**[Required Courses (12 credit hours)](https://osteopathic.nova.edu/degrees/masters/disaster-emergency-management/curriculum.html%22%20%5Cl%20%22RequiredCourses12credithours1)**

[**Management and Leadership Courses (3 credit hours)**](https://osteopathic.nova.edu/degrees/masters/disaster-emergency-management/curriculum.html#ManagementandLeadershipCourses3credithours2)

**Threats, Hazards and Impacts Courses (3 credit hours)**

[**Cyber Security Track (12 credit hours)**](https://osteopathic.nova.edu/degrees/masters/disaster-emergency-management/curriculum.html#CyberSecurityTrack12credithours6)

[**Criminal Justice Track (12 credit hours)**](https://osteopathic.nova.edu/degrees/masters/disaster-emergency-management/curriculum.html#CriminalJusticeTrack12credithours7)

[**Environmental Hazards Track (12 credit hours)**](https://osteopathic.nova.edu/degrees/masters/disaster-emergency-management/curriculum.html#EnvironmentalHazardsTrack12credithours8)

[**Fire Service Operations Track (12 credit hours)**](https://osteopathic.nova.edu/degrees/masters/disaster-emergency-management/curriculum.html#FireServiceOperationsTrack12credithours9)

[**Maritime Safety and Security Track (12 credit hours)**](https://osteopathic.nova.edu/degrees/masters/disaster-emergency-management/curriculum.html#MaritimeSafetyandSecurityTrack12credithours10)

**[Public Health Track (12 credit hours)](https://osteopathic.nova.edu/degrees/masters/disaster-emergency-management/curriculum.html%22%20%5Cl%20%22PublicHealthTrack12credithours11)**

**DEM 5050 - Bioterrorism and All-Hazards Preparedness**
**Credit Hours:**3
Students will review the ecological, sociological, environmental, and general health effects of disasters, natural and man-made. The course will explore the interprofessional roles and responsibilities of professionals, paraprofessionals, and volunteers in all-hazards emergency planning, response, mitigation, and recovery. Students will gain insights into all-hazards preparedness within the health system, community, and state and local agencies.
**Alternate Courses:**PUH 5112, CJI 6121, HCP 6101, GERO 5050

**DEM 5011 -Applied Research Methods**
**Credit Hours:**3
**Prerequisite:** DEM 5050
The main purpose of this course is to introduce students to quantitative and qualitative methods for conducting meaningful inquiry and research. They will gain an overview of research intent and design, methodology and technique, format and presentation, and data management and analysis informed by commonly used statistical methods. The course will develop each student’s ability to use this knowledge to become more effective as disaster and emergency manager leaders.

**DEM 5055 - Disaster Planning and Evaluation**
**Credit Hours:**3
**Prerequisite:** DEM 5050
Development of preparedness plans and response strategies is an important element of emergency management. In this course, students will be introduced to the variety of preparedness plans that are commonly used. Because agreements, personnel, vendors, etc. often change, or exercises reveal gaps in a plan, they must be constantly updated. Once students are familiar with the types of plans that are used, they will learn to critically assess and evaluate existing plans. Students will be required to develop a plan or annex as a final project for this course.
One course must be chosen from the options below.

**DEM 5010 - Leadership and Organizational Behavior for Emergency Preparedness**
**Credit Hours:**3
The application of effective leadership techniques and behaviors that influence is a valued skill set that emergency preparedness professionals use to mobilize human resources. Understanding and responding to organizational behavior is a challenge that emergency managers routinely face. This course provides students with an understanding of various leadership and organizational theories in the context of emergency preparedness. Students will examine and develop a range of skills in a number of areas: the use of 21st Century Management theories and practice, Group Dynamics, Leadership and Influence, Conflict Management and the Dynamics of Positional Power and Authority. Students will acquire these skills through experiential learning, observation and practice while learning practical strategies for their application for personal and professional growth in the Emergency Preparedness discipline.

**DEM 5020 - Preparedness, Planning, Mitigation and Continuity Management**
**Credit Hours:**3
**Prerequisite:** DEM 5050
This course provides the student with an understanding of the techniques for in-house or on-site planning as well as community planning. Planning will be addressed from its position in the overall philosophy of Comprehensive Emergency Management. Regulatory requirements for planning will be covered. Sample plans will be developed.

