

Course Overview

This is the first course in a four-course concentration on Critical Infrastructure and Key Resources (CIKR). There is another four-course concentration being offered by the School of Public Service Leadership on Continuity Management, which includes Business Continuity for the private sector and Continuity of Operations for the public sector. These concentrations are closely related and the goals for both are similar. The reason for not combining these two concentrations is related to the application of the knowledge and skill based on education from Capella.

There are unique aspects of the CIKR program. The most important is the governance structure. Approximately 80 percent of the Key Resources in the Critical Infrastructure are owned and operated by the private sector corporations; governance is in the purview of the federal government. The overall purpose of the CIKR program is to advance "a national unity of effort to strengthen and maintain secure, functioning, and resilient critical infrastructure" (Presidential Policy Directive (PPD) 21 - Critical Infrastructure Security and Resilience, p1).

Note: The term *business continuity* is used in the private sector and the term *continuity of operations* (COOP) is used in the public sector. We will use the term *continuity management program* for this course and other courses in the CIKR concentration.

Reference

White House Office of the Press Secretary. (2013, February). [Presidential Policy Directive \(PPD\) 21 - Critical Infrastructure Security and Resilience](https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resil). Retrieved from <https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resil>

Required Course Resources

You will use information from several government and organizational websites to complete the various activities in this course. Your course text is the *NFPA 1600*, a publication of the National Fire Protection Association. This text is available to you at no cost from the organization's website. Although there is no charge, you are required to register.

To download the *NFPA 1600*, visit the [NFPA website](#) and follow the prompts. Additional details are provided in your Unit 1 studies.

Course Discussions

The discussion area in the Capella courseroom is a place where you are given the opportunity to think critically about your ideas and share them with peers. Robust threaded discussions promote reflective responses and enhance the learning experience. To allow adequate time for responding to discussions, initial posts are due by Thursday each week. Responses are due by Sunday.

Take time to review the [Creating Strong Discussion Posts \[PDF\]](#) document, which has been designed to provide practical suggestions and best practices for crafting substantive responses to discussion questions. This document will also be made available in every discussion in this course.

Developing as a Writer

Your writing skills are critical to your academic and career success. Writing is an iterative process, and the keys to this process are creating drafts, seeking and receiving feedback, and making revisions. In this course you will have various opportunities to move through these steps as you work on your assignments. You will also have built-in support and assessment from a faculty writing expert. You are strongly encouraged to take advantage of the writing resources offered, such as those in the [Writing Center](#), as they are crucial to helping you become a more capable, skilled, and confident writer, both during your academic journey at Capella and beyond. If you feel you need more help than these resources can provide, your instructor can provide a referral for you to meet with a writing consultant.

APA Style and Formatting

Capella uses APA style as the standard for all academic writing. Using a single publication manual ensures a consistent style across degrees, programs, and schools. Because APA is used widely in scholarly works and academic publications, it is a good choice for the Capella community. Remember to use the APA manual from your first course as a resource for the assignments in this course.

APA Style Central has additional guidance, examples, and tools you can use for researching, writing, and formatting your paper and for citing and referencing resources in APA style. See the [APA Style and Format](#) section of the Writing Center for instructions on accessing and using APA Style Central.

Smarthinking

Capella partners with [Smarthinking](#), a Web-based tutoring service, to offer you online tutoring in a variety of subjects and custom critique of your papers. You will receive 168 minutes to use toward tutoring each quarter. The tutors are called e-structors and can help you develop successful learning skills in a professional and supportive environment. E-structors are available to help you, but not replace your instructor. Learn [how to get started](#) and [how to use Smarthinking](#).

With Smarthinking you can:

- Get live, one-on-one online tutoring help.
- Submit an essay or paper for review.
- Submit questions for a tutor's response.

Subjects covered include writing, APA style and formatting, and reading comprehension.

Capella Library

You are highly encouraged to explore the [Capella University Library](#). The Capella library is an entirely digital library and one of your most valuable resources for finding the persuasive evidence and scholarly resources you will use in your course assignments.

Career Resource Center

Use the [Career Center](#) resources to manage and plan your career through every stage. The Capella Career Center provides many online resources, but it also provides other ways you can get assistance and interact with the staff. You can connect and interact with counselors online and ask questions. The Career Center has multiple resources such as exploration and planning, job search strategies, connecting with others, job search tools, career enrichment, and seminars and presentations.

Course Competencies

(Read Only)

To successfully complete this course, you will be expected to:

- 1 Analyze the critical infrastructure environment.
- 2 Analyze the structure of the National Infrastructure Protection Program.
- 3 Analyze the current critical infrastructure of the National Infrastructure Protection Program standards, procedures, guidelines, national strategies, authorities, and policies.
- 4 Assess the National Partnership Structure.
- 5 Communicate in a manner that is scholarly, professional, and consistent with the expectations for members of the emergency management profession.

Course Prerequisites

There are no prerequisites for this course.

Syllabus >> Course Materials

Required

The materials listed below are required to complete the learning activities in this course.

Integrated Materials

Many of your required books are available via the VitalSource Bookshelf link in the courseroom, located in your Course Tools. Registered learners in a Resource Kit program can access these materials using the courseroom link on the Friday before the course start date. Some materials are available only in hard-copy format or by using an access code. For these materials, you will receive an email with further instructions for access. Visit the [Course Materials](#) page on Campus for more information.

Book

American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington, DC: Author. ISBN: 9781433805592.

Library

The following required readings are provided in the Capella University Library or linked directly in this course. To find specific readings by journal or book title, use [Journal and Book Locator](#). Refer to the [Journal and Book Locator library guide](#) to learn how to use this tool.

- 't Hart, P. (2013). [After Fukushima: Reflections on risk and institutional learning in an era of mega-crises](#). *Public Administration*, 91(1), 101–113.
- af Wählberg, A. E. (2001). [The theoretical features of some current approaches to risk perception](#). *Journal of Risk Research*, 4(3), 237–250.
- Armour, M. (2014). [Busting myths and building resilience: Practices and approaches that go beyond mere plan development](#). *Journal of Business Continuity & Emergency Planning*, 8(2), 106–113.
- Birkmann, J., Cardona, O. D., Carreño, M. L., Barbat, A. H., Pelling, M., Schneiderbauer, S., . . . Welle, T. (2013). [Framing vulnerability, risk and societal responses: The MOVE framework](#). *Natural Hazards*, 67(2), 193–211.
- Boin, A., & McConnell, A. (2007). [Preparing for critical infrastructure breakdowns: The limits of crisis management and the need for resilience](#). *Journal of Contingencies & Crisis Management*, 15(1), 50–59.
- Bowman, R., & Newman, A. (2016). [A model to improve preparedness and strategically enhance resiliency at a community level: The Garden State approach](#). *Journal of Business Continuity & Emergency Planning*, 10(2), 124–131.
- Buckle Henning, P., & Chen, W. (2012). [Systems thinking: Common ground or untapped territory?](#) *Systems Research & Behavioral Science*, 29(5), 470–483.
- Carter, M. & Fuller, C. (2016). [Symbols, meaning and action: The past, present and future of symbolic interactionism](#). *Current Sociology Review* 64(6), 931–961.
- Cavallo, A., & Ireland, V. (2014, September). [Preparing for complex interdependent risks: A System of Systems approach to building disaster resilience](#). *Elsevier*, 9, 181–193.
- De Dominicis, S., Crano, W. D., Ganucci Cancellieri, U., Mosco, B., Bonnes, M., Hohman, Z., & Bonaiuto, M. (2014). [Vested interest and environmental risk communication: Improving willingness to cope with impending disasters](#). *Journal of Applied Social Psychology*, 44(5), 364–374.
- Eddy, C., & Sase, E. (2015). [Implications of the Fukushima nuclear disaster: Man-made hazards, vulnerability factors, and risk to environmental health](#). *Journal of Environmental Health*, 78(1), 26–32.
- Fisher, J. G. (1998). [Contingency theory, management control systems and firm outcomes: Past results and future directions](#). *Behavioral Research in Accounting*, 10, 47–64.
- Francescato, D., & Aber, M. S. (2015). [Learning from organizational theory to build organizational empowerment](#). *Journal of Community Psychology*, 43(6), 717–738.

