

BIODEFENSE, PHD

Banner Code: PP-PHD-BIOD

Academic Advising

560 Founders Hall
Arlington Campus

359 Research Hall
Fairfax Campus

Website: schar.gmu.edu

This program is designed to prepare students to serve as scholars and professionals in the fields of biodefense and biosecurity. The program integrates knowledge of natural and man-made biological threats with the skills to develop and analyze policies and strategies for enhancing biosecurity. Other areas of biodefense, including nonproliferation, intelligence and threat assessment, and medical and public health preparedness are integral parts of the program.

Admissions & Policies

Admissions

See Graduate Admissions (<http://catalog.gmu.edu/admissions/graduate-policies/>) for general information on graduate admission to George Mason University. See the Schar School of Policy and Government Admissions website (<http://schar.gmu.edu/admissions/doctorate-admissions/>) for application requirements and deadlines. Students are considered for admission for the Fall term only.

Policies

For policies governing all graduate degrees, see AP.6.10 Requirements for Doctoral Degrees (<http://catalog.gmu.edu/policies/academic/graduate-policies/#ap-6-10>).

Reduction of Credit

Students who enter the doctoral program with a master's degree or other graduate credit may have their credit reduced by up to 30 credits, subject to the approval of the program director.

Requirements

Degree Requirements

Total credits: 72

Students are strongly encouraged to take the core courses as early as possible because they provide the foundation for the rest of the program. The courses which students plan to take should be approved in a program of study designed by the student and their advisor during the student's first semester. Students may take up to 12 credits of courses outside of the Biodefense Program with prior written approval of their advisor. Consult with the graduate program director or coordinator for a list of BIOD electives and approved non-BIOD electives that may be used to fulfill some of the requirements below.

A complete description of the program policies, procedures, and requirements is in the PhD student and faculty handbook ([https://](https://schar.gmu.edu/current-students/phd-student-services/phd-handbook-forms/)

schar.gmu.edu/current-students/phd-student-services/phd-handbook-forms/), which is published annually.

Core Courses

Code	Title	Credits
BIOD 604	Emerging Infectious Diseases I: Bacteria and Toxins	3
BIOD 605	Emerging Infectious Diseases II: Viral Agents	3
BIOD 609	Biodefense Strategy	3
BIOD 620	Global Health Security Policy	3
GOVT 500	The Scientific Method and Research Design	3
GOVT 540	International Relations	3
Select one of the following advanced research courses:		3
GOVT 717	Qualitative Methods	
POGO 611	Advanced Data Analysis for Policy and Government	
POGO 646	Policy and Program Evaluation	
An alternative research course approved by the program director		
Total Credits		21

Field of Specialization

Select one field of specialization and complete the requirements therein.

International Security

Code	Title	Credits
GOVT 744	Foundations of Security Studies	3
GOVT 745	International Security	3
Select six credits of electives (courses may be chosen from the electives list below)		6
Total Credits		12

Terrorism and Homeland Security

Code	Title	Credits
BIOD 722	Examining Terrorist Groups	3
BIOD 725	Terrorism and Weapons of Mass Destruction	3
Select six credits of electives (courses may be chosen from the electives list below)		6
Total Credits		12

Technology and Weapons of Mass Destruction

Code	Title	Credits
BIOD 706	Nuclear, Biological, and Chemical Weapons Policy and Security	3
BIOD 760	National Security Technology and Policy	3
Select six credits of electives (courses may be chosen from the electives list below)		6
Total Credits		12

Additional Specialization Courses

Code	Title	Credits
Of the courses listed for the preceding fields of specialization, students must select two courses from those that are not in their chosen field.		6
Total Credits		6

Electives

Code	Title	Credits
Select 9 to 21 credits of additional electives in consultation with advisor.		9-21

Courses may be offered by Schar or by other units. Schar courses include the following:

