Revised August 2016

This Handbook incorporates most of the requirements and rules pertaining to the Doctoral Program in Biodefense at George Mason University. In addition, the University Catalog (current edition), requirements, and rules, along with other pertinent University policies apply to and, in the case of inconsistency, take precedence over this Handbook. These rules apply to the incoming class of 2016-2017.

Certain information in this Handbook (e.g., credits, names, places, times, course numbers, and URLs) is subject to change.
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Introduction
Welcome to George Mason University’s PhD Program in Biodefense. The program faculty looks forward to a rewarding professional association with you during this important part of your career.

This Handbook
This Handbook should be used as a reference as students proceed through the program. Students are expected to read it carefully to learn about the program and refer back to it as they progress through the stages of the program. The Student/Faculty Handbook guides each incoming class, although details may differ slightly between each yearly edition. This Handbook applies to the class of students entering during the 2016-2017 academic year. Students are guided by the terms of this version throughout the program, though the faculty reserves the right to make changes to the program. The provisions of this handbook supplement, but do not replace, those of the University Catalog.

Your Education is in Your Hands
This doctoral education will serve as an “apprenticeship” to provide students with the knowledge and experience that will enable them to move confidently into advanced positions in the field of biodefense. As students develop professionally and academically through coursework and a variety of research experiences, they will progress from the core courses to specialized content courses. Research and practical experience both inside and outside Mason will provide valuable complements to studies in the field of biodefense.

At established milestones, assessments will be made of each student’s progress to determine whether s/he is ready for the next step of the academic journey. A satisfactory grade in each of the core courses, plus an overall satisfactory rate of progress (particularly on written research material), allows the student to continue in the program.

To facilitate the development of necessary skills, students will work with a faculty advisor from the beginning of the program. The faculty member will act as mentor, advisor, evaluator, and supervisor. However, each student is ultimately responsible for the development of his/her own education and for making progress in the program. The journey will be demanding, difficult, and time consuming, but students should also find it exciting, challenging, and intellectually fulfilling.

Upon completing all requirements, along with the positive assessment and formal recommendation of the faculty, students are awarded the degree of Doctor of Philosophy. This degree symbolizes the completion of a comprehensive biodefense education and research program that is designed to develop a fully capable and responsible scholar. This degree also marks the beginning of a career in continuing education, a journey that will never be complete.

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Scholarly Research
Receiving a PhD is an honor awarded by the faculty of a university for advanced scholarly achievement. It is awarded for scholarship, not merely for the successful completion of coursework. Students must also successfully complete the comprehensive qualifying examination, the dissertation proposal, and the dissertation.

In addition to conveying existing knowledge to a new generation, doctoral programs are dedicated to expanding the knowledge base of a field. Hence, the development of research skills is of primary importance. In contrast to master’s programs, students will spend much time on research not directly related to coursework but essential to mastery of the scholarship in a particular focus area. Students are expected to work with faculty-led research teams throughout their program, which will foster the maturation of research skills and facilitate the development of a doctoral dissertation proposal that addresses a significant issue in the field.

Many students return to academia after a significant period of time in the workforce, and many continue to work while pursuing degrees. Nevertheless, the program places a heavy emphasis on contributions by each student to the intellectual life of the program and the School. This includes participation in research projects; attendance at seminars, conferences, and workshops; and publication of on-going research.

Students are expected to become acquainted with the research projects of program faculty, staff, and fellow students through attending colloquia, brown-bag lunch presentations, and other informal research reviews. As students develop research interests, they should ask to join appropriate research teams. As new members of our scholarly community, doctoral students bring not only substantive knowledge of topics in the field, but also a set of analytical methods and the ability to use as well as expand on them.

Oral and written presentations serve as practice for a scholarly or professional career. The Schar School encourages its students to present their research at colloquia, professional conventions, and meetings with other professionals in the field. Additionally, by the end of their second year in the program, students in the program are expected to have written a paper suitable for presentation at a professional conference or publication in a scholarly journal.

Publication in peer-reviewed journals is one of the primary ways that scholars communicate new research and contribute to the understanding of the field. Such publications are important indicators of scholarly achievement and are used by universities and other organizations to judge the quality of young scholars. Doctoral students should pursue opportunities to present their research at professional meetings and publish in journals. One outlet for presenting student research is the research workshops organized by Schar School doctoral students to help their colleagues develop research and present their findings. In addition to presenting research, attending professional meetings and related social functions enhances a student’s professional development and also provides opportunities to network.

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**Schar School of Policy and Government at George Mason University**

Founded as a branch of the University of Virginia in 1957, George Mason University became an independent institution in 1972. Today, Mason is Virginia’s largest public university and is setting the gold standard for the modern, public university. Its dynamic culture and innovative academic programs prepare Mason’s hard-working students for 21st century careers. Its commitment to teaching excellence combines with cutting-edge research that enriches the academic experience. Located in the National Capital Region, students enjoy extensive cultural experiences and access to the most sought-after internships and employers in the country. The university has campuses throughout Northern Virginia (Fairfax, Arlington, Prince William, and Loudon Counties), as well as in Songdo, Korea.

In 2014, Mason strengthened its commitment to policy, government, and international affairs education, research, and service. By merging two substantial units, the University consolidated its activity in these areas and enhanced its ability to be a leader. In establishing the Schar School, the University sought to take advantage of its location adjacent to the nation’s seat of government and still make it sensitive to the Northern Virginia region. This prime location offers students and faculty unique opportunities to study federal, executive, and legislative policymaking in addition to agency policy activities.

Cross-cutting and innovative partnerships define Mason’s growing impact, and central to these activities is the diversity of the faculty and students. Mason and the Schar School attract students from every continent, while a dynamic, international faculty generates academic opportunities and research collaborations that span the globe.

With over eighty full-time faculty, the Schar School of Policy and Government is one of the largest and most vibrant schools of its kind. The faculty hold terminal degrees in a wide range of fields including political science, economics, sociology, international relations, geography, regional science, international relations, civil engineering, education, philosophy, medicine, history, anthropology, business, organizational behavior, psychology, software engineering, civil engineering, planning, and law.

Former and current faculty members include eminent academics. Six faculty hold named chairs, eight hold University Professorships, and five are members of the National Academy of Public Administration. A number serve as editors of major academic and professional journals and several have served as the presidents of their professional societies. Many members of the faculty have received awards for their teaching, research and service.

Current and former policymakers serve on the School’s faculty, including members of Congress, a former Governor of Virginia, senior officials from the Departments of State and Defense, a former Deputy Chair of the Federal Reserve, a former Director of the CIA, the former Parliamentarian of the United States Senate, and the General Counsel of the NSA. Schar School faculty members have won the Pulitzer Prize, Emmy Awards, and Peabody Awards.

Throughout the year, Schar School events feature practitioners and scholars from the National Capital Region, across the country, and around the world. Students have many opportunities to
build their professional and scholarly communities by participating in colloquia, conferences, research seminars, campaign events, and topical workshops available both on and off campus.

The Schar School is known worldwide for research that discovers new knowledge and develops practical solutions to challenges in international affairs, policy, and government. The School is home to ten research centers that span diverse policy areas, including public-private partnerships, economic development, energy policy, and emerging markets. Over the past decade, the National Science Foundation has ranked Mason’s programs in political science, public administration, public affairs, and public policy among the top ten in the country for research expenditures in these combined disciplines.

The scholars and experts of the Schar School community seek to push the frontiers of conventional wisdom, apply rigorous analysis to complex issues, and make a positive contribution to the world. Innovations in teaching, research, and policy are hallmarks of this community, and its impact reaches well beyond campus. The contributions of the Schar School begin in the Washington, DC region and extend throughout the world.
Doctoral Program Overview

The goal of the Biodefense Program is to educate the next generation of biodefense and biosecurity professionals and scholars. The program operates at the nexus of science and policy to provide students with the knowledge, skills, and training to assess the risks posed by natural and man-made biological threats, while teaching them to develop strategies for reducing these risks to national and international security. The Biodefense Program seeks to train students for employment in all sectors, including work with the US Government, private corporations, and non-governmental organizations. The program provides students with a broad background in the science and technology of biodefense, while giving them the opportunity to specialize in the narrower fields of International Security; Terrorism and Homeland Security; and Technology and Weapons of Mass Destruction.

By combining a foundation in the biological sciences with a focus on policy analysis, Mason’s Biodefense Program is the first of its kind in the United States to offer a broad program of study in the defense against all biological threats. The risks posed by these threats have steadily increased due to globalization, advances in science and technology, the changing nature of conflict, and a more nuanced definition of security. The dual-use nature of the biotechnology revolution and accelerating pace of innovation in the life sciences presents the world with both new opportunities and new dangers. The 2001 anthrax letter attacks highlighted the vulnerability of modern society to biological terrorism. The mounting toll of HIV/AIDS, the emergence of new infectious diseases such as Zika, SARS, and highly pathogenic avian influenza, and the potential for an influenza pandemic reinforce the need for a comprehensive biosecurity strategy to address the risks posed by naturally occurring diseases at home and abroad. The globalization of science and technology, disease outbreaks, and terrorist activities underscore the need for an international response to these issues.

Preventing and responding to man-made and naturally occurring disease outbreaks requires interdisciplinary collaboration, interagency coordination, intergovernmental coalitions, public-private partnerships, and international cooperation. The Biodefense Program is designed to provide students with the knowledge and skills to bridge the gap between scientists and policy-makers on each of these levels. These skills are also essential to combating terrorism, the proliferation of weapons of mass destruction, and other transnational threats.

Students can select one of three fields for their specialization: International Security; Terrorism and Homeland Security; or Technology and Weapons of Mass Destruction. These specializations provide students with an in-depth understanding of the theory and practice of their chosen field. Due to the complexity and scope of biodefense and biosecurity, doctoral students are also required to take two courses from the fields in which they are not concentrating.

Within the Schar School of Policy and Government, students can benefit from the extensive knowledge and experience of its renowned faculty whose areas of expertise range from chemical, biological, radiological, and nuclear weapons (CBRN) and terrorism to molecular and microbiology.
In addition to being able to take advantage of the array of courses within the Schar School, students in the Biodefense Program can also pursue courses in biology, bioinformatics, bioscience, health sciences, and communication. Mason is also home to the National Center for Biodefense and Infectious Diseases and an NIH-funded Biomedical Research Laboratory to develop techniques and products for the detection, diagnosis, prevention and treatment of infectious diseases resulting from natural outbreaks, intentionally released, or genetically engineered pathogens. Mason is also part of the Consortium of Universities of the Washington Metropolitan Area, enabling its students to take advantage of classes offered at universities such as Georgetown and the George Washington University.

**The Curriculum**

In addition to meeting the following requirements for this degree, students must meet the university requirements for all doctoral degrees.

To receive a PhD in Biodefense, students must complete a minimum of 72 credits. 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 that students plan on taking should be approved in a Degree Plan designed by the student and his/her 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. Students should consult with the Doctoral Program Director or PhD Student Services for a list of biodefense electives and approved non-biodefense electives that can be used to fulfill degree requirements.