- Fredericks, E. (2005). [Infusing flexibility into business-to-business firms: A contingency theory and resource-based view perspective and practical implications](#). *Industrial Marketing Management*, 34(6), 555–565.
- Gallo, G. (2013). [Conflict theory, complexity and systems approach](#). *Systems Research and Behavioral Science*, 30(2), 156–175.
- IOMA, Business Intelligence at Work (2010). [Preparedness should build on 8 principles of resilience](#). *Security Director's Report*, 10(2), 1–15.
- Laursen, M. R. (2015). [CBDRM in Nepal: A matter of risk perceptions](#). *International Journal of Disaster Resilience in the Built Environment*, 6(1), 73–85.
- Lei, Y., Wang, J., Yue, Y., Zhou, H., & Yin, W. (2014). [Rethinking the relationships of vulnerability, resilience, and adaptation from a disaster risk perspective](#). *Natural Hazards*, 70(1), 609–627.
- Manson, S. M. (2001). [Simplifying complexity: A review of complexity theory](#). *Geoforum*, 32(3), 405–414.
- McEntire, D. (2012). [Understanding and reducing vulnerability: From the approach of liabilities and capabilities](#). *Disaster Prevention and Management*, 21(2), 206–225.
- Prelipcean, G., Stancu, S., Roșca, G. I., & Lupan, M. (2012). [Particularities of risk in the case of extreme events](#). *Scientific Research and Education in the Air Force—AFASES*, 1, 211–217.
- Sandoval, V., & Voss, M. (2016). [Disaster governance and vulnerability: The case of Chile](#). *Politics and Governance*, 4(4), 107–116.
- Sanial, G. (2014). [Exploring U.S. Coast Guard organizational preparedness through chaos and complexity theories](#). *Emergence: Complexity and Organization*, 16(4), F1–F16.
- [Symbolic interactionism](#). In D. Jary & J. Jary (Eds.), *Collins dictionary of sociology* (4th ed.). London, UK: Collins.
- [Systems theory](#). In J. M. Palmisano (Ed.), *World of sociology*, Gale. Farmington, MI: Gale.

External Resource

Please note that URLs change frequently. While the URLs were current when this course was designed, some may no longer be valid. If you cannot access a specific link, contact your instructor for an alternative URL. Permissions for the following links have been either granted or deemed appropriate for educational use at the time of course publication.

- Barishansky, R. M. (2015, August). [The word on resilience](#). *Emergency Management*. Retrieved from <http://www.govtech.com/em/disaster/The-Word-on-Resilience.html#>
- National Fire Protection Association. (2016). [NFPA 1600](#). Retrieved from <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1600> (**Note:** *NFPA 1600* is the required text for this course. Instructions for accessing a free PDF version of this book are included in Unit 1, Study 3.)
- Pine, J. C. (2007). [The contributions of management theory and practice to emergency management \[DOC\]](#). In D. A. McEntire (Ed.), *Discipline, disasters and emergency management: The convergence and divergence of concepts, issues and trends from the research literature* (pp. 196–205). Retrieved from <http://www.training.fema.gov/hiedu/docs/emt/contributions%20of%20manage.doc>
- U.S. Department of Homeland Security. (2013, December). [National Infrastructure Protection Plan Fact Sheet 508 \[PDF\]](#). Retrieved from <https://www.dhs.gov/sites/default/files/publications/NIPP-Fact-Sheet-508.pdf>
- U.S. Department of Homeland Security. (2013, December). [NIPP 2013: Partnering for Critical Infrastructure Security and Resilience \(NIPP\) \[PDF\]](#). Retrieved from https://www.dhs.gov/sites/default/files/publications/NIPP%202013_Partnering%20for%20Critical%20Infrastructure%20Security%20and%20Resilience_508_0.pdf
- U.S. Department of Homeland Security. (2016). [NIPP Supplemental Tool: Incorporating Resilience into Critical Infrastructure Projects](#). Retrieved from <https://www.dhs.gov/publication/nipp-2013-resilience-ci-projects>
- U.S. Department of Homeland Security. (2016, October). [Critical Infrastructure Threat Information Sharing Framework: A Reference Guide for the Critical Infrastructure Community \[PDF\]](#). Retrieved from <https://www.dhs.gov/sites/default/files/publications/ci-threat-information-sharing-framework-508.pdf>
- U.S. Department of Homeland Security. (2017, June). [National Response Framework \(NRF\) – Critical Infrastructure and Key Resources Support Annex \[PDF\]](#). Retrieved from <https://www.fema.gov/pdf/emergency/nrf/nrf-support-cikr.pdf>
- U.S. Department of Homeland Security. (n.d.). [Presidential Policy Directive / PPD-8: National preparedness](#). Retrieved from <https://www.dhs.gov/presidential-policy-directive-8-national-preparedness>
- White House Office of the Press Secretary. (2013, February). [Executive Order 13636 - Improving Critical Infrastructure Cybersecurity](#). Retrieved from <https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/executive-order-improving-critical-infrastructure-cybersecurity>
- White House Office of the Press Secretary. (2013, February). [Presidential Policy Directive \(PPD\) 21 - Critical Infrastructure Security and Resilience](#). Retrieved from <https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resil>

Suggested

The following materials are recommended to provide you with a better understanding of the topics in this course. These materials are not required to complete the course, but they are aligned to course activities and assessments and are highly recommended for your use.

Optional

The following optional materials are offered to provide you with a better understanding of the topics in this course. These materials are not required to complete the course.

The following optional readings may be available in the Capella University Library. To find specific readings by journal or book title, use [Journal and Book Locator](#). Refer to the [Journal and Book Locator library guide](#) to learn how to use this tool. If the full text is not available, you may be able to request a copy through the [Interlibrary Loan](#) service.

