**Report of the**
**2013 Disciplinary Purview Focus Group:**

**Scholarship and Research to Ground the Emerging Discipline of Emergency Management**

This document was prepared by Jessica Jensen on behalf of the focus group. Please direct comments or inquiries related to the focus group/report to her at ja.jensen@ndsu.edu or 702-219-4293.

# Contents

**Preface**

Scholars within the emergency management higher education community have developed some consensus around the idea that emergency management is on a path to becoming an academic discipline in its own right. Building on existing consensus, an initiative began in 2012 to identify the components of academic disciplines and then begin to purposefully identify, recognize, formalize, and/or otherwise build those components for emergency management.

If emergency management is to be an academic discipline, then there are certain characteristics it must display. For instance, disciplines exhibit an identified disciplinary purview, a specified body of knowledge related to the purview, and theory related to the purview that provides means of understanding phenomena studied within the discipline, schema for organizing what is known, and grounding further research, core research questions. Research standards for how new knowledge is produced in the discipline and recognized must also exist.

The FEMA Higher Education Project sponsored two focus groups in 2012 to support the higher education community's efforts to formalize emergency management as an academic discipline. One focus group grappled with defining what emergency management is and does as a discipline (known as the disciplinary purview group); and, the other wrestled with what the research standards should be for the emerging discipline (known as the research standards group).

Documents were produced that report the discussion of both groups and their points of consensus (available at: https://training.fema.gov/emiweb/edu/emTheoryResearch.asp). The points of consensus cover three critical aspects of the emergency management discipline including a purview, core research foci, and standards for the conduct and publishing of research that specify how new knowledge is produced in the discipline and then recognized. Pending continued consensus building and revision, these documents have the potential to ground the further development of the discipline, the education of students, and emergency management research.

In 2013, the FEMA Higher Education Program again demonstrated its support of the higher education community's disciplinary efforts by sponsoring two additional focus groups. The first group, held July 23-24, 2013, was a follow-up to the 2012 Disciplinary Purview group and was intended to build upon its work. Specifically, the group's task was to identify the body of scholarship and research related to emergency management's purview that could ground the discipline, particularly as relates to the education of students. Participants in the focus group included:

Rick Bissell, University of Maryland, Baltimore County
Stephen Carter, University of Maryland University College
Daniel J. Klenow, North Dakota State University
Jessica Jensen, North Dakota State University (facilitator)
Jane Kushma, Jacksonville State University
David McEntire, University of North Texas
Joe Trainor, University of Delaware
William L. Waugh, Jr., Georgia State University and University of Nevada, Las Vegas

The focus group had two days of robust and productive discussion that resulted in the following:

1) Affirmation of the disciplinary purview suggested in the 2012 Disciplinary Purview Focus Group Report (with modification);
2) Identification of the topics that could be covered within emergency management degree programs that flow from the disciplinary purview, are grounded by significant scholarship and research, AND would benefit all students regardless of the career they pursue;
3) Exploration of the professional development needs of students seeking careers in emergency management and how those needs might relate to an emergency management education; and,
4) The skills that students graduating from an emergency management degree program ought to be able to demonstrate.

The following short report briefly reviews the group's discussion and includes appendices that identify the areas and topics about which scholarship and research exist to support student education, a range of professional development opportunities students might pursue depending on their intended emergency management career path, and skills students should be able to demonstrate upon graduating from emergency management degree programs.

The second focus group was a follow-up to the 2012 Research Standards group and intended to build upon its work. Specifically, the group's task was to explore how to transition the research standards into practice within individual emergency management degree programs and across the higher education community as a whole. The second focus group's discussion is reported in a separate document and can be found at
https://training.fema.gov/emiweb/edu/emTheoryResearch.asp.

**Report**

*Initial Tests for Group Consensus*
The focus group began with three tests for consensus. The first test for consensus was related to whether each person in the group supported the Draft Research Standards for the Academic Discipline of Emergency Management articulated within the 2012 Research Standards Focus Group Report. Consensus was sought because widespread buy-in by the higher education community will be required if we are to see research play a larger role within our degree programs as articulated in the 2012 Report. The group unanimously supported the Draft Standards.

As part of this test, the group discussed how the standards might be improved. There was agreement across the group that the following revisions/additions/topics be considered by the Research Standards Group in August, 2013 at EMI:

1) Add discussion in the preface regarding the extent to which the research standards represent something different or unique relative to the standards found in most social science disciplines.
2) Add discussion in the preface that articulates more broadly and appropriately the audience for the standards (i.e., not just those who conduct research but anyone who consumes research).
3) Add discussion in the preface regarding the difference between empirical research papers and analytical papers.
4) Consider whether it is appropriate to add a standard stipulating that a) in quantitative research, potential study participants ought to be provided the opportunity to review and comment on the data collection tool prior to data collection and b) in qualitative research, study participants ought to be provided the opportunity to review and comment on study findings prior to the dissemination of the study findings.
5) Consider whether standards for analytical papers should be developed. And, if so, consider whether the standards are best included as part of the Research Standards for Emergency Management or developed as a separate document.
6) Consider how guidance as to how to conduct research in keeping with the standards during routine times and disaster times and cope with methodological challenges might be developed and disseminated to support implementation of the Standards.