**Program Requirements**

The program allows students to specialize in one of three fields: International Security, Terrorism and Homeland Security, or Technology and Weapons of Mass Destruction. Courses in Research Methods are required of students in all fields. The degree requires 72 credit hours divided among core courses; advanced courses in one primary field of specialization; additional courses from a secondary field of specialization; supporting courses that can be taken outside the Schar School; research methods courses; electives; and dissertation guidance.

The course work is allocated as follows:

1. **Core Courses** (21 credits)
   Seven core courses include six required BIOD, GOVT, and PUAD courses and one additional advanced research course.

2. **Field of Specialization** (12 credits)
   Four courses from one of the fields of specialization:
   - International Security
   - Terrorism and Homeland Security
   - Technology and Weapons of Mass Destruction
3. **Courses from outside the specialization** (6 credits)
   Of the courses listed for the fields of specialization above, students must select two courses from those that are not in their chosen primary field.

4. **Electives** (9 to 21 credits)
   Students complete the remaining credits through additional elective courses chosen in consultation with their advisor. These courses may be in the School or may be offered by other departments in the University.

5. **Continuous registration: BIOD 998** (3 to 6 credits) and **BIOD 999** (6 to 18 credits)
   Students may apply to this degree a minimum of 3 and a maximum of 6 credits of 998 and a minimum of 6 credits of 999. They apply a minimum of 12 and a maximum of 24 dissertation credits (998 and 999 combined) to the degree. Students must enroll in a minimum of 3 credits per semester until 12 total combined credits have been completed. Students may register for one credit a semester thereafter.

   Once enrolled in BIOD 998, Dissertation Proposal, a student must maintain continuous registration in BIOD 998 or 999 each semester (excluding summers) until the dissertation is submitted to and accepted by the University Library. Failure to maintain continuous enrollment is grounds for termination from the program.

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Biodefense Degree Program Details

During their first semester in the program, students meet with their advisors and with PhD Student Services to complete a degree plan. (See Appendix IV for degree plan forms). Students are expected to discuss this plan periodically throughout their time in the program, make updates, and submit revisions for approval.

Courses for the Degree

Core courses

- BIOD 604 - Introduction to Biodefense I: Bacterial and Toxin Agents
- BIOD 605 - Emerging Infectious Diseases I: Bacteria and Toxins
- BIOD 609 - Biodefense Strategy
- GOVT 500 - The Scientific Method and Research Design
- GOVT 540 - International Relations
- One of two security courses (3 credits) chosen from the following:
  - BIOD 620 – Global Health Security Policy
  - PUAD 637 – Managing Homeland Security
- One additional advanced research course (3 credits) chosen from the following:
  - GOVT 712 – Problem Solving and Data Analysis II
  - GOVT 717 – Qualitative Methods
  - PUAD 646 – Program Evaluation
  - An alternative research course approved by the program director

Fields of Specialization: 12 credits from one specialization; 6 credits from another specialization

- Specialization I: International Security
  - Two required field seminars (6 credits)
    - GOVT 744 - Foundations of Security Studies
    - GOVT 745 - International Security
  - Two elective courses (6 credits)

- Specialization II: Terrorism and Homeland Security
  - Two required field seminars (6 credits)
    - BIOD 722 - Examining Terrorist Groups
    - BIOD 725 - Terrorism and Weapons of Mass Destruction
  - Two elective courses (6 credits)

- Specialization III: Technology and Weapons of Mass Destruction
  - Two required seminars (6 credits)
    - BIOD 706 - Nuclear, Biological, and Chemical Weapons Policy and Security
    - BIOD 760 - National Security Technology and Policy
  - Two elective courses (6 credits)
Electives
Students complete the remaining six credits through additional elective courses chosen in consultation with their advisor. These courses may be in the School or may be offered by other departments in the University.

Comprehensive Qualifying Examination
At the conclusion of their course work, students will take a written qualifying examination. This exam is based on the student’s course work and on the reading lists prepared for the biodefense core and each field of specialization. The purpose of the qualifying exam is to determine if the student is ready to engage in dissertation research. The exam must be completed before the student takes dissertation proposal or dissertation guidance courses.

A few months in advance, PhD Student Services will announce the dates for the next cycle of qualifying exams. Students will take two day-long exams, one in biodefense and one in the student’s area of emphasis. The office publishes two dates, usually one week apart. The categories of science and policy will be on one date and the exam on the student’s field of specialization will be given on a separate date.

At least one month prior to the first exam date, students planning on taking the qualifying exams must submit to PhD Student Services a comprehensive exam application and a completed Degree Plan approved by their advisor. The purpose is to verify that all course requirements have been completed.

Students planning to take their comps during a given cycle must be available for both dates. Students who cannot make both dates must postpone until the next offering. No dispensation or special provision is needed for a “late” exam, as long as the maximum semesters of enrollment allowed by the university are respected. The exam must be completed before the student takes dissertation proposal or dissertation guidance courses.

Each day of the exam is made up of an 8-hour session. The Director of PhD Student Services will proctor the exam. A computer is provided for writing the exam. Online access is prohibited, as well as the use of outside materials and electronic devices. Students are not permitted to use any of the following tools while taking the exam:

- Notes
- Books
- Reading lists
- Internet
- Personal computers of any kind
- Handheld devices (including but not limited to smartphones, tablets, iPads, handheld devices, and anything with document storage or internet access)
- Electronic storage devices (including but not limited to USB devices, flash drives, thumb drives, external hard drives)

Using any of the items above during the exam is grounds for failing the exam.
Exams are graded by the field committee appointed by the program director. Through its deliberations, the committee reaches a single result for each answer and, then, a single result for the exam overall. All answers must achieve a PASS or higher for a grade of PASS for the overall exam. The committee will render a single grade for each question and for the exam overall: FAIL, PASS or HIGH PASS. Any question that is failed must be re-taken and passed at the next exam cycle in order to pass the exam. Any question area that is failed may be re-taken no more than once. Failing a question area twice means that the overall exam is failed and that the student is terminated from the program.

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Dissertation

Registration during Dissertation Work
Once enrolled in BIOD 998 Dissertation Proposal, students must maintain continuous registration in BIOD 998 or BIOD 999 Dissertation Research each semester (excluding summers) until the dissertation is submitted to and accepted by the University Libraries. Once enrolled in 999 students must follow the university’s continuous registration policy as specified in the Academic Policies section of the Catalog. Students who defend in the summer must be registered for at least 1 credit of 999.

Students may apply a minimum of 3 and a maximum of 6 credits of 998 and a minimum of 6 credits of 999. They apply a minimum of 12 and a maximum of 24 dissertation credits (998 and 999 combined) to the degree. Student must enroll in a minimum of 3 credits per semester until they have completed 12 total combined credits of 998 and 999. Students may register for one credit a semester thereafter. Failure to be continuously enrolled in 998 and 999 will result in termination from the program.

To register for BIOD 998, the student must first have passed the Comprehensive Qualifying Exams and identified the Chair of the Dissertation Committee. The Chair must notify PhD Student Services that he/she has agreed to serve as the Dissertation Chair. PhD Student Services will then provide the student with CRN to use to register.

Before registering for BIOD 999, students must offer a successful public defense of the dissertation proposal. Successful completion of a dissertation is contingent on final approval of the dissertation committee and the dean.

Dissertation Chair
An important key to success in a dissertation is the selection of a dissertation chair who must be a member of the Schar School graduate faculty. The dissertation chair gives primary guidance to the student during the proposal and dissertation stages of the program.

Typically, students and faculty members discover or develop mutual interests, and the decision of who will be the chair flows naturally from their evolving relationship. This decision is voluntary on both sides; that is, the student is free to select the dissertation chair, and the faculty is free to decide which students’ committees to chair. It is the responsibility of the student to identify a dissertation chair who will accept the responsibility of supervision. Failure to do so may result in termination from the program. A list of eligible faculty who may serve as dissertation chair is included in Appendix I.

The Role of the Chair
Chairs serve as the major advisor and mentor to the doctoral candidates as they research and write their dissertations. Expectations of the chair include the following:
For the Proposal:

- Consult and meet with the student on a regular basis
- Advise on topic selection (e.g., appropriateness, academic value)
- Guide the student in the proposal writing process (e.g., understanding the need for a clearly defined problem statement, precise research questions, viable methodology, focused literature review, and thorough bibliography)
- Counsel student on reliability and validity of data-gathering methods
- Ensure that all research activities are reviewed by the Office of Research Integrity and Assurance (ORIA) prior to implementation of the research activities. Refer to http://oria.gmu.edu/
- Serve as the principal investigator for the research and assumes responsibility for the legal and ethical conduct of the work.
- Facilitate committee discussions about creating and improving the proposal

For the Dissertation:

- Meet with student on a regular basis to provide guidance and evaluation during the research and writing stages
- Review dissertation drafts in a timely manner
- Offer recommendations for revisions
- Communicate with committee members
- Discuss any problematic issues in the dissertation with the committee, student, and program director
- Approve the final draft for the dissertation defense, with the concurrence of the committee members
- Attend and supervise the dissertation defense
- Attend graduation/convocation to hood the candidate

Members of the dissertation committee are expected to be present in person at the dissertation defense.

A change in dissertation chair is unusual and reflects extraordinary circumstances. A discussion of the proposed change must involve the present chair, the proposed chair, and the Doctoral Program Director. Both the Doctoral Program Director and the Dean must approve a change in chair. (See Appendix IV for the Change of Committee Member form.)

**Dissertation Committee**

The dissertation committee chair, in consultation with the student, selects the other committee members from among Mason faculty. At least three members are required for a committee. All must be tenured or tenure-track members of the Mason faculty, and at least two—including the chair—must be from the Schar School faculty. The chair and those who have agreed to serve must sign the Dissertation Committee form (see Appendix III).

With the approval of the Doctoral Program Director, the committee may include additional members. These additional members may be part of the Mason faculty, or they may have other affiliations. The Doctoral Program Director recommends the dissertation committee to the Dean of the Schar School. The Dean appoints the members and reserves the right to make such
substitutions as necessary, after consultation with the dissertation committee chair. (See Appendix II for the Dissertation Committee form.)

The dissertation committee is responsible for supervising and approving all aspects of dissertation preparation and production: additional coursework, research design, model building, data collection, data analysis, dissertation writing, and the oral defense. The committee reads the various drafts of the dissertation, advises the student about directions the dissertation should take, and identifies changes the student may need to make.

Student-initiated changes in the composition of the dissertation committee may occur only with the approval of the PhD Program Director and Dean in consultation with the committee. Faculty may resign from a dissertation committee with appropriate notice by submitting a written resignation.

If the dissertation chair departs from the university, the following will apply: With the approval of the PhD Program Director, faculty departing at the end of the academic year (spring) will be allowed to continue in that role until the deadline for submitting dissertations for the summer. If the student does not or will not meet the deadline for submission in summer, the student must identify a new chair for the committee.