- Byers, T., Slack, T., & Parent, M. (2012). [Organizational theory](#). In *SAGE key concepts: Key concepts in sport management*. London, UK: Sage UK.
- Jordan, J. (2015). [Chaos theory](#). In D. Phillips (Ed.), *Encyclopedia of educational theory and philosophy* (Vol. 2, pp.156–157). Thousand Oaks, CA: SAGE Publications Ltd.
- Kovach, R., & McGuire, B. (2003). [Hazard vulnerability](#). In *Guide to global hazards*. London, UK: Philip's.
- Roedelein, J. E. (Ed.). (2006). [Communication theory](#). In *Elsevier's dictionary of psychological theories*. Oxford, England: Elsevier Science and Technology.
- Roedelein, J. E. (Ed.). (2006). [General theory of behavior](#). In *Elsevier's dictionary of psychological theories*. Oxford, England: Elsevier Science and Technology.
- Waks, L. (2014). [Complexity theory](#). In D. Phillips (Ed.), *Encyclopedia of educational theory and philosophy* (Vol. 2, pp. 168–170). Thousand Oaks, CA: SAGE Publications Ltd.

External Resource

Please note that URLs change frequently. While the URLs were current when this course was designed, some may no longer be valid. If you cannot access a specific link, contact your instructor for an alternative URL. Permissions for the following links have been either granted or deemed appropriate for educational use at the time of course publication.

- DRI International. (2017). [DRI Professional Practices](#). Retrieved from <https://www.drii.org/certification/professionalprac.php>
- Jensen, J. (2010). [Emergency management theory: Unrecognized, underused, and underdeveloped](#). In *Integrating Emergency Management Studies into Higher Education: Ideas, Programs, and Strategies*. Fairfax, VA: Public Entity Risk Institute.
- McEntire, D. A. (2004, June). [The status of emergency management theory: Issues, barriers, and recommendations for improved scholarship \[PDF\]](#). Paper presented at FEMA Higher Education Conference, Emmitsburg, MD. Retrieved from <https://training.fema.gov/hiedu/downloads/david%20mcentire%20-%20%20status%20of%20emergency%20management%20theory.pdf>

Projects

Project >> Critical Infrastructure National Strategies and Policies

Project Overview

The nation's critical infrastructure depends upon proactive and coordinated efforts that are necessary to strengthen and maintain secure, functioning, and resilient critical infrastructure. These include but are not limited to assets, networks, and systems. These assets, networks, and systems are vital to promoting public confidence and creating the country's safety, prosperity, and well-being. In order to withstand and rapidly recover from hazards, our critical infrastructure must be secure and resilient. Achieving security and resilience requires integration with the national preparedness system in areas related to prevention, protection, mitigation, response, continuity, and recovery. This endeavor is a shared responsibility among the federal government; the state, local, tribal, and territorial (SLTT) entities; and the public and private critical infrastructure owners and operators.

The purpose of the course project is:

1. To assess your understanding of the basic structure of the National Infrastructure Protection Plan authorities, and policies.
2. To assess your understanding of the requirements and responsibilities for management of the national system and analyze various theories and policies that would protect sustainable, resilient critical infrastructure systems.

The assignment in Unit 10 is designed to integrate insights from the other project components in the course that appear in Units 2, 4, and 7. You should use iterative feedback gained from these assignments to develop new observations and make revisions to your work so you are not merely cutting and pasting together work already done. Rather, you must demonstrate the ability to engage in critical thinking and scholarly research that show mastery of the competencies in the course. You are strongly encouraged to read the whole syllabus and all details pertinent to the course project and its components before starting the assignments.

Reference

White House Office of the Press Secretary. (2013, February). [Presidential Policy Directive PPD 21 - Critical Infrastructure Security and Resilience](#). Retrieved from <https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resil>

Unit 1 >> CIKR Policies and Supporting Theories

Introduction

Throughout the Emergency Management curriculum in the Capella School of Public Service Leadership, the design and development follows a guiding principle: *theory informs policy and practice*. As you will see in this unit, the course will present various theories through the readings and activities designed. These theories are *suggested* as basis for the CIKR policies, procedures, and guidelines. You are not bound by the theories presented in the course; other theories may be identified and used as the basis for policy, procedures, and guidelines. Please note that in each scoring rubric, an assessment of *Distinguished* requires identification of the theoretical basis for response to that rubric and your reasoning for the choice of theories which you believe are important and relevant to successful performance in the final project.

Learning Activities

u01s1 - Studies

Readings

Use the Capella University Library and the Internet to complete the following:

- Buckle Henning, P., & Chen, W. (2012). [Systems Thinking: Common Ground or Untapped Territory?](#) *Systems Research & Behavioral Science*, 29(5), 470–483.
- Fisher, J. G. (1998). [Contingency theory, management control systems and firm outcomes: Past results and future directions](#). *Behavioral Research in Accounting*, 10, 47–64.
- Gallo, G. (2013). [Conflict theory, complexity and systems approach](#). *Systems Research and Behavioral Science*, 30(2), 156–175.
- 't Hart, P. (2013). [After Fukushima: Reflections on risk and institutional learning in an era of mega-crises](#). *Public Administration*, 91(1), 101–113

The following resources are useful for the Critical Infrastructure and Key Resources (CIKR) concentration. You should tailor your consultation of these resources to match the needs of the unit's activities.

- Browse the White House Office of the Press Secretary. (2013, February). [Presidential Policy Directive \(PPD\) 21 - Critical Infrastructure Security and Resilience](#). Retrieved from <https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resil>

If you are unable to open the link, go to the main page of the website and search for the term: Presidential Policy Directive PPD 21.

- Browse the White House Office of the Press Secretary. (2013, February). [Executive Order 13636 - Improving Critical Infrastructure Cybersecurity](#). Retrieved from <https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/executive-order-improving-critical-infrastructure-cybersecurity>

If you are unable to open the link, go to the main page of the website and search for the term: Executive Order 13636.

Optional Reading

You may choose to consult the following resource:

- [Organizational theory. \(2012\)](#). In T. Byers, T. Slack, & M. Parent, *SAGE key concepts: Key concepts in sport management*. London, UK: Sage UK. Retrieved from http://library.capella.edu/login?url=http://search.credoreference.com/content/entry/sageuksm/organizational_theory/0?institutionId=816

u01s1 - Learning Components

- Identify Critical Infrastructure Key Resources (CIKR) program and its relationship to continuity management.
- Understand the environment of the NIPP in context of the vulnerabilities and challenges of the public and private sector.

- Explore the standards, procedures, guidelines, national strategies, authorities, and policies of the NIPP.

u01s2 - Assignment Preparation

Next week you will submit the first component of your final project. In this assignment, you will prepare a 20–25 PowerPoint slide presentation in which you analyze the current critical infrastructure of the National Infrastructure Protection Program (NIPP) standards, procedures, guidelines, national strategies, authorities, and policies. This analysis will entail completion of the following tasks:

- Describe the Critical Infrastructure Key Resources (CIKR) program and its relationship to continuity management.
- Describe the environment of the NIPP in context of the vulnerabilities and challenges of the public sector.
- Describe the environment of the NIPP in context of the vulnerabilities and challenges of the private sector.
- Explain the National Response Framework and the CIKR Annex.
- Explain the Energy Sector and the role of the Department of Energy.
- Describe PPD 21 and Executive Order 13636.
- Articulate the responsibilities of the private and public sector in the CIKR.

Take time this week to start gathering resources that will allow you to prepare for this assignment.

Be sure to read the assignment requirements for PowerPoint presentations.

You are encouraged to refer to the *APA Manual* to ensure you are citing all your sources appropriately in your assignment as this is part of the grading requirements. APA Style Central has additional guidance, examples, and tools you can use for researching, writing, and formatting your paper and for citing and referencing resources in APA style. See the APA Style and Format section of the Writing Center for instructions on accessing and using APA Style Central.