The second test for consensus concerned whether the disciplinary purview of emergency management as articulated in the 2012 Disciplinary Purview Focus Group Report was supported by the group. The Report defined emergency management as "the study of how humans and their institutions interact and cope with hazards, vulnerabilities, and resulting events (i.e., emergencies, disasters, catastrophes, and complex humanitarian crises), particularly through activities related to preparedness, response, recovery, and mitigation".

The group fully supported the essence of the purview as articulated in the document but differed regarding some of the wording in the statement. After much discussion the following modification was recommended: "Emergency management is the scientific study of how humans

and their institutions interact and cope with hazards and vulnerabilities, and resulting events and consequences". The decision to eliminate the parenthetical statement was based on the logic that the word "events" automatically covers all types and scope of events.

The third test for consensus concerned whether the group supported the concept (introduced in the 2012 Report) that the academic discipline of emergency management has a responsibility to provide a broad education related to its disciplinary purview in a manner that would serve ALL students regardless of the career paths they might pursue in emergency management (e.g., local, state, federal government positions, international humanitarian or development organizations, domestic nonprofits, businesses) or within the distributed function of emergency management (e.g., citizens, public works employees, hospital administrators, elected officials, fire fighters, police officers, etcetera). The group unanimously supported this concept.

*The Emergency Management Body of Scholarship and Research*
Building on this consensus, the group began to explore the emergency management body of knowledge and how it can inform an emergency management education.

The 2013 focus group concurred with the 2012 focus group which thought that "EMHIED should educate students on the basis of the vast and rich body of knowledge available" (Jensen, 2012, p. 3). It also, like the 2012 group acknowledged that:

- contributions to the body of knowledge have been made by scholars in a wide variety of disciplines (e.g., sociology, public administration, geography, anthropology, economics, political science, communications, engineering, psychology, public health);
- these contributions are distributed across countless books, scholarly peer-reviewed journal articles, and research center publications; and, further, that the EM body of knowledge is increasingly also found reflected in emergency management textbooks; and,
- the body of knowledge available has evolved over decades and will continue to evolve and expand as a diverse array of academic disciplines continue to explore hazards, vulnerabilities, and resulting events through their research and as EM scholars (i.e., those academics who identify themselves with the emerging discipline of emergency management and doctoral degree holders in emergency management) contribute to the body of knowledge through their own research;
- emergency management education would ideally be based upon the integration and synthesis of the existing scholarship and research. (Jensen, 2012, p. 3)

It became evident through the group's discussion that indeed a "vast and rich body of knowledge" (i.e., scholarship and research) related to the disciplinary purview of emergency management exists and can support student education in the following areas (at minimum): hazards, vulnerability, risk, events, preparedness, response, mitigation, and recovery.

The group brainstormed and later refined and organized into lists the topics related to the purview of emergency management about which there exists SIGNIFICANT scholarship and research. The lists cumulatively represent a distinct, specialized body of knowledge—a key characteristic of academic disciplines. These lists are provided in Appendixes A-H following this report.

The group did not discuss how the topics ought to be covered within a curriculum (e.g., within the context of which courses, how covered by degree level). However, the group recommended that emergency management programs not currently teaching on the basis of this scholarship and research do so without delay. It was the group's belief that students educated based on the integration and synthesis of the scholarship and research related to these topics/areas will be uniquely positioned to contribute to a career in emergency management or elsewhere in the distributed function of emergency management as compared to those without such an education.

*Professional Development and Emergency Management Career Paths*
An emergency management education based on existing scholarship and research related to the topics in Appendices A-H stands to benefit all students' understanding of and ability to positively impact how humans interact and cope with hazards, vulnerabilities, and associated events and consequences. Yet, the group concurred that an education will not be enough for the student who desires a career in emergency management. These students must pursue professional development opportunities (e.g., training, certification) and opportunities to gain direct, hands-on management experience.

Through its discussion, it became clear to the group that the professional development and experience students would ideally pursue to complement their emergency management education may vary substantially from one student to the next. While there is some limited overlap, the professional development opportunities related to an emergency management career in a domestic nonprofit are not identical to those related to an emergency management career in a humanitarian assistance related organization, a business, or government.