The Role of the Committee
The dissertation committee works with the chair to provide advice and consultation to the candidate throughout the process of research and writing. Expectations of the committee members include the following:

For the Proposal
- Meet with the student
- Advise on topic selection (e.g., appropriateness, academic value)
- Offer expertise in the member’s area of study
- Read and review the proposal in a timely manner
- Discuss any recommendations for revisions with the committee chair and student

For the Dissertation
- Meet with the student to provide guidance and evaluation during the research and writing stages
- Review dissertation drafts in a timely manner
- Offer recommendations for revisions
- Discuss any problematic issues in the dissertation with the committee chair and student
- Approve the final draft for the dissertation defense, in consultation with the other committee members (See Appendix IV for the Change of Committee Member form.)
Dissertation Proposal

Before writing the dissertation itself, each student must prepare a dissertation proposal and defend it successfully. The purpose of the proposal is to demonstrate to the committee that the student has conducted sufficient research and planning to be able to complete the dissertation. Passing the proposal defense constitutes approval for the student to undertake the research and writing of the dissertation. Students should expect to spend several months writing the proposal, which is usually thirty to forty double-spaced pages, but the dissertation chair will determine the appropriate length for any specific proposal.

While the structure of each individual student’s proposal might differ somewhat, the following outline serves as a guide for both the student and the committee.

1. **Title and Abstract**: A working title for the dissertation and an abstract will head the proposal; the student should be able to state the purpose of the dissertation in one sentence.

2. **Introduction**: The introduction defines the area of inquiry, explains why it is important to the discipline, and shows how the dissertation relates to the broader area of biodefense scholarship. The introduction also briefly states the research question or hypothesis, and it lays out the framework for the rest of the proposal.

3. **Literature Review**: The proposal includes a focused survey of the field to which the student will make a new contribution. The literature review is not merely a descriptive list of related books and scholarly articles or an annotated bibliography. It should focus on scholarship directly relevant to the dissertation and show how the dissertation will contribute new knowledge to that literature. What are the major controversies in the field and how will the dissertation help advance knowledge of the issue in question? How has the literature dealt with these topics thus far? What is the gap in the scholarship that the dissertation is intended to fill? The literature review should not be seen as a survey of related scholarship; it should be carefully integrated into the purpose of the proposed dissertation.

4. **Research Questions and Hypotheses**: After placing the dissertation topic in the extant literature, the proposal explains in detail the research question or hypothesis and how the dissertation will answer the central question. Secondary questions or hypotheses are appropriate, but overall, the dissertation should address one central question. What theoretical or causal connections will the dissertation demonstrate? What leads the student to expect the predicted outcomes? What sub-questions will the student answer in addressing the main research question?

5. **Data Collection**: This section of the proposal describes how the data will be collected. What data or information will the student explore in order to bring empirical evidence to bear on the topic (databases, archival sources, documents, laws, survey data, interviews, etc.)? What new evidence will the student develop that has not been available before? Alternatively, how will the student use the existing data to address questions that have not yet been addressed?
6. Methods of Analysis and Limitations of the Data: Once the proposal addresses theoretical, substantive, and data gathering issues, it then explains the methodology of the inquiry. The methods used should flow from the type of question the proposal asks and the nature of the evidence available (or to be developed). If the proposal uses quantitative data, how will the student operationalize the main concepts being addressed? That is, how will the data being explored represent the issues the student is addressing? Is the fit tight or loose? Is the student aware of the limits of the data? If the proposal uses qualitative data or evidence, what specific data analysis techniques will be used? If the proposal uses qualitative data, how will the student evaluate the empirical data? If the proposal uses a case study, how representative will the case be? The proposal should be clear about gaps or limitations in the data selected.

7. Implications of the Research: Finally, the proposal addresses the potential implications of the research. How will this research improve our understanding of biodefense? The significance might be theoretical (e.g., how can we understand the issue better?), methodological (e.g., how can we use better measurements in understanding the issue?), or practical (e.g., how can this area of biodefense be better implemented?). The student should be clear about the limitations of the research and the potential gaps between what the study is measuring and the conclusions the student wishes to draw from it.

8. Time Frame and Bibliography: The proposal should include a concrete time frame for completing the research and tentative chapter titles, as well as a bibliography of the sources cited in the proposal, using the citation or reference style that the dissertation chair has approved.

It is essential for students to keep in touch with their committee members, especially their dissertation chairs. Students should avoid surprising their committees with what they think are finished products. The expectation is that students correspond regularly with their committee members, sending outlines and ideas, and reporting progress on the research. It is the responsibility of the student to keep the committee informed of the status of the research and writing.

**Dissertation Proposal Defense**

Once the committee has reviewed and approved the proposal, the student schedules the defense with the help of PhD Student Services. At the defense, the student makes an oral presentation of the proposal to the committee and any other Schar School faculty, fellow students, or outside scholars who wish to attend.

In scheduling the defense, it is the student’s responsibility to ensure that all members of the committee are available and will be present for the defense. This is especially important during the summer, as faculty members are not obligated to be available during summer session. Any requests for exceptions to these requirements must be made well in advance in writing by the student’s committee chair and approved by the Program Director and the Dean.
Students must submit to PhD Student Services **at least 15 days** before the scheduled date of defense:

- a signed Statement of Readiness for Proposal Defense form (found in Appendix III)
- an e-mail with the proposed dissertation title, date and time of defense, names of the committee members, and an abstract of no more than 100 words
- a copy of the final draft of the full dissertation proposal

After the proposal defense, the student is responsible for collecting faculty signatures and submitting the Dissertation Proposal Defense form to PhD Student Services.

**Advancement to Candidacy**

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

In accordance with University requirements, the total time to degree for all doctoral students will not exceed **nine calendar years** from the time of first enrollment. Doctoral students are expected to progress steadily toward their degree and to advance to candidacy within **six years** of enrollment in the program. **Failure to do so may result in termination from the program.**

**The Dissertation**

The doctoral dissertation is a critical element of advanced research-based education. A dissertation is expected to contribute significantly to new knowledge and understanding of the world in which we live. It builds on the best of what has been discovered and understood by scholars who came before, and it provides a foundation on which further inquiry and additional understanding can be built in the future. Occasionally, a dissertation results *de novo* from a blinding flash of original insight. However, most often a dissertation represents a logical extension of past work and demands that the author have a comprehensive understanding of prior work in the chosen field of inquiry. Thus, a substantial part of the effort of doing research and writing the dissertation is devoted to building and codifying that base of prior knowledge.

The Schar School expects its candidates’ doctoral dissertations to represent outstanding contributions to the base of scholarly inquiry relevant to biodefense. A candidate’s dissertation research should be significant to some biodefense issue of importance. Thus a marriage of scholarship and relevance is the hallmark of a good dissertation. A dissertation should incorporate the best professional practices related to style, format, referencing, graphics, and language. Publication is an appropriate goal of any dissertation, and candidates should write with that goal in mind. All Schar School students are required to submit their dissertations to the electronic Mason Archival Repository Service (MARS) in order to make their research available to the greater scholarly community.

Students working on dissertation research must register for a minimum of 3 credits of BIOD 999 per semester (excluding summers) until they have completed the minimum number of credits of 999 required by their degree program. Then, they must register for 1
credit of BIOD 999 per semester until the dissertation is complete. See the “Full Time Status of Graduate Students” section of the University Catalog for more information.

Registration for dissertation research (BIOD 999) must be completed by the end of the schedule adjustment period. Failing to register on time in a particular semester does not alter the requirement for continuous registration for 999.

Policies and procedures for the submission of the dissertation can be found on the University and Dissertation & Thesis Services (UDTS) website at http://library.gmu.edu/udts. It is critical that the PhD student fulfill the requirements prior to defending the dissertation.

**Oral Defense**

The candidate must defend the dissertation in public before the dissertation committee and members of the University community who wish to attend.

As with the dissertation proposal defense, candidates will contact PhD Student Services for a room and equipment reservation. Candidates must submit the following to PhD Student Services at least fifteen days before the scheduled date of defense:

- A signed Oral Dissertation Defense Readiness form (see Appendix II)
- An email including the dissertation title, date and time of defense, all committee members, and an abstract of NO MORE THAN 100 WORDS
- A copy of the final draft of dissertation

At the same time, the candidate must provide copies of the dissertation to all members of the dissertation committee. The candidate also must place a copy on reserve at the Gateway Library Reserve Desk so that it is available to the University community at least fifteen days before the scheduled oral defense. In scheduling the defense, it is the candidate’s responsibility to ensure that all members of the committee are available and will be present for the defense. This is especially important during the summer, as faculty members are not obliged to be available during summer session. Any requests for exceptions to these requirements must be made well in advance in writing by the student’s committee chair and approved by the Program Director and the Dean. Candidates must be registered for at least one credit of BIOD 999 during the semester in which they graduate. August graduates must register for summer session.

It is common for a committee to require revisions after a successful defense to accommodate both substantive improvements and editorial corrections. If the defense is successful, all members of the dissertation committee sign at least three copies of the signature sheet. Candidates can find a sample sheet on the University Dissertation & Thesis Services (UDTS) website:

http://library.gmu.edu/udts

The candidate must ensure that the signature sheet follows the formatting guidelines before presenting it to the committee for signatures. After a successful defense, the candidate must submit all copies of the signature sheets to PhD Student Services to obtain final approval from the Doctoral Program Director and Dean. If the defense is unsuccessful, the candidate may need
to revise the dissertation and schedule a new defense date with the committee. The decision to allow a second defense is at the discretion of the dissertation committee.

**Dissertation Format and Delivery of Final Copies**
Candidates are required to follow the University’s “Thesis, Dissertation, or Project Guide.” The University rigidly applies its requirements for format, graphics, style, and timeline. It is the responsibility of the candidate to follow the established guidelines, available on the web at:

http://library.gmu.edu/udts

The university requires a format review by the University Dissertation & Theses Services (UDTS) coordinator in Fenwick Library. The candidate should forward a copy of the dissertation to the Coordinator as soon as possible before the defense to allow time to make the necessary changes to the document. The Coordinator reviews the completed dissertation for compliance with the guidelines. The Coordinator does not assume responsibility for editing or putting the dissertation in final form, which is fully the responsibility of the candidate. UDTS is in Fenwick Library on the Fairfax Campus, MSN 2FL, telephone (703) 993-2222.

Once the candidate receives all necessary approvals, the dissertation must be submitted to the University under the mandatory Electronic Submission Policy and will be placed in the Mason Archival Repository Service (MARS). It is the candidate’s responsibility to review the dissertation submission information available online and to contact the UDTS Coordinator to understand the submission requirements. Please note that the School requires immediate availability of all Schar School dissertations. Schar School students and graduates do not have the option of placing an embargo on their work on MARS.

The candidate must deliver two unbound copies to PhD Student Services for the Schar School’s permanent collection. The candidate is also required to provide bound copies for each member of the dissertation committee.