Carefully read the grading criteria on the CIKR Environment and the NIPP Presentation Scoring Guide to ensure you understand how your work will be assessed.

Course Resources

Publication Manual of the American Psychological Association

[APA Style and Format](#)

u01s2 - Learning Components

- Identify Critical Infrastructure Key Resources (CIKR) program and its relationship to continuity management.
- Understand the environment of the NIPP in context of the vulnerabilities and challenges of the public and private sector.
- Explore the standards, procedures, guidelines, national strategies, authorities, and policies of the NIPP.

u01s3 - Obtaining NFPA 1600

Download your *NFPA 1600: Standard on Disaster/Emergency Management and Business Continuity/Continuity of Operations Programs* course text from the NFPA website using the following instructions. (**Note:** Although there is no charge for this text, you must register on the website to access the PDF. Registration is free, and NFPA membership is not required.)

To download the PDF:

1. Go to [NFPA1600](#).
2. Select the 2016 edition.
3. Follow the prompts to register and download the material.

u01s4 - Discussion Expectations

Read the Graduate Discussion Participation Scoring Guide to learn how the instructor will evaluate your discussion participation throughout this course. Also, review [Creating Strong Discussion Posts \[PDF\]](#).

Initial Discussion Posts

- Your initial discussion posts in this course are expected to be at least 250 words and must include relevant examples and supporting evidence. All other references must be cited using current APA style and format.
- Include one academic resource in addition to the materials assigned in this course to support your reasoning.
- The initial discussion post must be made by Thursday of the current week.

Response Guidelines

- The response should be at least 75 words. Support your reasoning with one academic resource in addition to the materials assigned in this course.
- Keep in mind that the objective of your response post is to stimulate discussion, to promote an exchange of ideas among learners, and most importantly, to generate a sense of community in the courseroom.
- The response to one other learner's post must be made by Sunday of the current week.

Course Resources
APA Style and Format

u01d1 - Various Functions of Management

The Critical Infrastructure Key Resource program is composed of both the private and public sector assets. Approximately 80 percent of the resources included in the CIKR are owned and operated by the private sector. In this context, describe a joint public-private organization that will perform the various functions of management.

Your initial post should be at least 250 words. Support your ideas with relevant examples and evidence. Include at least one academic resource in addition to materials assigned in this course to support your reasoning. All references must be cited using current APA style and format.

Response Guidelines

Review the posts of your peers and respond to at least one, using one of the following approaches:

- Identify knowledge gaps or unknowns that were not considered in your peer's post.
- Identify an assumption on which the post seems to be based, and pose a useful alternative or contrasting approach based on a different assumption.
- Ask a probing question.
- Elaborate on a particular point.

Your response posts should be at least 75 words and substantive in nature. Support your views with references to assigned readings, as well as other theoretical, empirical, or professional literature. If you are responding with a personal perspective or an example from your workplace experience, be sure to focus on both the theoretical and practical implications. Cite all sources in current APA style.

Course Resources
Graduate Discussion Participation Scoring Guide
APA Style and Format
Creating Strong Discussion Posts

u01d1 - Learning Components

- Identify Critical Infrastructure Key Resources (CIKR) program and its relationship to continuity management.
- Understand the environment of the NIPP in context of the vulnerabilities and challenges of the public and private sector.
- Explore the standards, procedures, guidelines, national strategies, authorities, and policies of the NIPP.
- Demonstrate effective writing skills and proper APA formatting skills.

At the completion of this unit, your instructor will post a summary of key points from the week's concepts and topics.

Response Guidelines

You are not required to respond to this discussion.

Unit 2 >> NIPP and National Response Framework

Introduction

In this unit, you will be introduced to the policy and procedures developed and issued for building resilience in the CIKR system. CIKR is part of the National Response Framework (NRF). The NRF is a guide to how the Nation responds to all types of disasters and emergencies. This Framework describes specific authorities and best practices for managing disruptive incidents that range from the serious but purely local to large-scale terrorist attacks or catastrophic natural disasters. The NRF describes the principles, roles and responsibilities, and coordinating structures for delivering the core capabilities required to respond to a disruptive incident and describes how response efforts integrate with those of the other mission areas. This Framework is always in effect and describes the doctrine under which the Nation responds to incidents. The linkage of the NIPP 2013 to the NRF is *The Critical Infrastructure and Key Resources (CIKR) Support Annex*, which describes the policies, roles and responsibilities, and the concept of operations for providing security and resilience in the system.

References

US Department of Homeland Security. (2017, June). [National Response Framework \(NRF\) – Critical Infrastructure and Key Resources Support Annex \[PDF\]](https://www.fema.gov/pdf/emergency/nrf/nrf-support-cikr.pdf). Retrieved from <https://www.fema.gov/pdf/emergency/nrf/nrf-support-cikr.pdf>

Learning Activities

u02s1 - Studies

Readings

Use the Capella Library and the Internet to complete the following:

- Sanial, G. (2014). [Exploring U.S. Coast Guard organizational preparedness through chaos and complexity theories. Emergence: Emergence: Complexity and Organization, 16\(4\)](#), 1–16.

The following resources are useful for the Critical Infrastructure and Key Resources (CIKR) concentration. You should tailor your consultation of these resources to match the needs of the unit's activities.

- Browse US Department of Homeland Security. (2013, December). [National Infrastructure Protection Plan Fact Sheet 508 \[PDF\]](http://www.dhs.gov/sites/default/files/publications/NIPP-Fact-Sheet-508.pdf). Retrieved from www.dhs.gov/sites/default/files/publications/NIPP-Fact-Sheet-508.pdf

If you are unable to open the link, go to the main page of the Web site and search for the term: NIPP Fact Sheet 508

- Browse US Department of Homeland Security. (2013, December). [NIPP 2013: Partnering for Critical Infrastructure Security and Resilience \(NIPP\) \[PDF\]](http://www.dhs.gov/sites/default/files/publications/NIPP%202013_Partnering%20for%20Critical%20Infrastructure%20Security%20and%20Resilience_508_0.pdf). Retrieved from www.dhs.gov/sites/default/files/publications/NIPP%202013_Partnering%20for%20Critical%20Infrastructure%20Security%20and%20Resilience_508_0.pdf

If you are unable to open the link, go to the main page of the Web site and search for the term: NIPP 2013

- Browse US Department of Homeland Security. (2017, June). [National Response Framework \(NRF\) – Critical Infrastructure and Key Resources Support Annex \[PDF\]](https://www.fema.gov/pdf/emergency/nrf/nrf-support-cikr.pdf). Retrieved from <https://www.fema.gov/pdf/emergency/nrf/nrf-support-cikr.pdf>

If you are unable to open the link, go to the main page of the Web site and search for the term: NRF, CIKR Support

Optional Readings

You may choose to consult the following resources:

- Browse DRI International. (2017). [DRI Professional Practices](https://www.drii.org/certification/professionalprac.php). Retrieved from <https://www.drii.org/certification/professionalprac.php>

If you are unable to open the link, go to the main page of the Web site and search for the term: DRI Professional Practices