**DEM 5040 - Security Management in a Global Society**
**Credit Hours:**3
This course will examine security challenges and responses that face a global society including airport, maritime, rail, and auto safety. This course will provide students with the opportunity to investigate security management in other countries in order to make a comparison to the U.S. security management systems.

 One course must be chosen from the options below.

**DEM 5060 - Environmental Hazards in Emergency Preparedness**
**Credit Hours:**3
**Prerequisite:** DEM 5050
This course will provide a basic understanding of the many different environmental hazards that can be associated with a variety of disasters and emergencies. Topics to be addressed include types of hazardous materials, their storage and transportation, hazardous waste, different types of physical, mechanical and agricultural environmental hazards. Basic standards and regulations will be examined. Students will learn to develop in-house and on-site emergency response contingency plans.

**DEM 5080 - Agroterrorism and Food System Disasters**
**Credit Hours:**3
**Prerequisite:** DEM 5050
This course will introduce the student to the dangers and impacts of natural disasters and terrorist attacks involving agricultural or food industry targets. The student will learn about potential targets, detection systems, vulnerability assessment, planning, and recovery.

**DEM 5090 - Weapons of Mass Threat and Communicable Diseases**
**Credit Hours:**3
**Recommended:** DEM 5050/PUH 5112/CJI 6121
This course will provide students with an understanding of pandemic influenza and other communicable diseases. Students will also be introduced to potential chemical, biological, radiological, nuclear, and explosive weapons and will learn the expectations of preparations and response to a pandemic or CBRNE event.
**Alternate Courses:** CJI 6122

**DEM 6120 - Psychosocial Dimensions of Disaster**
**Credit Hours:**3
This course will focus on the psychological and behavioral health and psychological impacts of emergencies, disasters and terrorism on survivors, responders and communities. Topics will include identification and management of impacts and reactions, mental health systems and resources, Psychological First Aid (PFA), and considerations for vulnerable populations.

**DEM 6130 - Risk and Crisis Communication**
**Credit Hours:**3
Students will be exposed to the strategies and methodologies in the exchange of information among stakeholders about the nature, magnitude, significance, or control of a risk. The course will focus on helping students to build trust and explain complexities to individuals and groups when emergencies arise.

**DEM 6150 - Grant-writing for Emergency Preparedness**
**Credit Hours:** 3
**Prerequisite:** DEM 5011, DEM 5050

Introduction to the skills of grant writing in emergency preparedness. Each student will submit a completed grant application as a culminating experience. This course introduces students to grant development and preparation so that they can participate in the process of obtaining public or private funds to support research, education and/or service projects.

**DEM 6160 - Leadership Topics in Disaster and Emergency Preparedness**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
Leadership Topics is a course that will address current events or topics of special interest related to disaster and emergency preparedness. This is a didactic course rather than involving original research or a field experience.

**DEM 6170 - Elective Practicum**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
This is an elective experience available for all M.S. DEM students. With faculty approval, students will select a community-based project for a practicum in an emergency preparedness site or facility. The student is expected to acquire the skills and experience in the application of emergency preparedness. This Elective Practicum is an option to apply credit to a disaster deployment or temporary work with an NGO, such as the American or International Red Cross. A comprehensive written report will be required upon completion of the field project.

**DEM 6180 - Exercise Design**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
In this course students will use a building block approach to exercise design that will ensure successful progression in exercise complexity and execution, and allow for appropriate training and preparation to occur in the community conducting the exercise. Additionally, students will incorporate various evaluation methods to facilitate the development of viable “After Action Reports” and “Improvement Plans.” By the end of the course students will have designed of the many different types of disaster exercises.

**DEM 6010 - Practicum**
**Credit Hours:**3\*
**Prerequisite:** 24 degree-qualifying credits
This is a culminating capstone experience for all M.S. students. With faculty approval, students will select a community-based project for a practicum in an emergency preparedness site or facility. The student is expected to acquire the skills and experience in the application of emergency preparedness. Students in the practicum must complete a comprehensive written paper and final oral presentation to the DEM faculty

**DEM 6120 - Psychosocial Dimensions of Disaster**
**Credit Hours:**3
This course will focus on the psychological and behavioral health and psychological impacts of emergencies, disasters and terrorism on survivors, responders and communities. Topics will include identification and management of impacts and reactions, mental health systems and resources, Psychological First Aid (PFA), and considerations for vulnerable populations.