Even where there are similarities, there are often differences. For instance, while the professional development of all students pursuing emergency management careers would be served by attendance of conferences, those a student seeking a career in business continuity would ideally attend would be different from those a student interested in government emergency management might attend. And, while training is a critical component of professional development (regardless of intended career path in emergency management), the specific training that would best benefit a student will vary. Training in fundraising and volunteer management might be important for a student seeking a career in the nonprofit realm; yet, the student seeking a career within local government would be better served by training related to the conduct of Threat Hazard Impact Risk Analyses in keeping with current policy and preparing a mitigation plan that would earn Federal Emergency Management Agency approval.

The professional development opportunities related to emergency management careers at each level of government (at least in the United States) are not the same either. Those employed in local government emergency management would ideally have extensive professional development in a wide array of areas because the tasks they are required to perform within their job are many and of different types (e.g., budgeting, human resources management, planning, hazard/risk/vulnerability assessment, exercise design, implementation, and evaluation, etc.). Emergency management positions in higher levels of government tend to be specialized and require less of a range of knowledge and professional development, but greater depth. For instance, a position in the Federal Emergency Management Agency dedicated to Public

Assistance (PA) would require extensive and intimate knowledge of the law, policy, and regulation related to PA as well as related to the structure of FEMA (e.g., hierarchy within the PDD versus within the regions or headquarters and organizing structures like Joint Field Offices). Yet, for the local emergency manager, familiarity with the same would be sufficient. Thus, even within government emergency management careers in the United States, professional development demands differ.

The group brainstormed what professional development students would ideally seek to be competitive for /highly competent in emergency management jobs in the four areas where an emergency management career can be pursued including government, humanitarian assistance, domestic nonprofits (e.g., Red Cross, Lutheran Disaster Response, Operation Blessing), and businesses. A lengthy, though not exhaustive, list was developed and is provided in Appendix I following this report.

The group recognized the significance of professional development to career success in emergency management. The group suggested that emergency management education programs would be wise to early and often sensitize their students who desire an emergency management career to the importance of professional development and the opportunities for different career areas. It would also be wise, the group suggests, for programs to inform students of the responsibility they bear for their personal professional development.

The group suggested that various aspects of professional development be incorporated within degree program curriculums as appropriate given the program overall direction/nature, degree level, faculty, and student body needs to support student development and provide an opportunity to allow students to apply the scholarship and research they are learning.

There was consensus across the group that, for various reasons, emergency management degree programs should not conceive of themselves narrowly as professional preparatory programs. One of the primary reasons noted is that it would not be possible for degree programs to address each of the professional development needs related to the plethora of  emergency management careers within the auspices of a single degree program at any one level. Moreover, programs owe students the opportunity to learn about the significant, substantive, and topically varied body of scholarship and research that would benefit them in all emergency management career paths and provision of sufficient opportunity to learn that body of scholarship and research will not leave time for much else within a degree program.

Additionally, quality training is available through a range of institutions outside of academia and the training is typically delivered by individuals with significant experience doing whatever it is they are training others to do. While many individuals associated with higher education programs offer training in the field, there are also institutions offering training including the Federal Emergency Management Agency, state offices of emergency management, national nonprofits engaged in disaster work, international humanitarian organizations, and professional association that could help address the training needs of emergency management students. The current reality is that many of these institutions do not welcome the attendance of students who are not affiliated with the organization at the training sessions they offer. This reality suggests both the opportunity and need for increased, and, perhaps, formal partnerships between higher education

programs in emergency management and organizations offering training. These partnerships could be of great benefit to the professional development of students and the continued professionalization of the field at large.

*Critical Skills as Opposed to Professional Development*
The focus group determined that degree programs are not alone responsible for the professional development of students seeking emergency management careers. And, given the previous discussion, professional development may be part of degree program curricula to varying degrees and manifest in different ways, related to different career areas. The group did not believe that degree programs were without an obligation to develop skills in their students—quite the contrary. The group brainstormed and then discussed the specific skills that would benefit the career of any student taking emergency management courses. See Appendix J for this list. Assisting students in building these skills should be viewed as obligatory given the demand for thinkers, innovators, communicators, and collaborators both within emergency management and more broadly outside of emergency management.

Exactly how emergency management degree programs will convey the body of scholarship and research, incorporate professional development, and build skills will be different for the foreseeable future, for a variety of reasons. Nevertheless, if the emergency management higher education community accepts the disciplinary purview, recognizes the body of scholarship and research related to its purview, owns it, integrates it, synthesizes it, and begins to widely convey it to students, significant progress will have been made in the development of a discipline of emergency management and professionalization of the field.

The focus group discussed several ways the FEMA Higher Education Program might support the continuing efforts of degree programs to offer the best emergency management education possible including:

- Update existing college textbooks on the FEMA Higher Education Program website ensuring that they are thorough in their coverage of the scholarship and research and written in a broad enough way that reading of them would benefit a student seeking a career anywhere in emergency management or within the distributed function of emergency management.
- Sponsor a focus group that includes academics, FEMA EMI Learning Resource Center representatives/library specialists, and IT specialists to explore what would be required to develop an emergency management research database and the extent to which such a database might be developed in the near future.
- Convene a focus group to discuss the differences between training and education and develop a white paper that articulates these differences that both training and education institutions can utilize as a basis from which to understand what each does and how one complements the other.
- Develop conference tracks including one developed to focus on curriculum development that would include workshops related to development of program level objectives and degree program objectives, assessment, curriculum design, course content and syllabi development.

