

## Program Change Request

Date Submitted: 04/20/18 4:08 pm

Viewing: **SC-CERG-PRSM : Personalized Medicine Graduate Certificate**

Last approved: 11/16/17 5:18 pm

Last edit: 04/20/18 4:08 pm

Changes proposed by: jbazaz

Catalog Pages

Using this Program

[Personalized Medicine Graduate Certificate](#)

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

Yes

Requestor:

Name	Extension	Email
Ancha Baranova	571-334-1145	abaranov@gmu.edu

Effective Catalog: 2019-2020

Program Level: Graduate

Program Type: Certificate

Degree Type: Graduate Certificate

Title: Personalized Medicine Graduate Certificate

Registrar/OAPI Use Only – SCHEV Status

Approved

Registrar's Office Use Only – Program Start Term

Registrar/OAPI Use Only – SCHEV Letter

Concentration(s):

Registrar/IRR Use Only – Concentration CIP Code

College/School: College of Science

Department / Academic Unit: School of Systems Biology

Jointly Owned Program? No

Justification **Two (2) courses to be added to the Core course selection list; one (1) course removed from the Electives course list since it is no longer offered; five (5) courses added to the electives list.**

### In Workflow

1. Registrar-Programs:Workflow Review
2. SSB Program Chair
3. SC Curriculum Committee
4. SC Associate Dean
5. SC CAT Editor
6. Assoc Provost-Graduate
7. Registrar-Programs

### Approval Path

1. 04/23/18 9:24 am  
Rebekah Zacharias (rzachari): Approved for Registrar-Programs:Workflow Review
2. 04/23/18 7:50 pm  
Iosif Vaisman (ivaisman): Approved for SSB Program Chair

### History

1. Nov 16, 2017 by  
clmig-jwehrheim

### Catalog Published Information

**Total Credits Required:** Total credits: 15

**Registrar's Office Use Only - Program Code:**

SC-CERG-PRSM

**Registrar/IRR Use Only – Program CIP Code**

**Admission Requirements:**

## Admissions

University-wide admissions policies can be found in the [Graduate Admissions Policies](#) section of this catalog.

To apply for this program, please complete the [George Mason University Admissions Application](#).

Prospective students should hold an undergraduate GPA of 3.00 or current employment in clinical or translational research, diagnostics lab, or biological data analysis field.

To be considered for admission, applicants must submit the [George Mason University Admissions Application](#), all undergraduate transcript(s), three letters of recommendation, a statement of interest, and GRE general scores or MCAT scores.

**Program-Specific Policies:**

## Policies

Students may not enroll initially in any College of Science master's or doctoral program and later transfer into this certificate program.

For policies governing all graduate programs, see [AP.6 Graduate Policies](#).

## Premium Tuition

This certificate charges students a differential tuition rate of \$100 per credit hour, which is added to the standard graduate tuition rate (regardless of in or out of state status).

**Degree Requirements:**

This certificate may be pursued on a full-or part-time basis.

Students should refer to the [Admissions & Policies](#) tab for specific policies related to this program.

## Required Core Courses

Code	Course List Title	Credits
<b>Select 9 credits from the following:</b>		<b>9</b>
<a href="#">BIOL 562</a>	Personalized Medicine	
<a href="#">BIOL 566</a>	<b>Cancer Genomics</b>	
<a href="#">BIOL 572</a>	Human Genetics	
or <a href="#">BIOL 666</a>	Human Genetics Concepts for Health Care	
<a href="#">BIOL 685</a>	<b>Emerging Infectious Diseases</b>	
<a href="#">BIOS 743</a>	Genomics, Proteomics, and Bioinformatics	
Total Credits		9

## Electives

Code	Course List Title	Credits
<b>Select 6 credits from the following:</b>		<b>6</b>
<a href="#">BIOL 506</a>	<b>Selected Topics in Microbiology</b>	
<a href="#">BIOL 508</a>	<b>Selected Topics in Animal Biology</b>	