**DEM 6130 - Risk and Crisis Communication**
**Credit Hours:**3
Students will be exposed to the strategies and methodologies in the exchange of information among stakeholders about the nature, magnitude, significance, or control of a risk. The course will focus on helping students to build trust and explain complexities to individuals and groups when emergencies arise.

**DEM 6150 - Grant-writing for Emergency Preparedness**
**Credit Hours:** 3
**Prerequisite:** DEM 5011, DEM 5050

Introduction to the skills of grant writing in emergency preparedness. Each student will submit a completed grant application as a culminating experience. This course introduces students to grant development and preparation so that they can participate in the process of obtaining public or private funds to support research, education and/or service projects.

**DEM 6160 - Leadership Topics in Disaster and Emergency Preparedness**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
Leadership Topics is a course that will address current events or topics of special interest related to disaster and emergency preparedness. This is a didactic course rather than involving original research or a field experience.

**DEM 6170 - Elective Practicum**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
This is an elective experience available for all M.S. DEM students. With faculty approval, students will select a community-based project for a practicum in an emergency preparedness site or facility. The student is expected to acquire the skills and experience in the application of emergency preparedness. This Elective Practicum is an option to apply credit to a disaster deployment or temporary work with an NGO, such as the American or International Red Cross. A comprehensive written report will be required upon completion of the field project.

**DEM 6180 - Exercise Design**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
In this course students will use a building block approach to exercise design that will ensure successful progression in exercise complexity and execution, and allow for appropriate training and preparation to occur in the community conducting the exercise. Additionally, students will incorporate various evaluation methods to facilitate the development of viable “After Action Reports” and “Improvement Plans.” By the end of the course students will have designed of the many different types of disaster exercises.

Four courses must be chosen in this track to complete the concentration.

**DEM 6310 - Introduction to Cybersecurity**
**Credit Hours:** 3
This course provides the foundation for understanding the key issues associated with protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent, reasonable information security system, with appropriate intrusion detection and reporting features. Students are exposed to the spectrum of security activities, methods, methodologies, and procedures. Coverage includes inspection and protection of information assets, detection of and reaction to threats to information assets, and examination of pre- and post-incident procedures, technical and managerial responses, and an overview of the information security planning and staffing functions. Reviews of past hacking, criminal, and terrorist (state and non-state) attacks on information networks are a component of this course.

**DEM 6320 - Information Security Protection**
**Credit Hours:**3
An overview of the technical aspects of information security. Issues discussed include authentication, confidentiality, access control, trust and non-repudiation. Investigation of fundamental assurance technologies that can be applied to interface specifications, architectures, and implementations of information security mechanisms. The selection of appropriate security applications, security lifecycles, and interoperability issues will also be covered.

**DEM 6330 - Cybersecurity and the Constitution**
**Credit Hours:** 3
This course examines the scope of cybercrime and its impact on today’s system of criminal justice. Topics to be studied include: cybercrime and the Bill of Rights, computer-based economic crime, electronic commerce, ethical challenges, and the Computer Fraud and Abuse Act. Included will be an analysis of the legal considerations facing law enforcement and cybersecurity professionals who deal with the problems of discovering, investigating, and prosecuting cybercrime.

**DEM 6340 - Cyber Vulnerability**
**Credit Hours:** 3
Students discuss, at length, the reliability and vulnerability of computer-based technologies, biometrics, and security technologies. Included are case analyses of external (hacking) and internal (man-in-the-middle) attacks on government and private cyber communications systems.

Four courses must be chosen in this track to complete the concentration.

