**George Washington University, Washington - Ph.D. in Engineering Management with Research Focus in the Field of Crisis, Emergency and Risk Mgmt.**

The George Washington University Department of Engineering Management and Systems Engineering offers a 54 credit hour Doctor of Philosophy (Ph.D.) in Engineering Management with a focus in Crisis, Emergency, and Risk Management (CERM). No prior engineering education is required, but interest and aptitude in disciplined quantitative and qualitative methods is helpful. The program is designed to establish a detailed understanding of the broad field of emergency management, crisis management, organizational resiliency, disaster response, plus disciplined research methods as the student contributes new knowledge to this exciting field. The research focus is very flexible, allowing students to select their specific area of interest for their dissertation. Ph.D. Program graduates have had influential careers in senior leadership positions (US Department of Homeland Security, FEMA, US Military, others), international disaster management (Office of US Foreign Disaster Assistance, World Bank, others), think tanks and consulting organizations, teaching and research, and practice.

Doctoral students receive strong mentoring from faculty in the CERM focus area. The location in Washington, DC provides excellent educational, conference and professional opportunities beyond the formal education, and faculty that actively work to integrate doctoral students into their professional areas of interest and obtain recognition of their academic achievements.

The Ph.D. program includes 30 credit hours of coursework in CERM courses, management of technical organizations, and quantitative and qualitative research methods for doctoral research. Following successful course completion and passing the Doctoral Qualifying Examination, students complete a minimum of 24 credit hours of dissertation research, publish an article and defend their written dissertation. Specific course requirements, application requirements, and program details are available at the addresses below. Most coursework is completed through on-campus classes and mentorship meetings. Dissertation work and some independent courses can be conducted at a distance from campus.

Course work (Ten courses = 30 credits)

- Qualifying Examination
- Written Exam (Part I)
- Focus Area Exam (Part II)
- Candidacy
- Publication Requirement
- Proposal Defense
- Dissertation Research (24 credits)
- Final Examination/Doctoral Defense
- Electronic Dissertation Submission
- Post-Graduate Survey

More detail is available at https://www.emse.seas.gwu.edu/doctor-philosophy

Additional Information: https://www.emse.seas.gwu.edu/doctor-philosophy
https://www.emse.seas.gwu.edu/crisis-emergency-risk-management (Includes list of potential electives)

**Program Prerequisites**

- Calculus (Quantitative Methods for Engineering Management is available to meet this requirement)
- APSC 3115: Engineering Analysis III (A course is available as part of Ph.D. coursework that meets this - 3 credit(s))

**Direct Admits**

- Independent research and additional courses in Crisis, Emergency and Risk Management
- EMSE 6001: The Management of Technical Organizations - 3 credit(s)
- EMSE 6020: Elements of Problem Solving and Decision Making for Managers - 3 credit(s)
EMSE 6410: Survey of Finance and Engineering Economics - 3 credit(s)
EMSE 6801: Systems Engineering I - 3 credit(s)

Core Courses

EMSE 6765: Data Analysis for Engineers and Scientists (Offered in Spring and Fall) - 3 credit(s)
EMSE 8000: Research Formulation in EMSE (Offered in the Spring) - 3 credit(s)
EMSE 8001: Survey of Research Methods in EMSE (Offered in the Fall) - 3 credit(s)

George Washington University is a member of the Middle States Commission on Higher Education (MSCHE).
**Core Capabilities**

- Community Resilience
- Economic Recovery
- Environmental Response / Health and Safety
- Health and Social Services
- Infrastructure Systems
- Intelligence and Information Sharing
- Long-term Vulnerability Reduction
- Operational Communications
- Operational Coordination
- Planning
- Public Information and Warning
- Risk and Disaster Resilience Assessment
- Risk Management for Protection Programs and Activities
- Situational Assessment
- Supply Chain Integrity and Security
- Threats and Hazards Identification

**Core Competencies**

- Abide by Professional Ethics
- Community Engagement
- Disaster Risk Management
- Geographic Literacy
- Governance and Civics
- Leadership
- Operate within the EM Framework, Principles, and Body of Knowledge
- Possess Critical Thinking
- Scientific Literacy
- Sociocultural Literacy
- Systems Literacy
- Technological Literacy
- Value Continual Learning

**For More Information:**
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