**Intent to Graduate Form & Graduation Application**
At the beginning of the semester in which a candidate intends to graduate, the student must file an “Intent to Graduate” form on PatriotWeb at:

https://patriotweb.gmu.edu/

The current deadlines are available on the web at:

http://registrar.gmu.edu/graduation/

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Participation in Commencement/Convocation
Candidates who have qualified for graduation for the summer, fall, and spring semesters are invited to participate in the University’s commencement and the School’s convocation ceremonies. Information and dates relating to Commencement can be found at:

http://events.gmu.edu/commencement/

International Student Services

Visa Status
Each international student is responsible for having a current and valid visa. Students on F-1 and J-1 visas must maintain their full-time status, demonstrate appropriate financial resources, and remain in good academic standing. All visa-related issues are handled through the Office of International Programs and Services.

Office of International Programs and Services (OIPS)
OIPS provides advice on immigration matters, employment applications, taxation, Mason academic policies, cultural adjustment, and other practical issues. The office conducts an international student orientation each semester, organizes outings, arranges bi-weekly workshops on topics of interest, and co-sponsors International Week each spring.

To learn more, visit the Office of International Programs and Services located in Student Union Building I Addition, Fairfax Campus, Suite 4300, (703) 993-2970, http://oips.gmu.edu/. OIPS also holds office hours in Arlington. Please check the OIPS website for more information.

International Student Health Insurance
Health insurance is required for all F-1 and J-1 visa holders. Health insurance fees are deducted from all payments received by the University before funds are applied to tuition or other charges. Failure to make this payment may result in cancellation of classes. See the Health Insurance section for further information.

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University Services

Electronic Communication and Mason E-mail Accounts
Students are required to activate and access the e-mail account provided by the University. The University will communicate only via Mason e-mail accounts for registration, student accounts/billing, and financial aid. Students are responsible for the content of any communication sent to them by e-mail. Students may choose to have Mason e-mails forwarded directly to another account. Account setup instructions can be found at the MasonLive website:

http://masonlive.gmu.edu

Please note that the default setting for mail forwarding retains copies of e-mail on the Mason server. To avoid errors due to mailboxes being over quota, students should either regularly delete e-mail from their Mason account or, when setting up mail forwarding, students can choose to not save a copy of e-mails on the server. If students have any difficulties with this process, they should contact ITS at support@gmu.edu or by phone at (703) 993-8870.

Health Insurance
Students may purchase health insurance through Aetna Student Health. F-1 and J-1 visa students are automatically enrolled in the University’s plan. The deadline for an annual policy or for fall semester enrollment is September 15, 2016. George Mason University’s policy number is 724536. For additional information contact Student Health Services at (703) 993-2831 or visit the Student Health Services web site at: http://shs.gmu.edu/ or the Aetna Student Health website at:

http://www.aetnastudenthealth.com/schools/georgemason

Schar School Career Services
The Schar School offers comprehensive career service assistance for all current Schar School graduate students. Staff is available to help students review and revise resumes and cover letters, explore career goals, and identify employment opportunities. Through one-on-one meetings and regular workshops, Career Services provides students with the skills needed for a successful career search.

Career Services maintains an online job and internship database, Schar School CareersNow, which provides up-to-date listings of current positions and career events. Students who register for CareersNow can review job and internship positions, as well as connect with employers actively recruiting. For more information, please visit:

http://schar.gmu.edu/current-students/career-services/
In addition to Schar School CareersNow, students may also wish to Use Mason’s general job and internship database, HireMason [http://careers.gmu.edu/](http://careers.gmu.edu/), or to take advantage of Schar School’s LinkedIn group to maintain contact and network with faculty, fellow students, and alumni.

**Office of Disability Services**

As part of Mason’s continuing commitment to uphold the letter and spirit of the laws that ensure equal treatment of people with disabilities, the university established and maintains the Office of Disability Services (ODS). The mission of the ODS at Mason is to facilitate equal access for students with disabilities to university programs, events, and services. They do this by collaborating with students, faculty, staff, and community members to create diverse learning environments that are usable, equitable, inclusive, and sustainable. Students who believe they may be eligible for disability-related services should call ODS at (703) 993-2474 or visit the office on the Fairfax Campus in the Student Union Building (SUB) I, Room 2500, to find out what is needed to establish a file and receive services. Please see the ODS ebsite for more information:

[http://ods.gmu.edu/](http://ods.gmu.edu/)

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Program Administration, Policy and Procedures

The Schar School of Policy and Government administers the PhD program in Biodefense. Key individuals responsible for the administration of the program include:

Dean
Professor Mark J. Rozell
Associate Dean
Professor Ming Wan
Associate Dean
Professor Robert L. Dudley
Associate Dean for Academic Affairs
Professor Matthys K. van Schaik
PhD Program Director
Professor Gregory Koblentz
Assistant Dean for Graduate Program Management
Elizabeth Eck Olchowski
Director of PhD Student Services
Shannon Williams
Director of Career Development
Duane Bradshaw
Assistant Director of Career Development
Laura Hills
Director of Graduate Admissions
Travis Major
Academic Programs Coordinator
Erin Embrey

The PhD program core faculty is composed of tenured and tenure-track members of the Mason faculty whose primary affiliations are with the School. It also includes several members of the College of Humanities and Social Sciences (Departments of Psychology, Sociology, and History) and the School for Conflict Analysis and Resolution. A list of the core faculty may be found in Appendix I.

The program is administered by the Biodefense Doctoral Program Director and PhD Student Services. The Program Director takes the lead in proposing policy changes, and in chairing and appointing curriculum and admissions committees, making assistantship appointments, organizing comprehensive examinations, and making recommendations on dissertation committee membership to the Dean. PhD Student Services administers the program, including responding to information requests, communicating information about requirements and changes in status to students, and tracking application and graduation forms.

The Admissions Committee, chaired by the Biodefense Doctoral Program Director, will make determinations regarding admissions and the awarding of assistantships and fellowships. Decisions about whether each student has made adequate progress and may continue in the program will be made by the faculty annually.

The Advisor

Key to each student’s success in the program is close and continuing consultation with a member of the core faculty as advisor. This begins as soon as one enters the program. Initially, program administration assigns advisors based on students’ interests and on the need to balance the advising load among the faculty. Later the advisor typically is the faculty member who agrees to chair the student’s dissertation committee, and does not have to be the person originally assigned to the student. Students may change advisors with the agreement of both professors, provided all parties inform PhD Student Services in writing.

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The advisor helps determine the student’s schedule of classes for each semester, answers general questions about the program, and guides the student in selecting a specialty and defining a research orientation. The advisor is the first point of contact for problems that may arise. Students must consult their advisors before any program changes are made and keep the advisor up-to-date on decisions regarding the program. The advisor helps the student with research skill preparation as well as with the formation of the dissertation committee. In addition, the advisor serves as primary facilitator for the School’s evaluation of the student’s progress in the program. Because faculty advisors are advocates for their advisees, students should develop professional relationships with their advisors. It is to the student’s advantage to keep the advisor informed of progress and any special circumstances that arise.

**Degree Plan**

The Degree Plan states which courses the student is taking or has taken to fulfill his or her degree requirements. PhD students are strongly encouraged to submit their Degree Plan form periodically to both their advisor and PhD Student Services for review. The review is to ensure that the student is adhering to the requirements of the program. If a Reduction of Credits is to be applied, those credits should be included on the form. Degree Plan forms are available from PhD Student Services and are also available on the Schar School web page. Any changes in the plan must be documented with an amended Degree Plan form signed by the student’s advisor.

It is the student’s responsibility to be aware of the requirements of the PhD program and to adhere to those requirements.

**Class Locations and Times**

Courses are offered on the Fairfax and Arlington campuses, primarily Monday through Thursday, from 4:30pm-7:10pm or 7:20pm to 10:00pm. The Schar School also offers occasional classes online for students’ convenience. The School reserves the right to select the time and place of each class or seminar, within the limits set by general University policies and procedures.

**Credit for Prior Graduate Work**

The Doctoral Program Director may approve a maximum of 30 semester hours of relevant prior graduate work toward the PhD requirements. These hours must have been completed as part of a conferred master’s degree or equivalent. A maximum of 12 relevant credits taken at George Mason University while in Extended Studies may be transferred to the program with the approval of the Doctoral Program Director. Any Extended Studies credits granted will be included in the 30 semester hours.

Students should meet with Shannon Williams, Director of PhD Student Services, to discuss any reduction of credit. **This should be done in the first semester to ensure appropriate course choices.** Students and their advisors will make recommendations to the director as to how many credits should be accepted and toward which requirements they will be counted. Advisors should consider both the subject and quality of the course requirements and the quality of the student performance in the course in making decisions about prior work. Students must provide
their advisors with catalog copy and syllabi for the courses they wish to have considered for prior credit. University standards for prior course credits are described in the University Catalog.

**Credit Residency Requirement**

Biodefense doctoral program students must complete a minimum of 42 hours of graduate work after admission to degree status. **Students must register with the University for every semester (excluding summers) until they have completed all degree requirements.** Students who fail to do so will be dropped from the program.

**Registration**

Before the beginning of each semester, students should consult with their advisors regarding course registration for the upcoming semester. Registration is the responsibility of the student. Registration for most classes takes place electronically through PatriotWeb:

https://patriotweb.gmu.edu

**BIOD 996—Directed Readings and Research**

Prerequisites: 15 credits of GOVT and BIOD courses at 500 level and above, and permission of instructor.

Directed readings courses may have 1 to 3 credits. **A maximum of 6 credits of directed readings courses may be counted toward degree requirements.** Students wishing to pursue directed readings courses in areas not covered by regular course offerings should contact PhD Student Services. The student must assign a course title and have the faculty member directing the readings approve the course (e-mail approval is acceptable). A course outline of topics to be covered and a preliminary bibliography is required, as well as a statement on evaluation procedures for the course.

**Time Limit**

For both full-time and part-time students enrolled in Mason doctoral programs, whether entry is post-baccalaureate or post-master’s, the total time to degree will not exceed nine calendar years from the time of first enrollment as a doctoral student. Doctoral students are expected to progress steadily toward their degree and to advance to candidacy within no more than six years.

**Expected Learning Outcomes**

Graduates from the program will demonstrate superior academic skills in the field of biodefense. They will complete introductory courses in the foundations of the field and then develop a major specialization from among the sub-fields of International Security, Terrorism, and Homeland Security, and Technology and Weapons of Mass Destruction.

By the time students reach candidacy, they are expected to possess the quantitative and/or qualitative skills to design an original research project for their doctoral dissertation. All dissertations satisfying the requirements for graduation will make an independent scholarly
contribution to the field of biodefense. Students are required to present their research findings in both written and oral formats.

**Evaluations**

Beginning at the end of the student’s first year, the program faculty conducts an annual review to evaluate the individual’s suitability to continue in the program. Satisfactory performance in a doctoral degree program incorporates much more than achieving passing grades in designated courses and successfully completing examinations. The faculty is concerned particularly with the capability of students to conduct individual scholarly inquiry, to communicate their work effectively, and to serve as members of the professional community. Timely progress in the program is also a critical element in assessing continuation. Periodic student evaluations take all these factors into consideration. The School, at its sole discretion, may terminate a student from the program for any reason whatsoever.