Code	Title	Credits
<a href="#">BIOL 553</a>	Advanced Topics in Immunology	
<a href="#">BIOL 566</a>	Cancer Genomics	
<a href="#">BIOL 568</a>	Advanced Topics in Molecular Genetics	
<a href="#">BIOL 575</a>	Selected Topics in Genetics	
<a href="#">BIOL 583</a>	<b>General Biochemistry</b>	
<a href="#">BIOL 669</a>	Pathogenic Microbiology	
<a href="#">BIOL 682</a>	Advanced Eukaryotic Cell Biology	
<a href="#">BIOL 685</a>	<b>Emerging Infectious Diseases</b>	
<a href="#">BIOL 691</a>	<b>Current Topics in Biology 1</b>	
<a href="#">BIOL 695</a>	Seminar in Molecular, Microbial, and Cellular Biology	
<a href="#">BIOS 701</a>	Systems Biology	
<a href="#">BIOS 741</a>	Genomics	
<a href="#">BINF 630</a>	Bioinformatics Methods	
<a href="#">BINF 633</a>	Molecular Biotechnology	
<a href="#">BINF 733</a>	<b>Gene Expression Analysis</b>	

Up to 4 credits of [BIOL 693](#) and/or [BINF 796](#). 1

Total Credits

6

1Credit for these courses may only be applied toward the certificate's electives if the research topic is relevant to personalized or translational medicine.

Plan of Study:

### Additional Program Information

*This information is required by the Office of Accreditation and Program Integrity.*

Courses offered via distance (if applicable):

Indicate whether students are able to pursue on a: Both Full and Part-time basis

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

Are you changing the total number of credits required for this program?

Are you changing the delivery format in any way (e.g adding an online option)?

Are you adding/removing a licensure option which was approved by SCHEV?

Will any portion of this program be offered at an off-campus location?

Are you adding significant new content areas to the program?

Will this program change affect any specialized accreditation?

### Green Leaf Program Designation

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Is this a Green Leaf  
program?      No

Does this program cover material which crosses into another department?

No

Additional  
Attachments

Reviewer  
Comments

Additional  
Comments

Key: 415



# 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  
☐ Master's  
☐ Ph.D.  
☐ Undergraduate Certificate\*  
☒ Graduate Certificate\*  
☐ Bachelor's/Accelerated Master's ☐ Other:

**College/School:** College of Science **Department:** School of Systems Biology  
**Submitted by:** Dr. Ancha Baranova **Ext:** 571-334-1145 **Email:** abaranov@gmu.edu

**Effective Term:** Fall 2018 **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)

Please see page two.

## 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
Personalized Medicine Graduate Certificate	
	See attached sheet for proposed modifications

\*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
<i>I Vaisman</i>	04-02-18	Iosif Vaisman		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 Undergraduate Programs only

Undergraduate Council Member	Provost Office	Undergraduate Council Approval Date
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## For Graduate Programs Only

Graduate Council Member	Provost Office	Graduate Council Approval Date
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## 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.

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### **FOR ALL PROGRAMS** (required)

Program Title: **Personalized Medicine Graduate Certificate**

Date of Departmental Approval: **April 2, 2018**

### **FOR INACTIVATED PROGRAMS** (required if inactivating a program)

- Reason for Inactivation:

### **FOR MODIFIED PROGRAMS** (required if modifying a program)

- Summary of the Modification:** Two (2) courses to be added to the Core course selection list; one (1) course removed from the Electives course list since it is no longer offered; five (5) courses added to the electives list
- Text before Modification (title, degree requirements, etc.):**

#### Required Core Courses

Code	Course List Title	Credits
<a href="#">BIOL 562</a>	Personalized Medicine	3
<a href="#">BIOL 572</a>	Human Genetics	3
or <a href="#">BIOL 666</a>	Human Genetics Concepts for Health Care	
<a href="#">BIOS 743</a>	Genomics, Proteomics, and Bioinformatics	3
Total Credits		9