- McEntire, D. A. (2004, June). [The status of emergency management theory: Issues, barriers, and recommendations for improved scholarship \[PDF\]](#). Paper presented at FEMA Higher Education Conference, Emmitsburg, MD. Retrieved from <https://training.fema.gov/hiedu/downloads/david%20mcentire%20-%20%20status%20of%20emergency%20management%20theory.pdf>
- Pine, J. C. (2007). [The contributions of management theory and practice to emergency management \[DOC\]](#). In D. A. McEntire (Ed.), *Discipline, disasters and emergency management: The convergence and divergence of concepts, issues and trends from the research literature* (pp. 196–205). Retrieved from <http://www.training.fema.gov/hiedu/docs/emt/contributions%20of%20manage.doc>
- Jensen, J. (2010). [Emergency management theory: Unrecognized, underused, and underdeveloped](#). In *Integrating Emergency Management Studies into Higher Education: Ideas, Programs, and Strategies*. Fairfax, VA: Public Entity Risk Institute.
- Roeckelein, J. E. (Ed.). (2006). [Communication theory](#). In *Elsevier's dictionary of psychological theories*. Oxford, England: Elsevier Science and Technology.
- Roeckelein, J. E. (Ed.). (2006). [General theory of behavior](#). In *Elsevier's dictionary of psychological theories*. Oxford, England: Elsevier Science and Technology.

u02s1 - Learning Components

- Identify Critical Infrastructure Key Resources (CIKR) program and its relationship to continuity management.
- Understand the environment of the NIPP in context of the vulnerabilities and challenges of the public and private sector.
- Explore the standards, procedures, guidelines, national strategies, authorities, and policies of the NIPP.

u02a1 - CIKR Environment and the NIPP Presentation

In this first component of your course project, you will prepare a 20–25 slide PowerPoint presentation in which you analyze the current critical infrastructure of the National Infrastructure Protection Program (NIPP). You will do so by taking a critical look at the standards, procedures, guidelines, national strategies, authorities, and policies of the NIPP.

Make sure your presentation contains the identified slide headings which address the critical elements that are aligned with the grading criteria:

- Title.
- Purpose: Include the reasons for the presentation (1–2 slides only).
- Describe the Critical Infrastructure Key Resources (CIKR) program and its relationship to continuity management.
- Describe the environment of the NIPP in context of the vulnerabilities and challenges of the public sector.
- Describe the environment of the NIPP in context of the vulnerabilities and challenges of the private sector.
- Explain the National Response Framework and the CIKR Annex.
- Explain the Energy Sector and the role of the Department of Energy.
- Describe PPD 21 and the Executive Order 13636.
- Articulate the responsibilities of the private and public sector in the CIKR.

Assignment Requirements

You will use the speaker's notes section within the PowerPoint slides to provide all the information relevant to each slide, which you would otherwise present verbally.

Each slide must have no more than 4–5 bullets and each bullet must have no more than 4–6 words. Use graphics liberally throughout the presentation, but ensure they are appropriate for the content provided.

- **Written communication:** Written communication is free of errors that detract from the overall message.
- **APA formatting:** Resources and citations are formatted according to current APA style and formatting. Slide content does not need to conform to APA style.
- **Number of resources:** Minimum of five peer-reviewed resources, formatted according to APA guidelines.
- **Length of presentation:** 20–25 slides. At minimum, your PowerPoint presentation should contain two slides on each of the structural components in the body of your paper. Each slide in your presentation must include bulleted, succinct "on screen" content, as well as speaker notes that demonstrate your plan to communicate effectively with your audience.
- **Resources:** Your ideas must be supported with relevant recent, scholarly sources that are properly cited and referenced in APA Style.
- **Writing assistance** is available through the Capella Writing Center or Smarthinking, the free, online writing tutorial and review service.

Before you start your work, carefully read the grading criteria on the CIKR Environment and the NIPP Presentation Scoring Guide to ensure you understand all of the requirements for success.

[APA Style and Format](#)

u02d1 - National Response Framework

The National Response Framework is described as *always in effect*. What theories could be identified as informing this policy and why?

Your initial post should be at least 250 words. Support your ideas with relevant examples and evidence. Include at least one academic resource in addition to materials assigned in this course to support your reasoning. All references must be cited using current APA style and format.

Response Guidelines

Review the posts of your peers and respond to at least one, using one of the following approaches:

- Identify knowledge gaps or unknowns that were not considered in your peer's post.
- Identify an assumption on which the post seems to be based, and pose a useful alternative or contrasting approach based on a different assumption.
- Ask a probing question.
- Elaborate on a particular point.

Your response posts should be at least 75 words and substantive in nature. Support your views with reference to assigned readings, as well as other theoretical, empirical, or professional literature. If you are responding with a personal perspective or an example from your workplace experience, be sure to focus on both the theoretical and practical implications. Cite all sources in proper APA style.

Graduate Discussion Participation Scoring Guide

[APA Style and Format](#)

Creating Strong Discussion Posts

u02d1 - Learning Components

- Identify Critical Infrastructure Key Resources (CIKR) program and its relationship to continuity management.
- Understand the environment of the NIPP in context of the vulnerabilities and challenges of the public and private sector.
- Explore the standards, procedures, guidelines, national strategies, authorities, and policies of the NIPP.
- Demonstrate effective writing skills and proper APA formatting skills.

u02d2 - Unit 2 Summary

At the completion of this unit, your instructor will post a summary of key points from the week's concepts and topics.

Response Guidelines

You are not required to respond to this discussion.

Unit 3 >> Structure of the NIPP

Introduction

In this unit, we will be introduced to the Critical Infrastructure which is composed of Key Resources (usually known as CIKR). This system is critical to the American society. Effective, efficient communication and collaboration between the public and the private sectors is essential; approximately 80% of the Critical Infrastructure assets are owned and operated by the private sector.

The entire CIKR was authorized by one Presidential Decision Directive (PPD 21) and one Executive Order (EO13636) focusing on cyber security. The basic "blueprint" for the CIKR Structure is contained in the National Infrastructure Protection Plan (NIPP 2013). The National Plan (NIPP 2013) aligns with the National Preparedness System as outlined in the Presidential Decision Directive 8 *National Preparedness*. These documents are essential to the four courses in the CIKR concentration.

Learning Activities

u03s1 - Studies

Readings

Use the Capella Library and the Internet to complete the following:

- Cavallo, A., & Ireland, V. (2014, September). [Preparing for complex interdependent risks: A System of Systems approach to building disaster resilience](#). *Elsevier*, 9, 181–193.

The following resources are useful for the Critical Infrastructure and Key Resources (CIKR) concentration. You should tailor your consultation of these resources to match the needs of the unit's activities.

