must complete degree requirements with:

- A minimum GPA of 2.00 in the 32 credits of BIOL courses listed below
- A minimum GPA of 2.00 in the supporting courses listed below

Additionally:

- Students may apply no more than 4 credits of BIOL 103 or BIOL 104 toward elective credit (or equivalent transfer credit at the 100 to 200-level) if taken before the successful completion of BIOL 213.
- Biology majors must earn a minimum grade of 'C' in all of the biology core courses listed below. A grade of 'C' or better must be earned in BIOL 213 in order to advance to other core requirements.
- Students may repeat BIOL 213 once, but a second time only with permission of the Department of Biology.
- Students may not count BIOL 124 and/or BIOL 125 toward any biology major requirement.
- Students who take BIOL 310 may not count BIOL 303 and/or BIOL 304 toward any biology major requirement.
- BIOL 308 meets the writing intensive requirement for this major.

Through the coursework below, biology majors satisfy the Mason Core requirements in 'Natural Science', 'Quantitative Reasoning', and 'Information Technology'.

Degree Requirements

Biology Core Courses (22 credits)

All candidates for the Biology, BA, whether pursuing the degree with or without the concentration, must complete biology core courses as follows:

- BIOL 213 - Cell Structure and Function Credits: 4 (Mason Core: Natural Science course)
- BIOL 214 - Biostatistics for Biology Majors Credits: 4
- BIOL 308 - Foundations of Ecology and Evolution Credits: 5 (fulfills writing intensive requirement)
- BIOL 310 - Biodiversity Credits: 3 **and** BIOL 330 - Biodiversity Lab and Recitation Credits: 2
- BIOL 311 - General Genetics Credits: 4

BA without Concentration

In addition to the 22 credits of biology core courses, students pursuing the Biology, BA without the concentration must complete 30-35 credits as follows:

10 Credits of Biology Electives

- 10 credits of additional biology courses
  - Of which, at least 6 credits must be upper division, and at least one of these upper division courses must include a laboratory.

8 Credits of Chemistry

- CHEM 211 - General Chemistry Credits: 4 (Mason Core: Natural Science course)
- CHEM 212 - General Chemistry Credits: 4 (Mason Core: Natural Science course)

3-6 Credits of Math

- MATH 111 - Linear Mathematical Modeling Credits: 3 **or** MATH 113 - Analytic Geometry and Calculus I Credits: 4 (Mason Core: Quantitative Reasoning courses),

  Or both
- MATH 123 - Calculus with Algebra/Trigonometry, Part A Credits: 3 **and** MATH 124 - Calculus with Algebra/Trigonometry, Part B Credits: 3

3 Credits of Computer Science

- CDS 130 - Computing for Scientists Credits: 3 (Mason Core: Information Technology course and is recommended by the Department of Biology)
- **Or** any course(s) that fulfills the Mason Core: Information Technology requirement

6-8 Credits of Natural Science

Chosen from these Mason Core: Natural Science courses:

- ASTR 103 - Astronomy Credits: 3
- ASTR 111 - Introductory Astronomy: The Solar System Credits: 3
- ASTR 113 - Introductory Astronomy: Stars, Galaxies, and the Universe Credits: 3
- GEOL 101 - Introductory Geology I Credits: 4
- GEOL 102 - Introductory Geology II Credits: 4
- PHYS 160 - University Physics I Credits: 3
- PHYS 243 - College Physics Credits: 3
- PHYS 245 - College Physics Credits: 3
- PHYS 260 - University Physics II Credits: 3

Note

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

- MATH 113 - Analytic Geometry and Calculus I and MATH 114 - Analytic Geometry and Calculus II
- CHEM 313 - Organic Chemistry and CHEM 315 - Organic Chemistry Lab I
- CHEM 314 - Organic Chemistry II and CHEM 318 - Organic Chemistry Lab II
- PHYS 243 - College Physics and PHYS 244 - College Physics Lab
- PHYS 245 - College Physics and PHYS 246 - College Physics Lab

Without Concentration Total: 30-35 credits

▲ Concentration in Biology Education (with Licensure) (BIED)

The education concentration consists of a selection of courses that provide essential skills to students who wish to pursue a career teaching high school biology. Completing the Biology, BA with this concentration allows students to receive a license to teach biology in Virginia secondary schools.