In addition to the annual review, at the time of the qualifying examination, the faculty evaluates whether students should be encouraged to continue the pursuit of a doctoral degree. Many factors are examined such as GPA, academic performance, and the capability of the student to successfully complete a dissertation. Either the Doctoral Program Director or the student’s advisor conveys the results of the evaluation to each student. For students making good academic progress and fulfilling all requirements in a satisfactory manner, the formal evaluation is typically pro forma in character.

It is the responsibility of each student’s faculty advisor to represent his/her student in the faculty discussion of student progress. Students should keep their advisors informed of progress or areas of concern.

**Termination**

The student may be terminated from the program if the faculty feels the student has not made sufficient progress or has major academic deficiencies. The following is a list of reasons that will lead to a student’s automatic termination from the program:

- Receiving a grade of F in a single graduate level course.
- Receiving a grade of B- or below in two or more courses.
- Receiving a grade of B- or below in a single core course after the second attempt.
- Plagiarizing on the Comprehensive Qualifying Examination, Dissertation Proposal, or Dissertation.
- Failing the Comprehensive Qualifying Examination after the second attempt.

A student who is terminated from the program will receive written notification from the Doctoral Program Director. The termination is effective upon receipt of this notification. The notation of academic termination is affixed to the graduate student’s official record.

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**Appeals of Termination**

A student who is terminated from the program for any reason other than an automatic termination described above may appeal the decision to the Dean. This appeal must be in writing and must be received within 30 calendar days of the date on the notice of termination.

The Dean of the School may appoint a committee to review the appeal. This committee will make a recommendation concerning the appeal, and the Dean will make a final determination. This determination cannot be appealed.

There is no appeal of academic termination from the program if such action is an automatic termination that results from a student’s failure to meet the above stated requirements. However, students are entitled to an appeal of the grade that led to the termination.

**Grade Appeals**

Although the individual faculty member is the best judge of student performance, there may be instances when a student disagrees with a grade or other evaluation. In such cases, the student first must ask the faculty member concerned to reconsider the grade. If the student is not satisfied, a written request for review may be made to the Dean. This request must be submitted prior to the end of the drop period of the next regular session, excluding summer. The Dean may dismiss the appeal as being without merit; uphold the appeal and issue a change of grade; or appoint a committee to review the appeal. This committee will make a recommendation concerning the appeal, and the Dean will make a final determination, which cannot be appealed. Grading of the comprehensive qualifying exam is not subject to appeal.

**Drops/Withdrawals**

Students may be dropped from the program for failure to do any of the following:

- Carry a sufficient credit load
- Meet continuous registration requirements
- Take the comprehensive qualifying examination in the required timeframe
- Resolve incomplete grades in a timely manner
- Meet conditions of provisional admission status.

Students may submit a written request to withdraw from the program to the Doctoral Program Director, who will make a recommendation to the Dean. Requests for nonacademic reasons are generally accepted. The Dean reserves the right to reject any withdrawal, particularly when the student’s academic performance is in question.

Students who were terminated or have withdrawn are not permitted to enroll in any classes at George Mason University unless the Dean approves their written request for reinstatement. The Dean reserves the right to deny this request, to send this request to the Admissions Committee for re-evaluation, or to place conditions upon reinstatement. Such conditions may include, but are not limited to, resolution of outstanding incomplete coursework, completion of specified courses, achievement of specified grades in coursework, or meeting deadlines for taking required examinations. The Dean may also require that students meet the requirements of the Student Handbook in effect at the time of reinstatement.

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Leave of Absence

The Schar School does not grant a formal leave of absence from the Biodefense PhD program. Students who wish to take leave from the program should write the Doctoral Program Director beforehand, explaining their circumstances. The School will evaluate each student’s situation when the student wishes to re-enroll (see below). Should a student need to withdraw mid-semester, it is critical either to complete courses or go through formal withdrawal procedures so that future enrollment may be possible.

Re-Enrollment Procedures

A student who has failed to enroll in at least one credit of coursework for two or more consecutive semesters (not including summer) at George Mason University must obtain permission to re-enroll in the program. The student should complete and submit a Graduate Re-Enrollment form to PhD Student Services. This form is available on the Registrar’s website at http://registrar.gmu.edu. The Doctoral Program Director, the student’s advisor and, when necessary, the Admissions Committee, will conduct a review of the student’s file for any academic deficiencies. If they grant the student permission to re-enroll, they will send notification to the Registrar’s Office.

Courses at Other Institutions

After matriculation, students may take a maximum of 12 credits at other accredited institutions. The School must approve such coursework in advance. A student seeking approval should provide the Doctoral Program Director with a written request that includes a copy of the catalog description of the course, a syllabus for the course (or a list of topics covered in it), identification of the text(s) used in the course, and written approval of the student’s advisor/chair. Courses taken at any member institution of the Consortium of Universities of the Washington Metropolitan Area may be billed at Mason tuition rates.

The Honor Code and Professional Conduct

Mason operates under an honor system that has existed in the Commonwealth of Virginia for over 150 years. Students are responsible for understanding the provisions of the code that is described in detail in the George Mason University Catalog. The Mason Honor Code is as follows:

To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code: Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.

PhD studies go hand-in-hand with participation in an academic community, and students who pursue the degree must understand and uphold the norms and values of that community. The Doctoral Program is a rigorous intellectual endeavor. Students can expect the Schar School and the University to hold them to the highest standard of scholarly conduct. Students should familiarize themselves with the “Statement of Professional Ethics” and “Statement on
Plagiarism” adopted the American Association of University Professors. These statements are incorporated in the GMU Faculty Handbook, which is available on the Mason website:

http://www.gmu.edu/facstaff/handbook

As members of the academic community, students are held to these standards of professional conduct. Should disagreements between students or between a student and faculty member arise, every effort should be made to resolve these differences in a collegial manner. If this is not possible, students are responsible for taking the initiative to consult with their advisors, the Program Director, and then the Dean to discuss their concerns.

**The Schar School Policy on Plagiarism**

The profession of scholarship and the intellectual life of a university depend fundamentally on a foundation of trust. Thus, any act of plagiarism strikes at the heart of the meaning of the University and the purpose of the Schar School of Policy and Government. It constitutes a serious breach of professional ethics and it is unacceptable. Plagiarism is the use of another’s words or ideas presented as one’s own. It includes, among other things, the use of specific words, ideas, or frameworks that are the product of another’s work. Honesty and thoroughness in citing sources is essential to professional accountability and personal responsibility. Appropriate citation is necessary so that arguments, evidence, and claims can be critically examined.

Plagiarism is wrong because of the injustice it does to the person whose ideas are stolen. But it is also wrong because it constitutes lying to one’s professional colleagues. From a prudential perspective, it is shortsighted and self-defeating, and it can ruin a professional career.

The faculty of the Schar School of Policy and Government takes plagiarism seriously and has adopted a zero-tolerance policy. Cases of suspected plagiarism are referred to the Office of Academic Integrity and may lead to termination from the program. This termination will be noted on the student’s transcript. For foreign students who are on a university-sponsored visa (eg. F-1, J-1 or J-2), termination also results in the revocation of their visa.

To help enforce the Schar School policy on plagiarism, all written work submitted in partial fulfillment of course or degree requirements must be available in electronic form so that it can be compared with electronic databases, as well as submitted to commercial services to which the School subscribes. Faculty may at any time submit a student’s work without prior permission from the student. Individual instructors may require that written work be submitted in electronic as well as printed form. The Schar School policy on plagiarism is supplementary to the George Mason University Honor Code; it is not intended to replace it or substitute for it.

http://oai.gmu.edu/the-mason-honor-code-2/
Use of Editors
Schar School doctoral students are permitted to use copy editors for the sole purpose of formatting dissertations according to Fenwick Library requirements. Outside editors may not be used for a draft dissertation prior to the defense.

Conference Support
The Schar School may award student research grants for dissertation research (e.g., expenses associated with original data collection), presentation of a paper at a discipline-appropriate conference, and other expenses related to their doctoral studies. In order to apply for funds, a student must submit a written proposal, supporting documentation, a budget, and approval from advisor or chair. The advisor or chair should email the Assistant Dean for Graduate Program Management to indicate support for the conference as a means to move the student forward toward dissertation completion. Additional steps may be required. The student must submit all materials and have them approved prior to purchase and travel. Applications are considered on a case-by-case basis throughout the year. Details about the application process are available on the Schar School website.

Human Subjects Research
All researchers must receive written approval from Mason’s Office of Research Integrity and Assurance (ORIA) prior to conducting a research project involving human subjects. Ethical review of projects will be conducted either by ORIA staff or by members of the Institutional Review Board (IRB), a committee composed of faculty, staff, and community members who are trained in issues related to protecting human participants in research. Please see the ORIA website for more information:

http://oria.gmu.edu/

Educational Travel
Students pursuing independently arranged international educational travel experiences such as internships, independent study, service learning, or dissertation research must:

1. Register travel through the Mason Abroad Travel Registration System
2. Sign and file Acknowledgement of Risks and Medical Consent Form
3. Attend any required orientations
4. Pay applicable tuition, administrative, and program fees, if any
5. Comply with policies and procedures regarding academic advising
6. Abide by applicable University regulations and policies, including but not limited to the University Catalog, the Code of Student Conduct, and University drug and alcohol policies
7. Students must purchase the University-approved travel insurance for the duration of the international educational travel

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Guidelines for Graduate Certificate Programs
The Biodefense graduate program offers four, fifteen credit graduate certificates listed below. Each certificate has a specialized focus within the field of security studies. The certificates require two core courses and three electives.

Selecting Electives
Electives for your certificate will be selected in consultation with your assigned advisor. You must turn in your approved Degree Plan to PhD Student Services to receive credit for the electives you plan to take. Electives that have not been approved by your advisor will not count towards the certificate.

Declaring Certificate as a Secondary Program
Students pursuing a certificate as a secondary program to the PhD must be admitted to the graduate certificate program at least one semester before completion of certificate requirements. Students may be enrolled in one graduate certificate program while they pursue a master’s or doctoral degree.

Transferring Certificate Credits to PhD
Students who have completed a Biodefense Program graduate certificate may subsequently be approved to apply the credit hours for the certificate to the PhD as long as the courses for the certificate were taken within six years of official enrollment into the PhD degree program. All 15 credits will transfer into the PhD Biodefense program.

Time Limit
The time limit for completion is six years from the date of admission to the graduate certificate program. International students attending in F-1 or J-1 status have more restrictive time limits; contact the Office of International Programs and Services for information. The time limit is not extended because of an absence and subsequent re-enrollment into the graduate certificate program. Failure to meet the time limit or to secure an extension request may result in termination from the program.

Terrorism and Homeland Security Certificate
The certificate in terrorism and homeland security is an interdisciplinary introduction to the phenomenon of modern terrorism and its implications for US domestic and foreign policy. It focuses on multidisciplinary analysis and holistic cross-sectorial approaches to long-term prevention of and response to terrorism.