#### Electives:

Code	Course List Title	Credits
Select 6 credits from any of these electives:		6
<a href="#">BIOL 553</a>	Advanced Topics in Immunology	
<a href="#">BIOL 566</a>	Cancer Genomics	
<a href="#">BIOL 568</a>	Advanced Topics in Molecular Genetics	
<a href="#">BIOL 575</a>	Selected Topics in Genetics	
<a href="#">BIOL 669</a>	Pathogenic Microbiology	
<a href="#">BIOL 682</a>	Advanced Eukaryotic Cell Biology	
<a href="#">BIOL 695</a>	Seminar in Molecular, Microbial, and Cellular Biology	
<a href="#">BIOS 701</a>	Systems Biology	
<a href="#">BIOS 741</a>	Genomics	
<a href="#">BINF 630</a>	Bioinformatics Methods	
<a href="#">BINF 633</a>	Molecular Biotechnology	
<a href="#">BINF 733</a>	Gene Expression Analysis	
Up to 4 credits of <a href="#">BIOL 693</a> and/or <a href="#">BINF 796</a> . <sup>1</sup>		
Total Credits		6

<sup>1</sup> Credit for these courses may only be applied toward the certificate's elective courses if the research topic is relevant to personalized or translational medicine.

- **Text after Modification (title, degree requirements, etc.):**

#### Required Core Courses

Select 9 credits (3 courses) from any of the following:

Course List		
Code	Title	Credits
<a href="#">BIOL 562</a>	Personalized Medicine	3
<a href="#">BIOL 566</a>	Cancer Genomics	3 added
<a href="#">BIOL 572</a>	Human Genetics	3
or <a href="#">BIOL 666</a>	Human Genetics Concepts for Health Care	
<a href="#">BIOS 743</a>	Genomics, Proteomics, and Bioinformatics	3
<a href="#">BIOL 685</a>	Emerging Infectious Diseases	3 added
Total Credits		9

#### Electives:

Course List

Code	Title	Credits
Select 6 credits from any of these electives:		6
<a href="#">BIOL 506</a>	Selected Topics in Microbiology <sup>1</sup>	added
<a href="#">BIOL 508</a>	Selected Topics in Animal Biology <sup>1</sup>	added
<a href="#">BIOL 553</a>	Advanced Topics in Immunology	
<a href="#">BIOL 566</a>	Cancer Genomics	
<a href="#">BIOL 568</a>	Advanced Topics in Molecular Genetics	
<a href="#">BIOL 575</a>	Selected Topics in Genetics	
<a href="#">BIOL 583</a>	Biochemistry	added
<a href="#">BIOL 669</a>	Pathogenic Microbiology	
<a href="#">BIOL 682</a>	Advanced Eukaryotic Cell Biology	
<a href="#">BIOL 685</a>	Emerging Infectious Diseases	added
<a href="#">BIOL 691</a>	Current Topics in Biology <sup>1</sup>	added
<a href="#">BIOL 695</a>	Seminar in Molecular, Microbial, and Cellular Biology	
<a href="#">BIOS 701</a>	Systems Biology	
<a href="#">BIOS 741</a>	Genomics	
<a href="#">BINF 630</a>	Bioinformatics Methods	
<a href="#">BINF 633</a>	Molecular Biotechnology	
<a href="#">BINF 733</a>	Gene Expression Analysis	removed
Up to 4 credits of <a href="#">BIOL 693</a> and/or <a href="#">BINF 796</a> . <sup>1</sup>		
Total Credits		6

<sup>1</sup> Credit for these courses may only be applied toward the certificate's elective courses if the topic is relevant to personalized or translational medicine.

- **Reason for the Modification:**

The additional core courses were added to allow Certificate students admitted in fall semesters to be able to complete the program within 2 semesters (15 credits). In the current program two required core courses are only offered in alternating spring semesters – BIOL 562 and BIOS 743.

The elective courses added are to allow students to choose from a wider variety of courses that are offered under “topics” that are relevant to their fields of study.

**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
-