APPENDIX A. Hazard-Related Topics Supported by Significant Scholarship and Research

Hazards
- Types of hazards
- How hazards are defined
- How hazards are classified
- Hazard dimensions
  - Range of duration
  - Speed of onset
  - Typical predictability, seasonality, forewarning, and availability of perceptual cues
  - Source of hazard impacts (e.g., in the case of a hurricane both wind and storm surge are sources of impacts)
  - Related types of impacts to people, property, and/or the environment
  - Range of geographic scope of hazard related events
  - Range of magnitude and how measured
  - Changes in hazard profiles due to climate and other global changes
- How hazards develop/evolve
- Methods for, and tools related to, hazard detection and monitoring
- Geography of hazards
- Hazard analysis
  - General purpose
  - Underlying assumptions
  - Purpose for individuals/households, organizations (e.g., nonprofits and businesses), different levels of government, nations
  - Methods of conducting hazard analysis (including how to do it, supporting technologies, and strengths and weaknesses of various methods)
  - Use of hazard analysis results

**APPENDIX B. Vulnerability-Related Topics Supported by Significant Scholarship and Research**

Vulnerability
- Definitions of vulnerability
- Theoretical approaches to the conceptualization of vulnerability, evolution of approaches, and implications for scholarship and practice
- Significance of situational context in understanding what constitutes vulnerability
- Types of vulnerability
  - Social including
    - Broad issues that make people more prone to negative consequences from events like levels of education across the populace and aspects of culture
    - Issues specific to individuals that make them prone to harm such as a lack of transportation or poverty.
  - Political
  - Economic
  - Built (e.g., technology, infrastructure, homes, etc.)
  - Physical
- Levels of analysis related to vulnerability
  - Individuals and households
  - Organizations (e.g., nonprofits and businesses)
  - Local governments
  - Regions (e.g., states in the United States and/or areas such as the Pacific Northwest)
  - Nations
  - Global
- Concepts of special populations, vulnerable populations, and functional needs
  - Historical context of the concepts
  - Usefulness of the concepts
  - Application of the concepts
  - Organizations that interact with individuals and households with functional needs
- Vulnerability analysis
  - General purpose
  - Underlying assumptions
  - Vulnerability as interaction of capacity and that which makes us prone
  - Purpose for individuals/households, organizations (e.g., nonprofits and businesses), different levels of government, nations
  - Methods of conducting vulnerability analysis
    - Indicators of vulnerability
    - Sources of data
    - Methods of conducting analysis
    - Prediction of changing vulnerability profiles
  - Use of vulnerability analysis results
- Mapping vulnerability
  - Purpose
  - Methods of mapping
  - Technologies for mapping

**APPENDIX C. Risk-Related Topics Supported by Significant Scholarship and Research**

Risk
- How risk is defined
- Risk assessment
  - General purpose
  - Underlying assumptions
  - Purpose for individuals/households, organizations (e.g., nonprofits and businesses), different levels of government, nations
  - Methods of conducting risk assessment(including how to do it, supporting technologies, and strengths and weaknesses of various methods)
  - Use of risk assessment results
- Risk perception
  - Meaning and significance of risk perception
  - Classification of risk choices
  - How individuals and households perceive risk and factors that explain their risk perceptions
  - Relationship of individual and household risk perception to preparedness, response, and mitigation actions and behaviors
  - How businesses perceive risk and factors that explain their risk perceptions
  - Relationship of business risk perception to preparedness, response, and mitigation actions
  - How local government perceives risk and factors that explain risk perception at that level
  - Relationship of local government risk perception to preparedness, response, and mitigation behaviors
  - How nations perceive risk and factors that explain risk perception at that level
  - Relationship of national level risk perception to preparedness, response, and mitigation actions and behaviors
- Risk communication
  - Elements of effective risk communication messages related to preparedness, mitigation, and response
  - Methods of delivering risk communication messages
  - Factors related to receipt of risk communication messages by individuals and households
  - Factors related to individual and household behaviors/actions related to receipt of risk communication messages
- Risk education