Global Health & Security Certificate
The certificate in global health and security provides an introduction to the intersection of global public health and security, covering topics such as emerging infectious diseases, biosurveillance, the development of vaccines, and emergency response to public health disasters.

Science, Technology, and Security Certificate
The certificate in science, technology, and security provides an introduction to the intersection of science and security, covering topics such as the technology of CBRN weapons, proliferation, technical countermeasures, and the role of science and technology in the policy making process.
**Biodefense Certificate**
The certificate in biodefense provides an interdisciplinary introduction to manmade and natural biological threats, including a background in the science and technology of biodefense and the specialized areas of threat assessment, non-proliferation and medical and public health preparedness.

**Social Media**
The Biodefense Program has a strong internet presence, and all students are encouraged to connect and engage with the program online.

**Mason Biodefense Blog**: The blog is a compendium of all that the program does – on it you’ll find everything from analysis of current biodefense-related world news to copies of the most recent student publications. With content updated daily and the weekly Pandora Report, we encourage you to check it out and contribute!

⇒ PandoraReport.org

**Pandemics, Bioterrorism, and Global Health Security on LinkedIn**: With members range from current students to professionals well-established in the field, we strongly encourage you join and start interacting.

⇒ Pandemics, Bioterrorism, and Global Health Security LinkedIn Group

**Mason Biodefense Facebook Page**: We post everything from School news to job and internship opportunities. Like us and never miss another zombie apocalypse article again.

⇒ Facebook.com/gmu.biodefense

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Appendix I: Schar School Faculty

Schar School Faculty and Their Research
(may chair a doctoral committee or serve as a primary member)

Alan J. Abramson, Professor; Ph.D., Political Science, Yale University, 1990.
Nonprofit organizations; philanthropy; social entrepreneurship; collaborative governance.

Zoltan J. Acs, University Professor; Ph.D., Economics, The New School, 1980.
Entrepreneurship; philanthropy; digital economy; digital governance; digital citizenship.

Mark Addleson, Associate Professor; Ph.D., Management Economics, Graduate School of Business, University of Witwatersrand, 1993.
Organizational change; knowledge management; knowledge work; work practices; organizational networks; methodology of social inquiry; Austrian economics.

Katrin B. Anacker, Associate Professor; Ph.D., City and Regional Planning, The Ohio State University, 2006.
Housing; housing policy; urban policy; race and public policy; real estate markets; statistical methods; qualitative methods; research writing.

Enrique Desmond Arias, Associate Professor and Director, Peace Operations Program; Ph.D., Political Science, University of Wisconsin-Madison, 2001.
Armed actors and governance; comparative politics; criminal organizations and conflict; drug trafficking; extortion, corruption, and racketeering; policing; democratization; Latin America; research methods in violent settings.

Philip E. Auerswald, Associate Professor; Ph.D., Economics, University of Washington, 1999.
Entrepreneurship; innovation; global development.

Peter J. Balint, Professor of Environmental Policy; Ph.D., Policy Studies, University of Maryland, 2000.
Environmental policy; community-based conservation; natural resource management; ‘wicked’ environmental problems.

Jo-Marie Burt, Associate Professor; Ph.D., Political Science, Columbia University, 1999.
Comparative politics; Latin America; state-society relations; political violence; human rights; transitional justice.

Ahsan I. Butt, Assistant Professor; Ph.D., Political Science, University of Chicago, 2012.
Ethnicity and nationalism; international security; international relations theory; South Asia.
Kenneth J. Button, University Professor; Ph.D., Economics, Loughborough University, 1981. Transportation economics; transport planning; economics of privatization and regulation; environmental economics; regional economics; urban economics.

Terry L. Clower, Northern Virginia Chair and Professor of Public Policy; Ph.D., Information Sciences, University of North Texas, 1997. Regional economic development; economic and fiscal impact analysis; transportation; labor market analysis; land use planning; housing markets and policies; commercial development; community development; economic and demographic forecasting.

James K. Conant, Professor; Ph.D., Political Science, University of Wisconsin-Madison, 1983. Public administration; public budgeting; homeland security; environmental politics, policy, and administration.

Timothy J. Conlan, University Professor; Ph.D., Government, Harvard University, 1982. Federalism; intergovernmental relations; public policy making; Congress.

Desmond Dinan, Professor of Public Policy, ad personam Jean Monnet Chair; Ph.D., Modern European History, National University of Ireland, 1985. Global governance; European Union governance and institutions, history, and historiography.

Robert L. Dudley, Professor, Associate Dean; Ph.D., Political Science, Northern Illinois University, 1980. Judicial behavior; decision-making; legal processes and public policy.

Colin Dueck, Professor; Ph.D., Political Science, Princeton University, 2001. U.S. foreign policy; international relations; American defense policy; international security.

John S. Earle, Professor of Public Policy and Economics; Ph.D., Economics, Stanford University, 1988. Labor economics and policies; human resource practices; transition; development; corporate governance and firm performance; reallocation; industry dynamics; entrepreneurship; inequality; globalization; growth and finance; political economy; institutional economics; comparative analysis of economic policies and systems; microeconometrics; program evaluation.

Stephen S. Fuller, Dwight Schar Faculty Chair and University Professor of Public Policy and Regional Development; Ph.D., Regional Planning and Economic Development, Cornell University, 1969. Regional economic development; urban development; housing; urban planning; demographics; the Washington area’s development; economic analysis; labor force; forecasting – population, income, employment, real estate development; economic and fiscal impact analyses; economic development in developing countries.

Justin Gest, Assistant Professor of Public Policy; Ph.D., Government, London School of Economics and Political Science, 2010.
Comparative politics; immigration and citizenship; minority political behavior; Muslim politics; Western Europe; qualitative and multi-method inquiry.

**Jonathan L. Gifford**, Professor of Public Policy; Ph.D., Civil Engineering (Transportation), University of California-Berkeley, 1983. Transportation public-private partnership policy; transportation policy, planning and finance; infrastructure policy, planning and finance; urban and metropolitan planning and land use; technology standards and public policy; transportation and regional development policy; freight transportation in megaregions; transportation governance; infrastructure banks.

**Jack A. Goldstone**, Virginia E. Hazel and John T. Hazel, Jr. Professor of Public Policy; Ph.D., Sociology, Harvard University, 1981. Revolutions and social protest; democratization; state failure and reconstruction; global economic history and long-term economic growth; impact of global demographic change on security.

**Bassam Haddad**, Associate Professor; Ph.D., Political Science, Georgetown University, 2002. Comparative politics; political economy; Middle East politics.

**David M. Hart**, Professor of Public Policy; Ph.D., Political Science, Massachusetts Institute of Technology, 1995. Science and technology policy; U.S. public policy process; U.S. policy history, especially business, economic, and political history; international migration; entrepreneurship; manufacturing policy; energy innovation policy.

**Andrew Hughes Hallett**, University Professor of Public Policy and Economics; D.Phil., Economics, University of Oxford (Nuffield College), 1976. Open economy macroeconomics; policy coordination and exchange rate management; monetary integration (monetary and fiscal union in Europe); political economy models; fiscal policy; monetary policy; regionalism; economic policy and institutional design; dynamic games and bargaining; risk and decisions under uncertainty; commodity markets, financial policy.

**Michael Hunzeker**, Assistant Professor; Ph.D., Public and International Affairs, Princeton University, 2013. International security; military innovation; conflict termination.

**Mark N. Katz**, Professor; Ph.D., Political Science, Massachusetts Institute of Technology, 1982. Comparative politics; revolution; Russian politics and foreign policy; war and terror.

**Gregory Koblentz**, Associate Professor and Director of Biodefense Graduate Program; Ph.D., Political Science, Massachusetts Institute of Technology, 2004. International security; biological warfare; nuclear proliferation; terrorism.

**Naoru Koizumi**, Associate Professor and Director of Research; Ph.D., Environmental and Preventative Medicine, Hyogo College of Medicine, Japan, 2005, and Ph.D., Regional Science, University of Pennsylvania, 2002.
Applications of quantitative modeling and Geographic Information Systems (GIS) in health and environmental policy research.

**Siona Robin Listokin-Smith**, Associate Professor; Ph.D., Business and Public Policy, University of California-Berkeley, 2007. 
Public finance; political economy; corporate social responsibility; corporate governance; retirement and welfare policy.

**Mariely Lopez-Santana**, Associate Professor; Ph.D., Political Science, University of Michigan, 2006. 
Comparative politics; comparative welfare states; comparative federalism (including decentralization and devolution); Europeanization; new modes of governance.

**Stuart S. Malawer**, Distinguished Service Professor of Law & International Trade; Ph.D., International Relations, University of Pennsylvania, 1976; Diploma, Hague Academy of International Law (Research Centre for International Law & International Relations), 1971; J.D., Cornell Law School, 1967. 
U.S. trade law; U.S. & global trade politics; international trade relations; World Trade Organization; national security law & policy.

**Peter Mandaville**, Professor; Ph.D., Political Science, University of Kent at Canterbury, 1999. 
International relations; political Islam.

**John Marvel**, Assistant Professor; Ph.D., Public Administration, American University, 2012. 
Public management issues; public sector work motivation; manager-employee relationships.

**Jeremy D. Mayer**, Associate Professor; Ph.D., Political Science, Georgetown University, 1996. 
Public opinion; racial politics; foreign policy; presidential elections; media politics.

**Eric M. McGlinchey**, Associate Professor; Ph.D., Political Science, Princeton University, 2003. 
Comparative politics; Eurasian politics; international political economy.

**Robert J. McGrath**, Assistant Professor; Ph.D., Political Science, University of Iowa, 2011. 
American institutions; state politics and policy; health policy, political methodology.

**Connie L. McNeely**, Professor of Public Policy; Ph.D., Sociology, Stanford University, 1990. 
Culture; science and technology policy; globalization and international development; complex organizations and institutional analysis; comparative education; stratification and inequality; social theory.

**Char R. Miller**, Associate Professor; Ph.D., Johns Hopkins, 1999. 
Ancient and contemporary political theory; political culture; violence and discipline.

**Sonia Ben Ouaghrham-Gormley**, Associate Professor; Ph.D., Development Economics, School of Advanced Social Sciences, Paris, 1999.
International security; arms control and nonproliferation; WMD terrorism; illicit trade; former Soviet States; biological weapons threats; biodefense and biosecurity; science and technology; emerging technologies and security.

James P. Pfiffner, University Professor; Ph.D., Political Science, Wisconsin-Madison, 1975. The presidency; Congress; national security policy process; intelligence; public administration.

Anh Pham, Assistant Professor; Ph.D., Economics, University of California-San Diego, 2015. Taxation; firm behavior; developing countries.

Paul L. Posner, Professor and Director, Master of Public Administration Program; Ph.D., Political Science, Columbia University, 1995. Political science; public policy process; intergovernmental management; budgeting; tax policy.

Priscilla M. Regan, Professor; Ph.D., Political Science, Cornell University, 1981. Privacy and surveillance; public policy process; information and communication technologies; e-government.

