

# PERSONALIZED MEDICINE GRADUATE CERTIFICATE

**Banner Code:** SC-CERG-PRSM

## Academic Advising

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Science and Technology Campus

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This certificate is based upon a set of core courses that currently support the Biology, MS; the Biosciences, PhD; the Bioinformatics and Computational Biology, MS; and the Bioinformatics and Computational Biology, PhD degree programs. Students completing this certificate will receive the most up-to-date advanced education available in the region. Completion of the certificate will enhance the careers of those students who are already working in this area, and can also serve as a useful intermediate step towards later enrollment in master's or doctoral programs.

Courses are generally offered in the late afternoon or in the evening to accommodate students with full-time employment outside of the university.

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

## Admissions & Policies

### 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 (<https://www2.gmu.edu/admissions-aid/apply-now>).

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 (<https://www2.gmu.edu/admissions-aid/apply-now>), all undergraduate transcript(s), three letters of recommendation, a statement of interest, and GRE general scores or MCAT scores.

### 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).

## Requirements

### Certificate Requirements

Total credits: 15

Students should refer to the Admissions & Policies tab for specific policies related to this program.

#### Required Core Courses

|             |                                          |   |
|-------------|------------------------------------------|---|
| BIOL 562    | Personalized Medicine                    | 3 |
| BIOL 572    | Human Genetics                           | 3 |
| or BIOL 666 | Human Genetics Concepts for Health Care  |   |
| BIOS 743    | Genomics, Proteomics, and Bioinformatics | 3 |

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Total Credits 9

#### Electives

Select 6 credits from any of these electives: 6

|                                                           |                                                       |
|-----------------------------------------------------------|-------------------------------------------------------|
| BIOL 553                                                  | Advanced Topics in Immunology                         |
| BIOL 566                                                  | Cancer Genomics                                       |
| BIOL 568                                                  | Advanced Topics in Molecular Genetics                 |
| BIOL 575                                                  | Selected Topics in Genetics                           |
| BIOL 669                                                  | Pathogenic Microbiology                               |
| BIOL 682                                                  | Advanced Eukaryotic Cell Biology                      |
| BIOL 695                                                  | Seminar in Molecular, Microbial, and Cellular Biology |
| BIOS 701                                                  | Systems Biology                                       |
| BIOS 741                                                  | Genomics                                              |
| BINF 630                                                  | Bioinformatics Methods                                |
| BINF 633                                                  | Molecular Biotechnology                               |
| BINF 733                                                  | Gene Expression Analysis                              |
| Up to 4 credits of BIOL 693 and/or BINF 796. <sup>1</sup> |                                                       |

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Total Credits 6

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