**APPENDIX D. Event-Related Topics Supported by Significant Scholarship and Research**

Events
- Discussion of the words used to describe different kinds of events and how they are defined, operationalized, studied, and classified (e.g., crisis, emergency, disaster, catastrophe, complex humanitarian crisis, etc.)
- Events for individuals and households
  - Defining what constitutes different types of events
  - Impacts and needs
- Events for organizations (e.g., nonprofits and businesses)
  - Defining what constitutes different types of events
  - Impacts and needs
- Dimensions of events at a "community" level
  - Defining what constitutes different types of events
  - Impacts
  - Needs
    - Hazard-generated
    - Response-generated
    - Emergence/convergence
  - Situational context of events
    - Interaction of vulnerabilities of different types and at different levels of analysis
    - Historical context
    - Political/policy context
    - National context
  - Who is involved
    - DRC Organizational Typology
    - Affiliated/unaffiliated/spontaneous volunteers
    - Domestic and/or international organizations
  - How event impacts, needs, situational context interact to determine who is involved in response and recovery
  - Implications of impacts, needs, situational context, and who is involved for how events are managed in response and recovery
- Events for nations
  - Defining what constitutes different types of events
  - Impacts and needs
- Global events
  - Defining what constitutes different types of events
  - Impacts and needs
- Fundamental concepts
  - Resilience
  - Sustainability
  - Resistance
- Focusing events
  - Definition
  - Relationship of concept to response, recovery, mitigation, and preparedness

**APPENDIX E. Preparedness-Related Topics Supported by Significant Scholarship and Research**

Preparedness
- Defining preparedness
- Assumptions underlying conceptualizations of preparedness
- Individual and household
  - Available/ideal preparedness actions/activities/behaviors *including insurance*
  - Factors related to when individuals and households undertake preparedness actions/activities/behaviors
- Organizations (e.g., nonprofits and businesses)
  - Available/ideal preparedness actions/activities/behaviors
  - Factors related to when organizations undertake preparedness actions/activities/behaviors
- Local level government jurisdictions
  - Available/ideal preparedness actions/activities/behaviors (see common preparedness activities below)
  - Influences on jurisdictional preparedness efforts
- National level
  - Historical evolution of emergency management systems, structures, laws, and policies in various countries
  - Historical events in various countries
  - Analysis of preparedness in various countries
- Common preparedness activities
  - Community education
  - Preparedness campaigns
  - Training
  - Exercises
  - Planning
    - Elements of effective planning process
    - Components of plans
      - Shared components of all plans
      - Response-specific plan components
      - Recovery-specific plan components
      - Mitigation-specific plan components
      - Continuity-specific plan components
    - Characteristics/hallmarks of quality plans
    - Strategic versus operational planning
  - Technologies for preparedness including warning technologies
    - Use/adoption of technologies
    - Utility of technologies
    - Limitations of technologies
  - Evaluating preparedness activities
    - Outputs/outcomes
    - Methods of evaluation (e.g., after action reports)

- • Learning and emergency management
- Measuring preparedness
- International preparedness[1]
  - o Evolution of emergency management as a function
  - o Evolution of emergency management as a career field
  - o Evolution of emergency management education and research
  - o International humanitarian assistance codes of conduct
  - o Connections/linkages between preparedness/mitigation and development
  - o Role of key international organizations in the preparedness of nations around the world (e.g., United Nations, International Monetary Fund, World Bank, United States Agency for International Development, etc.)
  - o International information sharing and coordination systems (e.g., proposals for what might be developed and analysis of existing technologies/methods)

---

[1] The term international is used here as a means of organizing topics about which scholarship and research exist concerning efforts or issues that are global, cross-border, multi-national, or are otherwise related to the involvement of international organizations in emergency management. The term national above is used to organize topics about which scholarship and research exists about many nations around the world.

**APPENDIX F. Response-Related Topics Supported by Significant Scholarship and Research**

Response
- Individuals and Households
  - Components
    - Hazard detection
    - Protective action decision making
    - Protective action implementation
      - Preparatory actions
      - Protective actions
      - Withdrawal behavior (e.g., evacuation, sheltering, migration)
    - Post-disaster behavior and "myths"
  - Factors related to how/whether individuals and households undertake each component
  - Individuals who work for response organizations (e.g., fire, law enforcement)
    - Socio-psychological impacts related to response involvement
    - Role abandonment
- Organizations (e.g., individual government department/agencies, nonprofits, businesses)
  - Components
    - Activities undertaken to coordinate response within the organization
    - Activities undertaken to coordinate response with outside organizations
    - Activities related to provision/receipt of services/supplies/equipment
  - Influences on how/whether organizations undertake each component
- Local level government jurisdictions
  - Components
    - Hazard and population monitoring
      - Damage assessment (e.g., windshield, first-in, aerial)
    - Communications and information management
      - Information processing
      - Media communications
      - Communicating with the public
        - Warning
      - Interagency communications
    - Incident management
      - Decision making
      - Leadership
      - Emergency operations centers
      - Resource management
      - Logistics management
      - Coordination off scene as well as across the whole event
      - Collaboration off scene as well as across the whole event
      - Improvisation/flexibility
      - Management systems (e.g., National Incident Management System, command and control versus other models)