Kenneth A. Reinert, Professor of Public Policy and Director, International Commerce and Policy Program; Ph.D., Economics, University of Maryland, 1988. International trade policy; international development policy; economic globalization.

Edward Rhodes, Professor of Government and International Affairs; Ph.D., Public and International Affairs, Princeton University, 1985. International relations; international security; US national security policy; US foreign policy; US naval strategy and force posture; American isolationism; identity and foreign policy.

Hilton L. Root, Professor of Public Policy; Ph.D., Economics and History, University of Michigan, 1983. International economics; international finance; international development; developing nations; political economy of the design and implementation of development policy; economic policy reform; North-South relations; Asian-Pacific affairs; the sciences of complexity and institutional change.

Mark J. Rozell, Dean and Ruth D. and John T. Hazel Chair in Public Policy; Ph.D., American Government, University of Virginia, 1987. The presidency and separation of powers; religion and politics; media and politics.


Matthew Scherer, Assistant Professor; Ph.D., Political Science, Johns Hopkins University, 2007. Political theory; religion and politics; constitutional law.
Laurie A. Schintler, Associate Professor of Public Policy and Director, Transportation Policy, Operations, and Logistics Program; Ph.D., Urban and Regional Planning, University of Illinois at Urbana-Champaign, 1995.
“Big Data” and network analysis; critical infrastructure; transportation; quantitative methods; regional development; Geographic Information Systems (GIS); network analysis; housing market; science and innovation policy.

Louise Shelley, Omer L. and Nancy Hirst Endowed Chair and University Professor of Public Policy; Ph.D., Sociology, University of Pennsylvania, 1977.
Transnational crime; terrorism; corruption; human trafficking and smuggling; illicit trade; sustainability; Soviet successor states.

J.P. Singh, Professor; Ph.D., Political Economy and Public Policy, University of Southern California, 1995.
International trade; development; cultural policy.

Sita Nataraj Slavov, Professor of Public Policy and Director, Public Policy Doctoral Program; Ph.D., Economics, Stanford University, 2003.
Public finance; economics of aging; retirement policy; Social Security and Medicare; tax policy; economic analysis of political processes.

Hugh T. Sockett, Professor; Ph.D., Philosophy of Education, University of London, 1974.
Virtue ethics; political theory; democracy and education.

Rainer Sommer, Associate Professor of Public Policy and Enterprise Engineering; Ph.D., Software Engineering, Columbia Pacific University, 1991, and Information Technology, George Mason University, 1998.
Enterprise business systems; enterprise engineering; strategic planning; change management.

Roger R. Stough, University Professor of Public Policy; Ph.D., Geography and Environmental Engineering, Johns Hopkins University, 1978.
Modeling and policy in regional economic development, transport, information technology and entrepreneurship.

Jessica N. Terman, Assistant Professor, Ph.D., Public Administration, Florida State University, 2012.
Contracting-out/public procurement; state/local government administration; bureaucratic policymaking and behavior; rule making.

Tojo J. Thatchenkery, Professor of Organization Development and Director, Organization Development & Knowledge Management Program; Ph.D., Organizational Behavior, Case Western Reserve University, 1994.
Enhancing innovation and entrepreneurship using Appreciative Intelligence; creating knowledge-sharing organizational culture; change management; organizational transformation; quiet leadership; diversity and Asian American glass ceiling.
A. Trevor Thrall, Associate Professor of International Security; Ph.D, Political Science, Massachusetts Institute of Technology, 1996.
International security; US national security policy; political communication; public opinion on foreign policy and war.

Stefan Toepler, Associate Professor; Ph.D., Business and Economics, Free University of Berlin, 1995.
Nonprofit management and policy; philanthropy; NGOs and global civil society; NGO/Government relationships; arts and cultural policy.

Toni-Michelle C. Travis, Professor of Political Science; Ph.D., Political Science, University of Chicago, 1983.
Race and gender issues in political participation; public administration; urban politics.

Jennifer N. Victor, Associate Professor and Director of Undergraduate Programs; Ph.D., Political Science, Washington University in St. Louis, 2003.
Legislative politics; political networks; quantitative analysis.

Ming Wan, Professor, Associate Dean and Director of Political Science Graduate Studies; Ph.D., Political Science, Harvard University, 1993.
International political economy; Chinese foreign policy, Sino-Japanese relations; Asian Pacific region.

Anne L. Washington, Assistant Professor of Public Policy; Ph.D., Information Systems and Technology Management, The George Washington University, 2011.
American government and politics; Congress; information policy; eGovernment/Gov 2.0; human-computer interaction; information retrieval; knowledge management; legislative studies; qualitative methods; social theory; technology management; analytics; data science; transparency.

Janine R. Wedel, University Professor; Ph.D., Anthropology, University of California-Berkeley, 1985.
Shadow and influence elites; anthropology of policy; governance and privatization of policy; corruption and the state; accountability; social networks; Central and Eastern Europe; foreign aid.

Edmund J. Zolnik, Associate Professor; Ph.D., Economic Geography, University of Connecticut, 2004.
Safe/sustainable transportation; community/regional development; multilevel modeling.
Selected Affiliated Faculty

Kevin Avruch, Henry Hart Price Professor of Conflict Resolution, Professor of Anthropology and Dean, School for Conflict Analysis and Resolution, School for Conflict Analysis and Resolution; Ph.D., University of California, San Diego, 1978.

Gregory A. Guagnano, Associate Professor of Sociology; Department of Sociology and Anthropology; Ph.D., University of California-Davis, 1986.

Hugh Heclo, Robinson Professor; Ph.D., Political Science, Yale University, 1970.

John Paden, Robinson Professor of International Studies; Ph.D., Harvard University, 1968.

Steven Pearlstein, Robinson Professor; BA Trinity College, 1973.

Joseph A. Scimecca, Professor of Sociology; Department of Sociology and Anthropology; Ph.D., New York University, 1972.

Martin Jay Sherwin, University Professor of History; Department of History and Art History; Ph.D., University of California-Los Angeles, 1971.
**Instructional, Research, and Administrative Faculty**

(Staff serve on committees but not as chair or primary member)

**James N. Burroughs**, Term Assistant Professor; J.D., College of William and Mary, 1981.

**Delton T. Daigle**, Term Assistant Professor; Ph.D., Political Science, Ohio State University, 2010.


**Michael V. Hayden**, Distinguished Visiting Professor; M.A., Duquesne University, 1969.

**Todd M. La Porte**, Term Associate Professor; Ph.D., Political Science, Yale University, 1989.

**Arnauld Nicogossian**, Distinguished Research Professor; M.D., Tehran University, 1964; Internal Medicine and Pulmonary Medicine Fellowship, Mount Sinai Medical Center/Elmhurst City Hospital, NY; Board Certified Preventive Medicine/Aerospace Medicine, 1973.

**Charles Robb**, Distinguished Professor of Law and Public Policy; J.D., University of Virginia, 1973.

**Bill Schneider**, Professor of Public Policy and Public and International Affairs; Ph.D., Harvard University, 1972.

**Frank Shafroth**, Research Professor; J.D., Georgetown University, 1984.

**Jessica Srikantia**, Term Associate Professor; Ph.D., Psychology and the Conceptual Foundations of Science, The University of Chicago, 2005.

**Bonnie Stabile**, Research Assistant Professor and Director, Master of Public Policy Program; Ph.D., Public Policy, George Mason University, 2006.

**Laura Walker**, Term Assistant Professor; J.D., University of Toledo College of Law, 1977, and Ph.D., Public Policy, George Mason University, 2012.

**David C. Williams**, Distinguished Visiting Professor; M.Ed., University of Illinois at Urbana-Champaign, 1973.

**Matthys van Schaik**, Associate Dean for Academic Affairs, Ph.D., University of South Carolina, 1995.
Appendix II: Biodefense Faculty

Full-Time Faculty

Gregory D. Koblentz is Associate Professor in the Schar School and Director of the Biodefense Graduate Program at George Mason University. Dr. Koblentz is also a member of the Scientist Working Group on Chemical and Biological Weapons at the Center for Arms Control and Non-Proliferation. His research and teaching focus on international security, terrorism, homeland security, and weapons of mass destruction. He received his Master in Public Policy from the John F. Kennedy School of Government at Harvard University and his PhD in Political Science from the Security Studies Program at the Massachusetts Institute of Technology.

Sonia Ben Ouagrham-Gormley is Associate Professor in the Schar School. Previously, she was a Senior Project Manager for the Center for Nonproliferation Studies and Editor-in-Chief of the NIS Export Control Observer. From 2002-2005 she conducted a study of the Anti-Plague System of Central Asia and the Caucasus. Dr. Ben Ouagrham-Gormley's main research interests are export controls and weapons of mass destruction (WMD)-related trafficking in the former Soviet Union, the role of tacit knowledge in the transfer of bioweapons knowledge, conversion of former biological and chemical facilities, and proliferation financing. She received her PhD in Economics of Development at the Advanced School of Social Sciences in Paris, France.

Arnauld Nicogossian is a Distinguished Research Professor and Director of the Center for Study of International Medical Policies and Practices in the Schar School. He is also the Director of Public Policy for the International Society of Microbial Resistance (ISMR) and a member of the National American Red Cross Advisory Committee. Dr. Nicogossian served as the National Aeronautics and Space Administration (NASA) Associate Administrator for Life and Microgravity Sciences, Designate Agency Health and safety official, Chief Medical Officer and Senior Advisor for Health Affairs. Dr. Nicogossian is a Diplomat of the American Board of Preventive Medicine (Aerospace). He holds a Masters in Science degree from Ohio State University and is licensed to practice medicine in the State of Virginia. His research interests include program management, strategic planning and execution of research and technology development, health and medical policy analysis and evaluation, global public health, aerospace medicine, and internal medicine.

Bonnie Stabile is a Research Assistant Professor in the Schar School where she also serves as Assistant Director of the Center for the Study of International Medical Policies and Practices. Professor Stabile serves as Deputy Editor of World Medical & Health Policy and has served as a manuscript reviewer for other journals including the Review of Policy Research and the Journal of Health Politics, Policy and Law. Professor Stabile’s research interests include the ethical and policy dilemmas posed by the use of advanced technologies at the beginning and end of life; and the potential of policy analysis and program evaluation to improve policy outcomes. Professor Stabile’s federal government work experience includes acting as Installation Coordinator of a U.S. Army post in Amberg, Germany, and as a Program Analyst for the Federal Home Loan
Bank Board. From 1989-1993 she was Program Coordinator of the Senior Managers in Government Program at the John F. Kennedy School of Government at Harvard University.

Trevor Thrall is Associate Professor in the Schar School of Policy and Government. He teaches courses in international security, political communication, and US military intervention. His recently edited book, *American Foreign Policy and the Politics of Fear: Threat Inflation since 9/11* (Routledge 2009), examined why and how the Bush administration was able to build public support for the war in Iraq in 2003. The companion volume to that work, *Why Did the United States Invade Iraq?* (Routledge 2011), collects competing explanations about why the administration decided to go to war in the first place. Prior to arriving at Mason, Dr. Thrall was an associate professor at the University of Michigan-Dearborn where he directed the Master of Public Policy and Master of Public Administration programs. He received his PhD in Political Science from the Massachusetts Institute of Technology.