- Browse US Department of Homeland Security. (2013, December). [National Infrastructure Protection Plan Fact Sheet 508 \[PDF\]](#). Retrieved from www.dhs.gov/sites/default/files/publications/NIPP-Fact-Sheet-508.pdf

If you are unable to open the link, go to the main page of the Web site and search for the term: NIPP Fact Sheet 508

- Browse US Department of Homeland Security. (2013, December). [NIPP 2013: Partnering for Critical Infrastructure Security and Resilience \(NIPP\) \[PDF\]](#). Retrieved from www.dhs.gov/sites/default/files/publications/NIPP%202013_Partnering%20for%20Critical%20Infrastructure%20Security%20and%20Resilience_508_0.pdf

If you are unable to open the link, go to the main page of the Web site and search for the term: NIPP 2013

If you have not done so yet, download your copy of [NFPA 1600](#). See Unit 1, Study 3, for download instructions. Use your downloaded copy to complete the following:

- *NFPA 1600* pages 1600-1 to 1600-15

u03s1 - Learning Components

- Identify the structure of the National Infrastructure Protection Program related to resilience and security.
- Study the theoretical implications of the use of the terms security and resilience in context of the NIPP.

u03s2 - Assignment Preparation

Next week you will submit the second component of your final project in which you have to analyze the structure of the National Infrastructure Protection Program and examine why security and resilience are designated as two defining features of the NIPP. Take time this week to start a rough draft of your work and conduct research in the Capella Library that will allow you to do the following:

- Analyze the structure of the National Infrastructure Protection Program related to resilience.
- Analyze the structure of the National Infrastructure Protection Program related to security.
- Examine the theoretical implications of the use of the term "security" in context of the NIPP.
- Examine the theoretical implications of the use of the term "resilience" in context of the NIPP.

Before you start a rough draft of your work, carefully read the grading criteria on the Structure of the NIPP Scoring Guide to ensure you understand all of the requirements for success.

You are encouraged to refer to the *APA Manual* to ensure you are citing all your sources appropriately in your assignment as this is part of the grading requirements. APA Style Central has additional guidance, examples, and tools you can use for researching, writing, and formatting your paper and for citing and referencing resources in APA style. See the APA Style and Format section of the Writing Center for instructions on accessing and using APA Style Central.

u03d1 - Formation structure of the NIPP

Thus far in the course, you have been presented with several theories which can inform policy and procedures for the CIKR overall system. What theories inform the formation structure of the NIPP structure and why?

Your initial post should be at least 250 words. Support your ideas with relevant examples and evidence. Include at least one academic resource in addition to materials assigned in this course to support your reasoning. All references must be cited using current APA style and format.

Response Guidelines

Review the posts of your peers and respond to at least one, using one of the following approaches:

- Identify knowledge gaps or unknowns that were not considered in your peer's post.
- Identify an assumption on which the post seems to be based, and pose a useful alternative or contrasting approach based on a different assumption.
- Ask a probing question.
- Elaborate on a particular point.

Your response posts should be at least 75 words and substantive in nature. Support your views with reference to assigned readings, as well as other theoretical, empirical, or professional literature. If you are responding with a personal perspective or an example from your workplace experience, be sure to focus on both the theoretical and practical implications. Cite all sources in proper APA style.

Course Resources

Graduate Discussion Participation Scoring Guide

[APA Style and Format](#)

Creating Strong Discussion Posts

u03d1 - Learning Components

- Identify the structure of the National Infrastructure Protection Program related to resilience and security.
- Study the theoretical implications of the use of the terms security and resilience in context of the NIPP.
- Demonstrate effective writing skills and proper APA formatting skills.

u03d2 - Unit 3 Summary

At the completion of this unit, your instructor will post a summary of key points from the week's concepts and topics.

Response Guidelines

You are not required to respond to this discussion.

Unit 4 >> Environment of the CIKR

Introduction

In this unit, you will explore how the Critical Infrastructure is designed to address the hazards of the environment in which we live. Roads and bridges, power and distribution systems, and industrial capacity are examples of the Key Resources protected by the Critical Infrastructure system. Physical threats and natural disasters were the hazards toward which the infrastructure was originally designed to provide security and resilience; the threat of cyberattacks has emerged as a hazard of increasing concern.

Learning Activities

u04s1 - Studies

Readings

Use the Capella Library and the Internet to complete the following:

- Lei, Y., Wang, J., Yue, Y., Zhou, H., & Yin, W. (2014). [Rethinking the relationships of vulnerability, resilience, and adaptation from a disaster risk perspective](#). *Natural Hazards*, 70(1), 609–627.
- af Wahlberg, A. E. (2001). [The theoretical features of some current approaches to risk perception](#). *Journal of Risk Research*, 4(3), 237–250.
- Prelipcean, G., Stancu, S., Roșca, G. I., & Lupan, M. (2012). [Particularities of risk in the case of extreme events](#). *Scientific Research and Education in the Air Force– AFASES*, 1, 211–217.
- Birkmann, J., Cardona, O. D., Carreño, M.L., Barbat, A. H., Pelling, M., Schneiderbauer, S., Welle, T. (2013). [Framing vulnerability, risk and societal responses: The MOVE framework](#). *Natural Hazards*, 67(2), 193–211.

The following resource is useful for the Critical Infrastructure and Key Resources (CIKR) concentration. You should tailor your consultation of this resource to match the needs of the unit's activities.

- Browse US Department of Homeland Security. (2016, October). [Critical Infrastructure Threat Information Sharing Framework: A Reference Guide for the Critical Infrastructure Community](#) [PDF]. Retrieved from <https://www.dhs.gov/sites/default/files/publications/ci-threat-information-sharing-framework-508.pdf>

If you are unable to open the link, go to the main page of the Web site and search for the term: Critical Infrastructure Threat Information Sharing Framework.

u04s1 - Learning Components

- Identify the structure of the National Infrastructure Protection Program related to resilience and security.
- Study the theoretical implications of the use of the terms security and resilience in context of the NIPP.

u04a1 - Structure of the NIPP

In this second component of your final project, you will analyze the structure of the National Infrastructure Protection Program and examine why security and resilience are designated as two defining features of the NIPP. You will carry out this analysis by doing the following:

- Analyze the structure of the National Infrastructure Protection Program related to resilience.
- Analyze the structure of the National Infrastructure Protection Program related to security.
- Examine the theoretical implications of the use of the term "security" in context of the NIPP.
- Examine the theoretical implications of the use of the term "resilience" in context of the NIPP.

Submission Requirements

- **Written communication:** Your writing should clearly identify where each grading criteria or part of the assignment is addressed. Your points must be logical, substantive, and relevant based on the evidence presented. The writing must be free of errors that detract from the overall message.
- **APA guidelines:** Resources and citations must be formatted according to current APA style and formatting. When appropriate, use APA-formatted headings.
- **Resources:** Your ideas must be supported with relevant recent, scholarly sources that are properly cited and referenced in current APA style.
- **Length of paper:** 5–7 typed, double-spaced pages, not including the title page and references.
- **Font and font size:** Times New Roman, 12 point.

Writing assistance is available at the Writing Center or Smarthinking, a free online writing tutorial and review service. Both are linked in the Resources.

Review the scoring guide for the grading criteria for this assignment.

u04d1 - FEMA and Theoretical Implications of Terminologies

FEMA makes a distinction between hazard (not intentional) and threat (intentional). Is this a useful distinction? What are the theoretical implications of the terminologies?

Your initial post should be at least 250 words. Support your ideas with relevant examples and evidence. Include at least one academic resource in addition to materials assigned in this course to support your reasoning. All references must be cited using current APA style and format.

Response Guidelines

Review the posts of your peers and respond to at least one, using one of the following approaches:

- Identify knowledge gaps or unknowns that were not considered in your peer's post.
- Identify an assumption on which the post seems to be based, and pose a useful alternative or contrasting approach based on a different assumption.
- Ask a probing question.
- Elaborate on a particular point.