Students majoring in biology with this concentration must complete 31-36 credits and additional coursework required for licensure in Virginia. In doing so, students will satisfy the Mason Core requirements in 'Natural Science', 'Quantitative Reasoning', and 'Information Technology'. A grade of 'C' or better is required for all licensure coursework.

In addition to the 22 credits of biology core courses, students must take the following:

8 Credits of Anatomy and Physiology

- BIOL 430 - Advanced Human Anatomy and Physiology I Credits: 4
- BIOL 431 - Advanced Human Anatomy and Physiology II Credits: 4

3 Credits of Biology Electives

- Choose one additional biology course as elective

8 Credits of Chemistry

Mason Core: Natural Science courses:

- CHEM 211 - General Chemistry Credits: 4
- CHEM 212 - General Chemistry Credits: 4

3-6 Credits of Math

- MATH 111 - Linear Mathematical Modeling Credits: 3 **or** MATH 113 - Analytic Geometry and Calculus I Credits: 4 (Mason Core: Quantitative Reasoning courses)**,**

  Or both
- MATH 123 - Calculus with Algebra/Trigonometry, Part A Credits: 3 **and** MATH 124 - Calculus with Algebra/Trigonometry, Part B Credits: 3

3 Credits of Computer Science

- CDS 130 - Computing for Scientists Credits: 3 (Mason Core: Information Technology course and is recommended by the Department of Biology)

- **Or** any course(s) that fulfills the Mason Core: Information Technology requirement

6-8 Credits of Natural Science

Chosen from these Mason Core: Natural Science courses:

- ASTR 103 - Astronomy Credits: 3
- ASTR 111 - Introductory Astronomy: The Solar System Credits: 3
- ASTR 113 - Introductory Astronomy: Stars, Galaxies, and the Universe Credits: 3
- GEOL 101 - Introductory Geology I Credits: 4
- GEOL 102 - Introductory Geology II Credits: 4
- PHYS 160 - University Physics I Credits: 3
- PHYS 243 - College Physics Credits: 3
- PHYS 245 - College Physics Credits: 3
- PHYS 260 - University Physics II Credits: 3

Teacher Licensure Requirement (21 credits)

A grade of 'C' or better is required for all licensure coursework.

- EDCI 473 - Teaching Science in the Secondary School Credits: 3
- EDCI 483 - Advanced Methods of Teaching Science in Secondary School Credits: 3
- EDCI 490 - Student Teaching in Education Credits: 6 (Mason Core: Synthesis course)
- EDRD 419 - Literacy in the Content Areas Credits: 3
- EDUC 372 - Human Development, Learning, and Teaching Credits: 3 (Mason Core: Social and Behavioral Science course)
- EDUC 422 - Foundations of Secondary Education Credits: 3

BIED Concentration Total: 52-57 credits

Mason Core and Elective Credits (41-68 credits)

The remaining credits (see below for specific credit counts) are available to fulfill any remaining Mason Core requirements (outlined below). Once those and all requirements for bachelor's degrees and College of Science Bachelor of Arts requirements are met, any remaining credits may be completed by elective courses. Students are strongly encouraged to consult with their advisor to ensure that they fulfill all requirements.

- Without concentration: 63-68 credits
- With concentration: 41-46 credits

Mason Core

Please note that some Mason Core requirements may already be fulfilled by the major requirements listed above.

Expand each item below for a link to specific course lists for each category:

Foundation Requirements (15-19 credits)

- Mason Core UWCU - Written Communication Credits: 6

- Mason Core UOC - Oral Communication Credits: 3
- Mason Core UQR - Quantitative Reasoning Credits: 3
- Mason Core UITC - Information Technology Credits: 3-7

Core Requirements (22 credits)

- Mason Core UFA - Arts Credits: 3
- Mason Core UGU - Global Understanding Credits: 3
- Mason Core ULIT - Literature Credits: 3
- Mason Core UNSL - Natural Science Credits: 7
- Mason Core USBS - Social and Behavioral Sciences Credits: 3
- Mason Core UWC - Western Civilization/Western History Credits: 3

Synthesis/Capstone Requirement (minimum 3 credits)

- Mason Core USYN - Synthesis/Capstone Credits: minimum 3

Degree Total: Minimum 120 credits