**Adjunct Faculty**

Charles Blair is the Senior Fellow on State and Non-State Threats at the Federation of American Scientists (FAS) and an adjunct professor at Mason, where he lectures on the nexus of terrorism and WMD. Since the 1980s, Mr. Blair has worked on issues relating to the diffusion and diversification of WMD in the context of proliferation amid the rise of mass casualty terrorism incidents and the centripetal and centrifugal elements of globalization. Mr. Blair’s work focuses on state and violent non-state actors – amid a dystopic and increasingly tribal world. Before joining FAS in 2010, he was a research associate with the National Consortium for the Study of Terrorism and Responses to Terrorism where, among other projects, he managed the Global Terrorism Database, the largest open-source compilation of terrorist events in the world. Mr. Blair also spent two years exploring elements of the Pakistani Neo-Taliban, and for almost a decade he has studied US right-wing “White” nationalist groups, apocalyptic millenarian ideologies, and other groups with interest in and experiences with WMD. Mr. Blair has also worked with the James Martin Center for Nonproliferation Studies, the National Nuclear Security Administration, the Anti-Defamation League, and the Center for Terrorism and Intelligence Studies. Mr. Blair is also a lecturer at Johns Hopkins University where he instructs graduate students about the technologies underlying WMD.

Robert House is an adjunct professor in the Mason Biodefense Program, where he teaches medical countermeasure development. He is President of DynPort Vaccine Company LLC, which manages product development programs for government agencies, and provides consulting, technical, and program management services to companies in the biotechnology and pharmaceutical industries. DynPort’s portfolio includes vaccines and therapeutics to protect against emerging infectious diseases including biological warfare threat agents and seasonal and pandemic influenza. Prior to joining DynPort, Dr. House worked at Covance Laboratories in Madison, WI and IIT Research Institute in Chicago, IL, where he managed programs in immunotoxicology assessment. He has nearly 30 years of experience in biomedical research and development, specializing in the assessment of inadvertent and therapeutic immunomodulation. Dr. House earned his Master of Science in Public Health and PhD degrees in Medical
Parasitology from the University of North Carolina School of Public Health, and is the author, co-author, or editor of more than 100 journal articles and book chapters in the areas of immunotoxicology, host defense, cytokine biology, and biodefense. Dr. House was also recently named Vice President Elect of the Society of Toxicology’s Biotechnology Specialty Section. He is a certified Project Management Professional and a Fellow of the Academy of Toxicological Sciences.

**Andy Kilianski** is a Biological Scientist at the United States Department of Defense. His work focuses on combating current and future threats from weapons of mass destruction. Prior to entering public service, Dr. Kilianski was a National Research Council fellow with the US Army at Edgewood Chemical Biological Center. His research there focused on biosurveillance and the identification and characterization of novel agents that threaten today’s warfighter. Dr. Kilianski’s research interests also included emerging viral pathogens and public health and biodefense policy, and he was selected as an Emerging Leaders in Biosecurity Initiative Fellow for 2015. His work has been published in peer-reviewed journals such as *PLoS Pathogens*, *Journal of Virology*, and *Emerging Infectious Diseases*. He received his Ph.D. in Microbiology and Immunology from Loyola University Chicago where his dissertation research involved uncoupling virus-host interactions important for coronavirus pathogenesis and developing antiviral compounds against emerging coronaviruses (SARS-CoV and MERS-CoV).

**Katalin Kiss** received a Bachelor's Degree in Biology from Rensselaer Polytechnic Institute and a PhD from Texas A&M University. She began her career working with immunotoxins—antibodies that recognized cancer cells conjugated to the toxin, ricin. Upon returning to graduate school, she worked with Coxiella and then Francisella. She has more than 20 years of experience in cell biology and microbiology.

**Linda Millis** is an adjunct professor in the Mason Biodefense program, where she teaches the theory and practice of intelligence. Ms. Millis is the former Director of National Security at the Markle Foundation, a non-profit organization devoted to improving the use of information technology to address critical public needs in the areas of health and national security. Ms. Millis has more than two decades of experience with national security issues, including threat assessment, intelligence analysis, intelligence program management, domestic preparedness for bioterrorism threats, tracking the financial assets of terrorists, and protecting critical infrastructure. She has held senior positions at the National Security Agency, Central Intelligence Agency, the Intelligence Community Management Staff, the President's Foreign Intelligence Advisory Board, and the Commission on the Roles and Capabilities of the Intelligence Community (also known as the Aspin/Brown Commission). She is also a certified arms control inspector for several nuclear weapons treaties. Ms. Millis earned her MA/MS in International Public Policy from the Johns Hopkins School of Advanced International Studies.

**Jennifer Nuzzo** is a Senior Associate at the UPMC Center for Health Security. An epidemiologist by training, her work focuses on international and domestic biosurveillance, infectious disease diagnostics, and disease mitigation strategies. She also has worked on issues related to tuberculosis control, foodborne outbreaks, and water security. Dr. Nuzzo is an Associate Editor of the peer-reviewed journal *Health Security*, and she was Co-Managing Editor of the *Biosecurity Briefing*. Dr. Nuzzo has served as a consultant to the National Biosurveillance
Advisory Subcommittee, as a member of the US Environmental Protection Agency’s National Drinking Water Advisory Council (NDWAC), and as a member of the NDWAC’s Water Security Working Group. She has also served as a project advisor for the American Water Works Association Research Foundation (now called the Water Research Foundation). She has also been consulted on pandemic planning efforts in the Republic of Indonesia and Taiwan. In 2002 and 2003, Dr. Nuzzo worked as a public health epidemiologist for the City of New York, where she was involved with disease and syndromic surveillance efforts related to the city’s Waterborne Disease Risk Assessment Program. She also worked on a local climate change initiative for the City of Cambridge, Massachusetts. Dr. Nuzzo received a DrPH in epidemiology from the Johns Hopkins Bloomberg School of Public Health, an SM in environmental health from Harvard University, and a BS in environmental sciences from Rutgers University.

**Sujatha Rashid** is an adjunct faculty member in the Biodefense program where she teaches the course on viral agents. A medical microbiologist by training, she received her doctorate in Medical Virology in 2000 from Christian Medical College in Vellore, India. She currently is a senior scientist with a global biological resource center in a private non-profit organization. As a virology team lead for a government funded biorepository she has assisted in making high quality reagents available to researchers for outbreaks such as pandemic Influenza, Ebola, and Zika viruses.

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Appendix III: Forms

These and other forms can be found on the Schar School website [here](#).

1. Qualifying Exam Application
2. Dissertation Committee Form
3. Change of Dissertation/Field Committee
4. Statement of Readiness for Proposal Defense
5. Dissertation Proposal Defense

[Back to Table of Contents]
George Mason University
Schar School of Policy and Government
Biodefense PhD Qualifying Exam Application

Student Name: ___________________________ Date: ___________________________
G Number: ___________________________ Handbook Year: ___________________________

Major Fields
Please identify your area of emphasis:

☐ International Security   ☐ Terrorism & Homeland Security
☐ Technology & Weapons of Mass Destruction   ☐ Other: ___________________________

Coursework and Degree Plan
A review of your coursework must be completed before you are approved to take the qualifying exam. Please make the necessary updates to your degree plan and include a current version with this application.

☐ Current degree plan attached

Committee Chair
After passing the qualifying exam and before registering for BIOD 998 proposal credits, students must identify a faculty member to serve as dissertation committee chair. The faculty member must indicate in writing a willingness to serve in this capacity. If you have already identified a committee chair, please specify here.

Dissertation Committee Chair: ___________________________

☐ Tentative   ☐ Confirmed in writing (documentation attached)

Please return this form to Shannon Williams, Schar School PhD Student Services.

Qualifying Examination Application Approved by:

Director,
PhD Student Services ___________________________ ___________________________ ___________________________
Name Signature Date
# George Mason University
## Schar School of Policy and Government
### Dissertation Committee

Student’s Name: __________________________________ Date: __________________________

Program:  □ Biodefense  □ Political Science  □ Public Policy

Tentative Dissertation Title: ______________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

The following professors have agreed to serve on my dissertation committee:

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Approved By:

Assistant Dean, Program Management _________________  __________

PhD Program Director _________________  __________

Dean  _________________  __________

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Please return this form to Schar School PhD Student Services
Arlington: Founders Hall 5th Floor, MS 3B1
Fairfax: A201 Robinson Hall, MS 3F4
George Mason University
Schar School of Policy and Government
Change of Dissertation/Field Committee Member

Student’s Name: ___________________________ Date: ___________________________

Program:  ☐ Biodefense  ☐ Political Science  ☐ Public Policy

Tentative Title: _________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Name  Signature  Date
Chair  ____________________________  ____________________________  ______
Leaving Committee  ____________________________  ____________________________  ______
Joining Committee  ____________________________  ____________________________  ______
Leaving Committee  ____________________________  ____________________________  ______
Joining Committee  ____________________________  ____________________________  ______

Approved By:

Assistant Dean, Program Management  ____________________________  ____________________________  ______
PhD Program Director  ____________________________  ____________________________  ______
Dean  ____________________________  ____________________________  ______

Please return this form to Schar School PhD Student Services
Arlington: Founders Hall 5th Floor, MS 3B1
Fairfax: A201 Robinson Hall, MS 3F4
George Mason University
Schar School of Policy and Government

Statement of Readiness for Proposal Defense

Student’s Name: ___________________________ Date of Defense: _______________________

Program:  □ Biodefense  □ Political Science  □ Public Policy

This form needs to be signed and submitted at least 15 days prior to the scheduled defense.

I have read the draft dissertation proposal as titled below and it is of sufficient quality for proceeding to the oral defense.

Tentative Title: _____________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

Committee Members:

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</table>

I have received a draft copy of the document named above.

Director, PhD Student Services ___________________________ Signature _________________________ Date

Please return this form to Schar School PhD Student Services
Arlington: Founders Hall 5th Floor, MS 3B1
Fairfax: A201 Robinson Hall, MS 3F4
George Mason University
Schar School of Policy and Government
Dissertation Proposal Defense

This is to certify that this student has successfully defended his/her dissertation proposal.

Student’s Name: ___________________________ Date of Defense: ________________

Program:  □ Biodefense                □ Political Science                □ Public Policy

Title: __________________________________________

______________________________________________________________________________

______________________________________________________________________________

Name                      Signature                      Date

Chair                     ____________________________  ____________________________  ______

Member                   ____________________________  ____________________________  ______

Member                   ____________________________  ____________________________  ______

Member                   ____________________________  ____________________________  ______

Member                   ____________________________  ____________________________  ______

Approved By:

PhD Program Director   ____________________________  ____________________________  ______

Dean                    ____________________________  ____________________________  ______

I have received a copy of the dissertation proposal.

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