**DEM 6423 - Interagency Disaster Communication**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
This course provides an overview of the history, principles and organizational structure of the Incident Command System (ICS), and will identify the core components of the ICS and the National Incident Management System (NIMS). Topics will include communication, pre-and post-mitigation planning, operational concepts, prioritization of target capabilities, and development of an Incident Response Plan (IRP).
**Alternate Course:** CJI 6123

**DEM 6424 - Community Disaster Preparedness**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
This course will emphasize “disaster resistant communities” and will provide information on preparing and developing partnerships within the community. Regardless of the nature of the incident, intentional or non-intentional, law enforcement may be charged with enforcing public health orders, securing contaminated areas and health facilities, providing protection and support for the transportation of national stockpiles, and control of civil unrest. Resources may be overwhelmed and the ability to respond will depend on preparation and partnerships within the community.
**Alternate Course:** CJI 6124

**DEM 6404 - Community Planning, Response and Recovery for Families and Children**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
This course is designed to address interdisciplinary roles in preparation and post disaster community health among families and children. The course will focus on the impact of a disaster on health and family, dissemination of health information and guides to family emergency planning. Topics will include: best practice of methods and evaluations of the impact of disaster on health and family; dissemination of health information; guides to family emergency planning; and avenues for public health and safety disciplines to interface with health management organizations.
**Alternate Course:** HCP 6104

**DEM 6410 - Emergency Preparedness Public Policy and Law**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
This course will address relevant state and federal statutes which affect emergency preparedness. Students will explore the legal implications of mitigation and preparedness efforts and will also become familiar with legal resources available for future reference and research.

Four courses must be chosen in this track to complete the concentration.

**DEM 5060 - Environmental Hazards in Emergency Preparedness**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
This course will provide a basic understanding of the many different environmental hazards that can be associated with a variety of disasters and emergencies. Topics to be addressed include types of hazardous materials, their storage and transportation, hazardous waste, different types of physical, mechanical and agricultural environmental hazards. Basic standards and regulations will be examined. Students will learn to develop in-house and on-site emergency response contingency plans.

**DEM 5080 - Agroterrorism and Food System Disasters**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
This course will introduce the student to the dangers and impacts of natural disasters and terrorist attacks involving agricultural or food industry targets. The student will learn about potential targets, detection systems, vulnerability assessment, planning, and recovery.

**DEM 6424 Community Disaster Preparedness**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
This course will emphasize “disaster resistant communities” and will provide information on preparing and developing partnerships within the community. Regardless of the nature of the incident, intentional or non-intentional, law enforcement may be charged with enforcing public health orders, securing contaminated areas and health facilities, providing protection and support for the transportation of national stockpiles, and control of civil unrest. Resources may be overwhelmed and the ability to respond will depend on preparation and partnerships within the community.
**Alternate Course:** CJI 6124

Four courses must be chosen in this track to complete the concentration.

**DEM 6610 - Fire Service Operations**
**Credit Hours:** 3
This course will explore the role of the fire department as a part of the emergency services and response community, as well as the greater community, during a disaster. The concept of risk-based decision-making for amore effective response during disasters or multiple casualty incidents will be addressed. Incident priorities, strategies, and tactics as they relate to preparedness, planning, and incident management, as well as de-escalation of the response, will also be discussed.

**DEM 6423 - Interagency Disaster Communications**
**Credit Hours:** 3
This course provides an overview of the history, principles and organizational structure of the Incident Command System (ICS), and will identify the core components of the ICS and the National Incident Management System (NIMS). Topics will include communication, pre-and post-mitigation planning, operational concepts, prioritization of target capabilities, and development of an Incident Response Plan (IRP).

**DEM 6424 - Community Disaster Preparedness**
**Credit Hours:** 3
This course will emphasize “disaster resistant communities” and will provide information on preparing and developing partnerships within the community. Regardless of the nature of the incident, intentional or non-intentional, law enforcement may be charged with enforcing public health orders, securing contaminated areas and health facilities, providing protection and support for the transportation of national stockpiles, and control of civil unrest. Resources may be overwhelmed and the ability to respond will depend on preparation and partnerships within the community.

**DEM 6410 - Emergency Preparedness Public Policy and Law**
**Credit Hours:** 3
This course will address relevant state and federal statutes which affect emergency preparedness. Students will explore the legal implications of mitigation and preparedness efforts and will also become familiar with legal resources available for future reference and research.

**PUH 5220 - Environmental and Occupational Health**
**Credit Hours:** 3
Investigates environmental and occupational factors that contribute to the development of health problems in industrialized and developed countries. Includes such topics as toxic substances, pests and pesticides, food quality, air and water pollution, solid and hazardous waste disposal, occupational hazards and injury prevention.