- Operations
  - Coordination on scene
  - Collaboration on scene
  - Improvisation/flexibility
  - Management systems (e.g., Incident Command System)
  - Specific tasks (e.g., search and rescue, sheltering, firefighting, law enforcement, emergency medical care and triage)
- National response
  - Laws and legal issues
  - Corruption in relief provision
  - Cultural and historical influences on national response
  - Policies, policy implementation, policy impacts (e.g., National Incident Management System)
  - Case studies of national response efforts to seminal events (e.g., in the United States, Hurricane Katrina)
  - National level organizations
    - Evolution of roles related to response (e.g., in the United States, Federal Emergency Management Agency)
    - Influences on national response
- International response[2]
  - Laws and legal issues
  - Standards, ethics, and accountability
  - Corruption in humanitarian assistance
  - Codes of conduct and response
  - "Response" involvement of development organizations versus humanitarian assistance organizations
  - Media coverage of international events and international response/recovery efforts and consequences of coverage (e.g., perceptions, donations)
  - Structuring mechanisms and organizational tools for international response/recovery
  - Coordinating bodies in international response/recovery

---

[2] The term international is used here as a means of organizing topics about which scholarship and research exist concerning efforts or issues that are global, cross-border, multi-national, or are otherwise related to the involvement of international organizations in emergency management. The term national above is used to organize topics about which scholarship and research exists about many nations around the world.

**APPENDIX G. Recovery-Related Topics Supported by Significant Scholarship and Research**

Recovery
- Individual and households
  - Impacts including socio-psychological impact, housing, livelihood
  - Needs particularly those related to socio-psychological support, refugees, and internally displaced persons
  - Sources of assistance
  - Experience with sources of assistance
  - Factors influencing recovery
- Organizations
  - Nonprofits
    - Landscape of nonprofit organizations and relationship to recovery
    - Roles in recovery (including significant literature related to sheltering, case management, socio-psychological support, donations management, and volunteer management)
    - Influences of nonprofits on local level/community recovery
    - Challenges to recovery participation
  - Businesses
    - Roles in recovery (e.g., consulting, rebuilding, economic engines, etc.)
    - Factors influencing business recovery
- Local level government jurisdictions/"community"
  - Case studies of local level/community recovery around the world
  - Social capital and community recovery
  - Leadership in recovery
  - Politics of recovery
  - Demographic impacts
  - Litigation in recovery
  - Change and recovery (e.g., social, political, environmental)
  - Tasks and influencing factors
    - Damage assessment
    - Debris management
    - Continuity/recovery of government services
    - Re-occupancy/permitting
    - Post-event recovery planning
    - Housing recovery
    - Infrastructure recovery
    - Economic recovery
    - Environmental recovery/protection/preservation
    - Cultural/historical resource recovery/protection/preservation
- National level
  - Demographic impacts
  - Economic impacts/recovery

- o Approaches to assistance
- o Laws (e.g., in the United States, the Stafford Act)
- o Policy development, policy implementation, policy impacts (e.g., in the United States, National Disaster Recovery Framework)
- o Politics (e.g., in the United States, politics related to Presidential Disaster Declarations)
- International recovery[3]
  - o Laws and legal issues
  - o Standards and accountability
  - o Codes of conduct
  - o "Recovery" involvement of development organizations versus humanitarian assistance organizations
  - o Media coverage of international events and international response/recovery efforts and consequences of coverage (e.g, perceptions, donations)
  - o Structuring mechanisms and organizational tools for international response/recovery
  - o Coordinating bodies in international response/recovery

---

[3] The term international is used here as a means of organizing topics about which scholarship and research exist concerning efforts or issues that are global, cross-border, multi-national, or are otherwise related to the involvement of international organizations in emergency management. The term national above is used to organize topics about which scholarship and research exists about many nations around the world.

**APPENDIX H. Mitigation-Related Topics Supported by Significant Scholarship and Research**

Mitigation
- Cost-benefit analysis
  - Purpose
  - Assumptions underlying
  - Methods for conducting
- Individuals and households
  - Mitigation options
  - Relationship between mitigation options and hazard types
  - Theories that help explain the extent to which individuals and households adopt mitigation measures
  - Rates of individual and household implementation of mitigation measures
  - Factors related to individual and household implementation of mitigation measures
- Businesses
  - Mitigation options
  - Relationship mitigation options to hazard types
  - Theories that help explain the extent to which businesses adopt mitigation measures
  - Factors related to business implementation of mitigation measures
- Local level government jurisdictions/ "communities"[4]
  - Mitigation options
    - Community protection works
      - Types
      - Design
      - Relationships to hazard types, both current and under changing conditions (e.g., climate change)
      - Factors influencing implementation
    - Building contents protection
      - Types
      - Design
      - Relationships to hazard types
      - Factors influencing implementation
    - Building construction
      - Types
      - Design
      - Relationships to hazard types
      - Factors influencing implementation
    - Hazard source control
      - Types
      - Design

---

[4] Of note, a significant body of literature regarding mitigation plan development and quality exists; yet, since planning was referred to within the preparedness appendix, it is not repeated again here.

