



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

Type (Check one):

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

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

Effective Term: Fall **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

Existing	New/Modified
	Undergraduate Certificate in the Biological Sciences for Career Changers
	Must have an undergraduate degree with an overall GPA of 3.0

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 _____

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

Program Title: Undergraduate Certificate in the Biological Sciences for Career Changers

Date of Departmental Approval: December 5, 2014

FOR INACTIVATED PROGRAMS

- Reason for Inactivation:

FOR MODIFIED PROGRAMS

- Summary of the Modification:
- Text before Modification (title, degree requirements, etc.):
- Text after Modification (title, degree requirements, etc.):
- Reason for the Modification:

FOR NEW PROGRAMS

- Reason for the New Program: We estimate that around 50 students per year come to Mason with the intention of taking undergraduate science courses, but do not intend to earn a degree. These are individuals with a Bachelor's degree in a non-science field who have decided to change careers and apply to a graduate science program or a health-related professional program (medical, dental school etc.). Such individuals register for classes as non-degree students or register as a biology or chemistry major supposedly seeking a second undergraduate degree. In the first case, as non-degree students, they have very low registration priority, are frustrated that they cannot get the classes they need, and often register complaints to the department or to higher levels. In the second case, where they actually seek admission so as to purportedly earn a second degree, once they earn the minimum credits needed for admission to a professional school, they leave Mason. In this case our retention statistics suffer. In addition, these students often do not seek advising and waste their time and money on courses that will not help them accomplish their goals.

This certificate program would accomplish several things:

- A) Provide an organized curriculum for such individuals;
 - B) Provide an organized advising session for them each semester;
 - C) Provide career advice;
 - D) Through the \$500 per semester program fee, offset the additional advising and administrative costs for the program;
 - E) Improve the graduation and retention statistics for the Department and the College.
- Relationship to Existing Programs:
The Pre-Medical Undergraduate Certificate is designed specifically for members of the US military who are preparing for the Gsquared graduate certificate. That certificate is specifically for pre-medical students, while this program is designed for students preparing for any graduate program in the biological sciences. Finally, the Pre-Medical Undergraduate Certificate is a one year program, while this certificate is a two year program. Details are found below.

Undergraduate Certificate in the Biological Sciences for Career Changers

Post-baccalaureate students are invited to enroll in the Certificate Program in the Biological Sciences for Career Changers, sponsored by the Department of Biology, George Mason University. By completing this program students will be qualified to apply for most graduate programs in the biological sciences including medical, dental, optometry, podiatry, pharmacy, and veterinary schools. However, graduate and professional school undergraduate coursework requirements can vary. Make sure you check the coursework requirements for schools to which you wish to apply.

To earn this certificate, students will take*:

- 1) Cell Biology, Biostatistics and Genetics (12 credits);
- 2) Three additional upper level (300- 400- or 500 level) biology classes (12 credits);
- 3) Two semesters of General Chemistry (8 credits);
- 4) Two semesters of Organic Chemistry and one semester of Biochemistry (14 credits);
- 5) Two semesters of physics with labs (8 credits)
- 7) One semester of psychology and one semester of sociology (6 credits)
- 8) One semester of college level Math, calculus is recommended but not required (3-4 credits);
- 9) Career Seminars, featuring outside speakers from a wide variety of biologically-oriented professions (0 credits);

* Some courses will be waived if already taken during previous undergraduate training. Substitutions will be recommended where appropriate.

Each student must see an Advisor in the Department of Biology, prior to registration each semester. The program will normally take four semesters to complete for a full-time student. See sample schedule.

It is recommended that students interested in healthcare professions do the following:

- 1) Register for the HEALTHPROFESSIONSADVISOR listserv;
- 2) Attend at least one group advising session conducted by the Health Professions Advisor; and
- 3) Consider participating in Health Professions Advising activities designed for students in a relevant application cycle.

To earn the certificate a student must pass all of the courses listed above, with no grade lower than a B- and achieve a GPA of at least 3.40.

Fees

In addition to tuition and the usual laboratory and College of Science fees, a Certificate Program fee of \$500 per semester will be assessed to defray the costs of the outside speakers and the additional administrative work associated with this program.

Application Requirements

- A) Bachelor's degree from an accredited university with a GPA of 3.00 or higher;
- B) The desire to pursue a career in biological sciences or the health professions (research, medicine, dentistry, teaching, law etc.);
- C) Completed Mason admission application (on-line application is preferable) along with a the appropriate application fee (\$65 for domestic, \$80 for international students, \$100 for paper applications);
- D) Two copies of official transcripts from each institution attended;
- E) No standardized test scores are required.

Sample Schedule

Semester One

BIOL 213: Cell Biology (4 credits)

BIOL 214: Biostatistics (4 credits)

CHEM 211: General Chemistry one (4 credits)

Physics one (4 credits)

Non-credit Seminar on Biologically Related Professions

Total: 16 credits

Semester Three

Upper Level Biology (4 credits)

Organic Chemistry (5 credits)

Upper Level Biology (4 credits)

Psychology (3 credits)

Total: 16 credits

Semester Two

BIOL 311: Genetics (4 credits)

MATH elective (3-4 credits)

CHEM 212: General Chemistry two (4 credits)

Physics two (4 credits)

Total: 15-16 credits

Semester Four

Upper Level Biology (4 credits)

Organic Chemistry (5 credits)

Biochemistry (4 credits)

Sociology (3 credits)

Total: 16 credits