



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 and certificates)
- Delete Existing
- Modify Existing (check all that apply) – M.S. Biology
 - Title (SCHEV approval required except for minors, certificates)
 - Concentration (Choose one): Add Delete Modify
 - Degree Requirements
 - Admission Standards
 - Application Requirements
 - Other Changes: _____

Type (Check one):

- B.A. B.S. Minor
- Undergraduate Certificate
- M.A. M.S. M.Ed.
- Ph.D. Graduate Certificate
- Other: _____

College/School: Department:
 Submitted by: Ext: Email:

Effective Term: 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)

Program Title: (Required)
Title must identify subject matter. Do not include name of college/school/dept.

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

Courses offered via distance:
(if applicable)

TOTAL CREDITS REQUIRED:

Existing	New/Modified
M.S. Biology	
Systematics and Evolutionary Biology	Evolutionary Biology)
	See attached.
	See attached.
	N/A
	30

Approval Signatures

College/School _____ Date _____ Provost's Office _____ Date _____
Interdisciplinary Council Use Only

Collaboration with another unit at Mason, the originating department must circulate this proposal for review by those units and obtain 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 _____

Justification for Change in Concentration

The change from “Systematics and Evolutionary Biology” to simply “Concentration in Evolutionary Biology” reflects modern trends and terminology. This change both simplifies and broadens the appeal of this concentration to students. The revised curriculum should result in enhanced graduate student enrollment. There has been low enrollment in this concentration in the past since the Systematics field does not match interests of a SSB faculty. On the other hand, students enrolled in Evolutionary Biology concentration may extract tremendous benefits from interaction with SSB mentors, including those working on multifactorial and infectious disease. Additionally, this concentration will be supported by the faculty of the Department of Biology in terms of providing research mentors, potential graduate committee members and faculty for several of the core courses; BIOL expertise will cover all population aspects (population ecology and population genetics) and will accept students who wish to work with plants and animals rather than humans. The Department of Biology has grown to over 20 faculty and is ready to move from a strictly undergraduate department, to one embracing graduate students and instruction. Sixteen members of the faculty have already served on graduate committees in both SSB and ESP and most of them will enthusiastically embrace this Concentration. Proposed modification of MS in Biology SEB concentration will result in tightening collaborative connections between SSB and BIOL departments.

Response to Current Needs

One of the major goals of the university is to increase graduate enrollment. Developing a mechanism for graduate faculty to work with MS in Biology students through this concentration should result in a surge of new students and expansion of a capacity for MS in Biology Program since there will be an increase in potential research mentors that cover a variety of research fields with their expertise..

Student Demand

We expect at least ten new MS students per year if this Concentration is properly marketed by the College of Science, the School of Systems Biology and the Department of Biology.

Admission Requirements

Prospective students should submit standard application materials, including the university application form, undergraduate transcript(s), General GRE scores, personal statement, and three letters of recommendation. Recommended minima include GRE scores of 1100 on the old scale or approximately 303 on the new scale, an undergraduate GPA of 3.00, strong letters of recommendation, and statement of interests consistent with at least one faculty member’s research program. Fulfillment of the minimum requirements does not guarantee admission to the program, as availability of an appropriate mentor will be an important part of the admissions decision. With more potential mentors from the Department of Biology there will be more students admitted than previously.

Degree Requirements

Concentration in Evolutionary Biology

Students pursuing the concentration Evolutionary Biology should work closely with their advisor to plan a program of study within the following parameters:

A. 3 credits of Seminar

One credit of BIOL 690 - Introduction to Graduate Studies in Biology

Two Credits of either BIOL 692 - Seminar in Biology Credits: 1

and/or BIOL 695 - Seminar in Molecular, Microbial, and Cellular Biology Credits: 1

B. 6-10 Credits of Core Courses

BIOL 574 - Population Genetics Credits: 4

BIOL 579 - Molecular Evolution and Conservation Genetics Credits: 3

BIOL 648: Population Ecology Credits: 3

C. 6-8 credits of organismal biology chosen in consultation with the student's major advisor and/or committee and the program director.

Examples: BIOL 501, 507, 508, 518, 532, 533, 536, 537, 538, 539, 543, 559, 566, 572, 581, 582, 643, and EVPP 536

D. 4-7 Credits of Molecular Techniques (must include a laboratory)

EVPP 515: Molecular Environmental Biology 1 Credits: 3

EVPP 615: Molecular Environmental Biology 2 Credits: 4

E. 1-6 Credits of Research

Either:

1-3 credits of BIOL 798 - Master's Research Project

or

3-6 credits of BIOL 799 - Thesis Credits

F. 0-10 Credits of Electives approved by the student's advisor and/or committee and the program director.