- Relationships to hazard types
- Factors influencing implementation
  - Land use practices
    - Types
    - Design
    - Relationships to hazard types
    - Factors influencing implementation
  - Public awareness and education
    - Ethical considerations related to mitigation
    - Cultural considerations related to mitigation
    - Legal considerations related to mitigation
    - Impact of mitigation projects (e.g., financial, performance)
- Regional level
  - Policy design, policy implementation, policy impact (e.g., in the United States, state level mandates to develop mitigation plans and impact of those mandates)
- National level
  - Laws and legal issues
  - Policy design, policy implementation, policy impact (e.g., in the United States, Community Rating System and National Flood Insurance Program)
  - Limits on mitigation in different national scenarios
- International level[5]
  - Influence of international organizations on mitigation within countries around the world
  - Cross border engagement in mitigation activities
  - Kinds of technical assistance that can help poorer countries develop effective mitigation programs

---

[5] The term international is used here as a means of organizing topics about which scholarship and research exist concerning efforts or issues that are global, cross-border, multi-national, or are otherwise related to the involvement of international organizations in emergency management. The term national above is used to organize topics about which scholarship and research exists about many nations around the world.

**APPENDIX I. Areas for Training and Professional Development Depending on Career Goals**

Depending on the sector in which a student desires to work/increase professionalism related to, it may be to their advantage to become familiar with/competent using/applying the following professional development opportunities (e.g., training).

| | U.S. Gov't | Intl Hum. | Dom. NPO | Bus. Cont. |
|---|---|---|---|---|
| Access monitoring, methods, and technologies for networks, buildings and facilities | X* | | | X |
| ANSI-ASQ National Accreditation Board (ANAB) certification (i.e., PS-PREP or Accreditation for Organizational Resilience-Emergency Management-Business Continuity Management Systems) | | | | X |
| ASIS SPC.1-2009 Organizational Resilience: Security Preparedness, and Continuity Management System | | | | X |
| Attendance of professional conferences | X | X | X | X |
| British Standard 25999-2:2007 Business Continuity Management | | | | X |
| Budgeting and financial management software | X* | | | |
| Business continuity software | | | | X |
| Case management certification (e.g., CCM) | | X | X | |
| Emergency management certification (e.g., CEM) | | | | |
| Change management | X | X | X | X |
| Client/case management software | | X | X | |
| Information processing and communications equipment and technologies (e.g., telephones, computers, word processing software, electronic mail management systems) | X* | X | X | X |
| Cluster coordination model | | X | | |
| Compassion fatigue training | X* | X | X | |
| Conflict management | | X | | |
| Contracts and procurement | X* | | | X |
| Current government risk assessment tools (e.g., THIRA) | X* | | | |
| Current government planning frameworks (e.g., National Response Framework, National Disaster Recovery Framework) | X | | X** | X** |
| Current news regarding events around the world (e.g., IRIN, Prevention Web, ReliefWeb, Global Disaster Alert and Coordination System) | | X | | |

| | U.S. Gov't | Intl Hum. | Dom. NPO | Bus. Cont. |
|---|---|---|---|---|
| Current presidential policy directives | X | | X** | X** |
| Damage assessment (e.g., related to receipt of a Presidential Disaster Declaration) | X* | | | |
| Data protection and information security monitoring, methods, and technologies | X* | | | X |
| Debris management related to Emergency and Presidential Disaster Declarations | X* | | | |
| Development and implementation of mutual aid agreements | X* | | X | X |
| Donations management software (e.g., AidMatrix) | | X | X | |
| eGrants system (e.g., navigation, applications) | X* | | | |
| Employee protection strategies (e.g., workplace violence prevention) | | | | X |
| Emergency Management Accreditation Program standards and certification | X* | | | |
| Emergency management-related laws and regulations | X | X | X | X |
| Emergency Operations Center (EOC) design and equipment | X* | | | X |
| Exercise development and implementation | X | X | X | X |
| Federal grants (i.e., range of grants and purposes, grant guidance, grant applications) | X* | | | |
| Federal recovery assistance programs related to Presidential Disaster Declarations (i.e., Public Assistance, Individual Assistance) | X* | | X | |
| Federal Emergency Management Agency Independent Study Professional Development Series | X | X | X | X |
| Federal Emergency Management Agency's floodplain map program | X* | | | |
| Fundraising strategies | | X | X | |
| Geographic information system mapping | X* | | | |
| Government agencies and professional groups that monitor and research hazards | X | X | X | X |
| Grant writing and administration | X | X | X | |
| Hazard analysis software/tools (e.g., HAZUS) | X* | | | X |
| Hazard-related laws, regulations, and liability | X | X | X | X |
| Homeland Security Exercise and Evaluation Program (HSEEP) | X* | | | |
| Humanitarian logistics management strategies and software | | X | | |
| Human resource management | X | X | X | X |
| Human rights and humanitarian assistance law | | X | | |
| Humanitarian Accountability Project International Organization for Standardization | | X | | |