 Four courses must be chosen in this track to complete the concentration.

**DEM 6210 - Introduction to Maritime Safety and Security**
**Credit Hours:**3
This course offers basic shipboard safety awareness, covering topics such as personal safety techniques and use of firefighting and other onboard equipment to protect one’s self, crew and vessel at sea.

**DEM 6220 - Maritime Safety and Security Leadership**
**Credit Hours:**3
**Prerequisite:** DEM 6210
Ship’s officers are responsible for the safety of their crew. This course will introduce the student to concepts such as crew leadership, target identification, the decision-making risk matrix, and safety drilling. Students will learn to develop a vessel safety plan.

**DEM 6230 - Maritime Security for the Cruise Line and Yachting Industries**
**Credit Hours:**3
**Prerequisite:** DEM 6210
This course will address the safety issues specific to the cruise and yachting industries. Topics will include keeping threats away from the vessel and protecting passenger’s lives and well-being.

**DEM 6240 - Concepts in Shipboard Safety Management**
**Credit Hours:**3\*
**Prerequisite:** DEM 6210
In this course, students will learn how to address safety issues such as medical emergencies, oil spills, fires, or collisions while underway and at dockside. Students will learn to develop a contingency plan for a vessel taking into consideration such things as geographical area of operation, environmental conditions, and the proximity or suitability of both onshore and offshore facilities.

**DEM 6250 - History of Maritime Disasters**
**Credit Hours:**3
This course will provide a historical understanding of the development of the maritime industry and will include topics such as piracy, commerce, naval warfare, and improvement in naval architecture. The course will address these topics through a series of case studies.

This track is in partnership with the Public Health program in NSU's Dr. Kiran C. Patel College of Osteopathic Medicine. Four courses must be chosen in this track to complete the concentration.

**DEM 6500 - Epidemiology of Disasters**
**Course Hours:**3
**Recommended:**PUH 5301; DEM 5011
This course will examine the fundamentals of epidemiology including basic concepts in epidemiology concerning the distribution and determinants of disease frequency in human populations and their investigation. Using a case-based approach, students will use the basic principles and methods of epidemiological investigation to assess the short-term and long-term effects of disasters and to predict consequences of future disasters.  This course will address topics areas including basic demography, measures of disease frequency, disease screening and surveillance, descriptive and analytical study design and sources of error in investigations.

**DEM 6141 - Social Vulnerability: Implications in the Disaster Cycle**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
This course will identify the at-risk and vulnerable populations and discuss how each of these groups is affected in times of disaster. In addition, the course will address the special needs and emergency response efforts that must be considered for each of these groups.

**DEM 6510 - Public Health Issues in Disaster and Emergency Preparedness**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
This course will explore the pervasive relationship of public health in the emergency and disaster prevention, response and recovery environment. The course will emphasize the importance of the integration of public health in the development of effective emergency response contingencies to disasters.

**DEM 6165 - Healthcare Emergency Management**
**Credit Hours:** 3
**Prerequisite:** DEM 5050
This course will introduce you to multiple scenarios in which ICS was utilized during a healthcare crises through the use of both case studies and established emergency management principals. Students will be encouraged to discuss these responses and examine how our current Incident Command System could of improved upon the outcome of those incidents.

**PUH 5201 - Foundations of Public Health**
**Credit Hours:** 3
This course provides an overview of the essential areas of public health including biostatistics; epidemiology; social and behavioral sciences; environmental and occupational health, and health policy, planning, and management.

**PUH 5314 - Global Health**
**Credit Hours:** 3
This course addresses global health problems and trends translated to the needs and demands of populations, as well as the socioeconomic and political impact on health delivery. The role of international health agencies will also be addressed.

**MI 6421 - Geographic Information Systems**
**Credit Hours:** 3

**MI 6405 - Public Health Informatics**
**Credit Hours:**3
Public health informatics is the systematic application of information and computer science and technology to public health practice, research and learning. This course focuses on developing the knowledge and skills of systemic application of information, computer science, and technology to public health practice. Students will acquire a basic understanding of informatics in public health practice, and be able to apply the skills of using some informatics tools in public health practices.