Your response posts should be at least 75 words and substantive in nature. Support your views with reference to assigned readings, as well as other theoretical, empirical, or professional literature. If you are responding with a personal perspective or an example from your workplace experience, be sure to focus on both the theoretical and practical implications. Cite all sources in proper APA style.

Course Resources
Graduate Discussion Participation Scoring Guide
APA Style and Format
Creating Strong Discussion Posts

u04d1 - Learning Components

- Identify the structure of the National Infrastructure Protection Program related to resilience and security.
- Study the theoretical implications of the use of the terms security and resilience in context of the NIPP.
- Demonstrate effective writing skills and proper APA formatting skills.

u04d2 - Unit 4 Summary

At the completion of this unit, your instructor will post a summary of key points from the week's concepts and topics.

Response Guidelines

You are not required to respond to this discussion.

Unit 5 >> Vulnerabilities of the CIKR

Introduction

In this unit we learn about the structure of the National Infrastructure Protection Plan's "built-in" vulnerabilities, which can be an obstacle to effective, efficient continuity management of the CIKR assets. The first source of vulnerability is the variety of people and organizations, both public and private sectors, involved with the structure. Communication and politics often constitute vulnerability. A complex structure requires a monitoring program to ensure the desired parameters of security

and resilience are the "normal operating" mode. At times, the U.S. must rely on international partners' cooperation, and this could be another source of vulnerability. Information sharing is another source of vulnerability, complicated by concerns of the protection of the information involved. The attacks on 9/11 provided a strong wake up call for not adequately sharing information; regrettably, many of the "silos" which existed on September 11th, 2001 are a continuing source of vulnerability.

Learning Activities

u05s1 - Studies

Readings

Use the Capella Library to read:

- Eddy, C., & Sase, E. (2015). [Implications of the Fukushima nuclear disaster: Man-made hazards, vulnerability factors, and risk to environmental health](#). *Journal of Environmental Health*, 78(1), 26–32.
- IOMA, Business Intelligence at Work (2010). [Preparedness should build on 8 principles of resilience](#). *Security Director's Report*, 10(2), 1–15.
- McEntire, D. (2012). [Understanding and reducing vulnerability: From the approach of liabilities and capabilities](#). *Disaster Prevention and Management*, 21(2), 206–225.

Use the Internet to complete the following:

- Barishansky, R. M. (2015, August). [The word on resilience](#). *Emergency Management*.

The following resource is useful for the Critical Infrastructure and Key Resources (CIKR) concentration. You should tailor your consultation of the resource to match the needs of the unit's activities.

- Browse US Department of Homeland Security. (2017, June). [National Response Framework \(NRF\) – Critical Infrastructure and Key Resources Support Annex \[PDF\]](#). Retrieved from <https://www.fema.gov/pdf/emergency/nrf/nrf-support-cikr.pdf>

u05s1 - Learning Components

- Identify vulnerabilities and challenges related to critical infrastructure environments.
- Identify the critical infrastructure vulnerabilities related to cyberattacks.
- Identify the critical infrastructure vulnerabilities related to physical intrusion.
- Recognize potential solutions for cyberattacks.

u05d1 - Disruptive Incidents

It is said that planning to respond to disruptive incidents is *always* flawed because we *always* do not know the type of disruptive incident, the time of occurrence of the disruptive incident, and the time of advance, to name a few critical elements missing from our planning. Planning which comprehends the vulnerabilities and threats to CIKR is no different. Which theories support planning in this type of situation?

Your initial post should be at least 250 words. Support your ideas with relevant examples and evidence. Include at least one academic resource in addition to materials assigned in this course to support your reasoning. All references must be cited using current APA style and format.

Response Guidelines

Review the posts of your peers and respond to at least one, using one of the following approaches:

- Identify knowledge gaps or unknowns that were not considered in your peer's post.
- Identify an assumption on which the post seems to be based, and pose a useful alternative or contrasting approach based on a different assumption.
- Ask a probing question.
- Elaborate on a particular point.

Your response posts should be at least 75 words and substantive in nature. Support your views with reference to assigned readings, as well as other theoretical, empirical, or professional literature. If you are responding with a personal perspective or an example from your workplace experience, be sure to focus on both the theoretical and practical implications. Cite all sources in proper APA style.

Creating Strong Discussion Posts

u05d1 - Learning Components

- Identify vulnerabilities and challenges related to critical infrastructure environments.
- Identify the critical infrastructure vulnerabilities related to cyberattacks.
- Identify the critical infrastructure vulnerabilities related to physical intrusion.
- Demonstrate effective writing skills and proper APA formatting skills.
- Recognize potential solutions for cyberattacks.

u05d2 - Unit 5 Summary

At the completion of this unit, your instructor will post a summary of key points from the week's concepts and topics.

Response Guidelines

You are not required to respond to this discussion.

Unit 6 >> Challenges of the CIKR

Introduction

In this unit, you will learn emergency managers often refer to the four phases of emergency management, last articulated by FEMA in October 2007. The four phases of Emergency Management are still displayed in the classrooms of the Emergency Management Institute in Emmitsburg, MD. Today, the definitions explained in the 2011 Presidential Policy Directive 8: National Preparedness have become the norm for Homeland Security. In this course, we will use the PPD 8 definitions.

Challenges of the CIKR come with the establishment of the 16 critical infrastructure sectors. One of the basic components in the critical infrastructure sector is Information-Sharing. Often private sector owners and operators have reservations about sharing proprietary or sensitive information. The Federal Protected Critical Infrastructure Information Program helps to protect against the disclosure of this type of information.

Learning Activities

u06s1 - Studies

Readings

Use the Capella library and the Internet to complete the following:

- Fisher, J. G. (1998). [Contingency theory, management control systems and firm outcomes: Past results and future directions](#). *Behavioral Research in Accounting*, 10, 47–64.
- Fredericks, E. (2005). [Infusing flexibility into business-to-business firms: A contingency theory and resource-based view perspective and practical implications](#). *Industrial Marketing Management*, 34(6), 555–565.
- Manson, S. M. (2001). [Simplifying complexity: a review of complexity theory](#). *Geoforum*, 32(3), 405–414.

The following resource is useful for the Critical Infrastructure and Key Resources (CIKR) concentration. You should tailor your consultation of the resource to match the needs of the unit's activities.

- Browse U.S. Department of Homeland Security. (n.d.). [Presidential Policy Directive / PPD-8: National preparedness](#). Retrieved from <https://www.dhs.gov/presidential-policy-directive-8-national-preparedness>

If you are unable to open the link, go to the main page of the Web site and search for the term: PPD-8: National preparedness

Pay particular attention to the definitions provided for *security, resilience, national preparedness, prevention, protection, mitigation, response, and recovery*. Your understanding of these terms is important to the discussion question in this unit.

Use your downloaded copy of [NFPA 1600](#) to read the following:

- Read Chapter 5
- Read Chapter 6
- Read related sections in Annex A. (**Note:** When reading *NFPA 1600*, you will encounter sections marked with an asterisk (*), which means that supplementary information is provided in Annex A.)