BIOD 610	Advanced Topics in Global Health Security
BIOD 620	Global Health Security Policy
BIOD 621	Ethics and International Security
BIOD 622	Negotiating in the International Arena
BIOD 705	Intelligence: Theory and Practice
BIOD 706	Nuclear, Biological, and Chemical Weapons Policy and Security
BIOD 709	Nonproliferation and Arms Control
BIOD 710	Health Security Preparedness
BIOD 722	Examining Terrorist Groups
BIOD 723	Legal Dimensions of Homeland Security
BIOD 725	Terrorism and Weapons of Mass Destruction
BIOD 726	Food Security
BIOD 751	Biosurveillance
BIOD 752	
BIOD 760	National Security Technology and Policy
BIOD 762	Biotechnology and Society
BIOD 766	Development of Vaccines and Therapeutics
BIOD 793	Directed Studies in Biodefense
BIOD 810	Advanced Seminar in Biodefense
BIOD 890	Doctoral Supervised Internship
BIOD 899	Directed Research in Biodefense
GOVT 510	American Government and Politics
GOVT 641	
GOVT 706	Federalism and Intergovernmental Relations
GOVT 739	Issues in Comparative and International Politics
GOVT 741	Advanced Seminar in International Politics
GOVT 745	International Security
GOVT 755	Seminar in Politics and Bureaucracy
GOVT 843	
PUAD 504	Managing in the International Arena: Theory and Practice
PUAD 630	Emergency Planning and Preparedness
PUAD 631	Disaster Response Operations and Recovery

PUAD 632	Terrorism: Theory and Practice	
PUAD 635	Emergency Preparedness: Interagency Communication and Coordination	
PUAD 701	Cross-Cultural and Ethical Dimensions of International Management	
PUAD 727	Seminar in Risk Assessment and Decision Making	
PUAD 731	Homeland/Transportation Security Administration	
PUAD 738	Issues in International Security	
PUAD 750	Federalism and Intergovernmental Relations	
PHIL 642	Biomedical Ethics	
PUBP 757	Public Policy in Global Health and Medical Practice	
PUBP 758	Global Threats and Medical Policies	
Total Credits		9-21

Qualifying Exam

The purpose of the qualifying exam is to determine if the student is ready to engage in dissertation research. Doctoral students are eligible to take the exam at the conclusion of coursework, provided an approved Degree Plan is on file with Schar. The exam must be completed before the student takes dissertation proposal (BIOD 998 Doctoral Dissertation Proposal).

Advancement to Candidacy

Advancement to candidacy for the doctoral degree occurs when a student has met the coursework requirements, passed the comprehensive qualifying examination, presented and successfully defended a dissertation proposal, and has an approved dissertation committee.

Dissertation Research

Once enrolled in BIOD 998, students in this degree program must maintain continuous registration in BIOD 998 or BIOD 999 each semester (excluding summers) until the dissertation is submitted to and accepted by the University Libraries. Once enrolled in BIOD 999, students must follow the university's continuous registration policy as specified in AP.6.10.6 Dissertation Registration (<http://catalog.gmu.edu/policies/academic/graduate-policies/#ap-6-10-6>). Students who defend in the summer must be registered for at least 1 credit of BIOD 999.

Students may apply to this degree a minimum of 3 and a maximum of 6 credits of BIOD 998 and a minimum of 6 and a maximum of 18 credits of BIOD 999. They apply a minimum of 12 and a maximum of 24 dissertation credits (BIOD 998 and BIOD 999 combined) to the degree. Because of the continuous registration policy, students may be required to register for additional credits of these courses.

Before registering in BIOD 999, students must offer a successful public defense of the dissertation proposal. Students must present the results of the dissertation research to their dissertation committee in a seminar and defend their dissertation to the university community. Successful completion of a dissertation is contingent on approval of the dissertation committee and the dean.

Code	Title	Credits
Research credits		12-24
BIOD 998	Doctoral Dissertation Proposal (minimum of 3 credits)	
BIOD 999	Doctoral Dissertation (minimum of 6 credits)	
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Total Credits		12-24