| | U.S. Gov't | Intl Hum. | Dom. NPO | Bus. Cont. |
|---|---|---|---|---|
| Hyogo Framework | | X | | |
| Incident management software (e.g., WebEOC) | X* | | X** | X** |
| International humanitarian assistance coordination organizations such as International Council of Volunteer Agencies, United Nations Office for the Coordination of Humanitarian Affairs (OCHA), Inter-Agency Standing Committee's Steering Committee for Humanitarian Response, Voluntary Organizations in Cooperation in Emergencies (e.g., roles, membership, organizing mechanisms) | | X | | |
| International needs assessment initiatives (e.g., Operational Guidance on Coordinated Assessments in Humanitarian Crises, Humanitarian Dashboard) | | X | | |
| International Organization for Standards (ISO) 22301: 2012 Societal security -- Business continuity management systems | | | | X |
| International Red Cross and Red Crescent Movement 1994 Code of Conduct | | X | | |
| Integrated Public Alert and Warning System (IPAWS) | X* | | | |
| Key development organizations such as USAID, IMF, World Bank (e.g., mission, structure, history) | | X | | |
| Key humanitarian response organizations such as the United Nations, NATO (e.g., mission, structure, history) | | X | | |
| Local emergency management related ordinances | X* | | X | X |
| Local hazard-related development ordinances | | | | |
| Marketing | | X | X | |
| Mitigation planning guidance (e.g., the blue book) | X | | | |
| National Fire Protection Association 1600: Standard on Disaster / Emergency Management and Business Continuity Programs | X | | X | X |
| National Flood Insurance Program and Community Rating System | X | | | |
| National Incident Management System | X | | | |
| "Oslo Guidelines" regarding the use of military and civil defence assets in disaster relief | | X | | |
| Other hazard modeling software | X | | | |
| Oxfam Code of Conduct for NGOs | | X | | |
| People in Aid Code of Good Practice | | X | | |
| Personal security awareness | | X | | |

| | U.S. Gov't | Intl Hum. | Dom. NPO | Bus. Cont. |
|---|---|---|---|---|
| Planning certification (e.g., AICP) | X | | | X |
| Policies and laws pertaining to working with individuals with functional needs | X | | X | |
| Policies and laws related to working with pets | X | | X | |
| Preliminary Damage Assessment related to Presidential Disaster Declarations | X | | | |
| Professional associations (i.e., membership, conference attendance, and service) | X | X | X | X |
| Professional certifications (e.g., DRII, BCI, CEM) | | | | |
| Professional engagement through reading and contributing to blogs, keeping up with scholarship (e.g., Natural Hazards Observer) | X | X | X | X |
| Program management certification (e.g., PgMP) | X | X | X | X |
| Project management certification (e.g., CAPM, PMP) | X | X | X | X |
| Project Qualite | | X | | |
| Regional multinational disaster organizations (e.g., Asian Disaster Reduction Center) | | X | | |
| Regulated industries and laws and policies related to them | X* | | | X** |
| Response planning guidance (e.g., CPG 101) | | | | |
| Social media for preparedness, response, mitigation, and/or recovery | X | X | X | X |
| Sphere Project Humanitarian Charter and Minimum Standards in Disaster Response Handbook | | X | | |
| State emergency management-related laws | X* | | X | X |
| State hazard-related laws | X* | | X** | X** |
| State emergency management policies and guides | X* | | X** | X** |
| Supply chain risk management strategies | | | | X |
| Video surveillance monitoring, methods, and technologies (e.g., CCTV, analog, IP and digital cameras and systems) | | | | X |
| Voluntary Private Sector Preparedness Accreditation and Certification Program (PS‑Prep) | | | | X |
| Voluntary Organizations Active in Disaster (e.g., NVOAD, SVOADs) | X | | X | |
| Volunteer management certification (e.g., CVA) | | X | X | |
| Volunteer management software | | X | X | |
| Warning system equipment and technologies | X* | | | |

\* The extent to which a student would pursue professional development opportunities related to this will depend on the level of government they wish to be employed at and the job responsibilities of specific positions.
\*\* The extent to which a student would need professional development opportunities related to this will vary significantly across organizations and positions.

**APPENDIX J. Skills Emergency Management Students Should be Able to Demonstrate upon Graduation**

1. Verbal communications
2. Written communications
3. Interpersonal communication
4. Group communication
5. Network building and stakeholder engagement
6. Analytical thinking
7. Application of research in practice
8. Problem solving
9. Decision making
10. Leadership