Optional Reading

You may choose to read the following resource:

- Kovach, R., & McGuire, B. (2003). [Hazard vulnerability](#). In *Guide to global hazards*. London, UK: Philip's.

u06s1 - Learning Components

- Identify vulnerabilities and challenges related to critical infrastructure environments.
- Identify the critical infrastructure vulnerabilities related to cyberattacks.
- Identify the critical infrastructure vulnerabilities related to physical intrusion.
- Recognize potential solutions for cyberattacks.

u06s2 - Assignment Preparation

Next week you will submit the third component of your final project in which you have to analyze the critical infrastructure environment. Take time this week to start a rough draft of your work and conduct research in the Capella Library that will allow you to do the following:

- Examine the broad vulnerabilities and challenges related to critical infrastructure environments.
- Analyze the critical infrastructure vulnerabilities related to cyberattacks.
- Describe the critical infrastructure vulnerabilities related to physical intrusion.
- Propose potential solutions for cyberattacks.

Before you start a rough draft of your work, carefully read the grading criteria on the CIKR Environment: Vulnerabilities and Challenges Scoring Guide to ensure you understand all of the requirements for success.

You are encouraged to refer to the *APA Manual* to ensure you are citing all your sources appropriately in your assignment as this is part of the grading requirements. APA Style Central has additional guidance, examples, and tools you can use for researching, writing, and formatting your paper and for citing and referencing resources in APA style. See the APA Style and Format section of the Writing Center for instructions on accessing and using APA Style Central.

Course Resources
<i>Publication Manual of the American Psychological Association</i>
APA Style and Format

u06d1 - PPD8 Definitions of Terms

In u06s1, you were asked to review the definitions from PPD8. Based on your review, what term commonly used with emergency management is missing from the list and why? Do you agree with the omission? Provide justification for your answer.

Your initial post should be at least 250 words. Support your ideas with relevant examples and evidence. Include at least one academic resource in addition to materials assigned in this course to support your reasoning. All references must be cited using current APA style and format.

Response Guidelines

Review the posts of your peers and respond to at least one, using one of the following approaches:

- Identify knowledge gaps or unknowns that were not considered in your peer's post.
- Identify an assumption on which the post seems to be based, and pose a useful alternative or contrasting approach based on a different assumption.
- Ask a probing question.
- Elaborate on a particular point.

Your response posts should be at least 75 words and substantive in nature. Support your views with reference to assigned readings, as well as other theoretical, empirical, or professional literature. If you are responding with a personal perspective or an example from your workplace experience, be sure to focus on both the theoretical and practical implications. Cite all sources in proper APA style.

Course Resources
Graduate Discussion Participation Scoring Guide
Creating Strong Discussion Posts
APA Style and Format

u06d2 - Unit 6 Summary

At the completion of this unit, your instructor will post a summary of key points from the week's concepts and topics.

Response Guidelines

You are not required to respond to this discussion.

Unit 7 >> Building Resilience in the CIKR

Introduction

In this unit, you will focus on *resilience*, as required for the Critical Infrastructure. The requirement for resilience in the CIKR is identical to the requirement inherent to continuity management. PPD 21 - Critical Infrastructure Security and Resilience established the term *resilience* as a permanent part of the lexicon of national preparedness. PPD 8 National Preparedness defines resilience as "the ability to adapt to changing conditions and withstand and rapidly recover from disruption due to emergencies."

This definition could serve as a "mantra" for the entire discipline of emergency, continuity, and crisis management. Hopefully, this definition will strike a responsive chord within you as you as a student in Emergency Management in pursuit of your degree. Resilience and security are basic hallmarks of the National Infrastructure Protection Program as part of the National Response Framework. The critical infrastructure of the United States needs resilience in time of disruptive incidents and security of the CIKR at all times.

References

U.S. Department of Homeland Security. (n.d.). [Presidential Policy Directive / PPD-8: National preparedness](#). Retrieved from <https://www.dhs.gov/presidential-policy-directive-8-national-preparedness>

The White House Office of the Press Secretary. (2013, February). [Presidential Policy Directive \(PPD\) 21 - Critical Infrastructure Security and Resilience](#). Retrieved from <https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resil>

Learning Activities

u07s1 - Studies

Readings

Use the Capella Library to read the following:

- Bowman, R., & Newman, A. (2016). [A model to improve preparedness and strategically enhance resiliency at a community level: The Garden State approach](#). *Journal of Business Continuity & Emergency Planning*, 10(2), 124–131.
- Armour, M. (2014). [Busting myths and building resilience: Practices and approaches that go beyond mere plan development](#). *Journal of Business Continuity & Emergency Planning*, 8(2), 106–113.

The following resource is useful for the Critical Infrastructure and Key Resources (CIKR) concentration. You should tailor your consultation of the resource to match the needs of the unit's activities.

Use the Internet to complete the following:

- Browse US Department of Homeland Security. (2016). [NIPP Supplemental Tool: Incorporating Resilience into Critical Infrastructure Projects](https://www.dhs.gov/publication/nipp-2013-resilience-ci-projects). Retrieved from <https://www.dhs.gov/publication/nipp-2013-resilience-ci-projects>

If you are unable to open the link, go to the main page of the Web site and search for the term: Incorporating Resilience into Critical Infrastructure Projects

u07s1 - Learning Components

- Identify vulnerabilities and challenges related to critical infrastructure environments.
- Identify the critical infrastructure vulnerabilities related to cyberattacks.
- Identify the critical infrastructure vulnerabilities related to physical intrusion.
- Recognize potential solutions for cyberattacks.

u07a1 - CIKR Environment: Vulnerabilities and Challenges

A robust security and resilience system in the CIKR depends upon a mature continuity management program which has been fully tested and revised as necessary. Such a continuity management program must be built on a sound risk assessment composed of hazard identification, vulnerability assessment, and impact analysis. Identification of vulnerabilities and challenges in the critical infrastructure environment is a fundamental aspect of a resilient CIKR program.

For this third component of your final project, you will write a research paper in which you analyze the environment of the NIPP. Your analysis should take into consideration all internal and external hazards and threats to Critical Infrastructure and Key Resources to design and monitor resilient, sustainable operating and protective systems. Your work should demonstrate consideration of the overall federal Critical Infrastructure and Key Resources program for protection of the key resources

In your research paper:

- Analyze the broad vulnerabilities and challenges related to critical infrastructure environments.
- Analyze the critical infrastructure vulnerabilities related to cyberattacks.
- Describe the critical infrastructure vulnerabilities related to physical intrusion.
- Propose potential solutions for cyberattacks.

Submission Requirements

- **Written communication:** Your writing should clearly identify where each grading criteria or part of the assignment is addressed. Your points must be logical, substantive, and relevant based on the evidence presented. The writing must be free of errors that detract from the overall message.
- **APA guidelines:** Resources and citations must be formatted according to current APA style and formatting. When appropriate, use APA-formatted headings.
- **Resources:** Your ideas must be supported with relevant recent, scholarly sources that are properly cited and referenced in current APA style.
- **Length of paper:** 5–7 typed, double-spaced pages, not including the title page and references.
- **Font and font size:** Times New Roman, 12 point.

Writing assistance is available at the Writing Center or Smarthinking, a free online writing tutorial and review service. Both are linked in the Resources.

Review the scoring guide for the grading criteria for this assignment.

Course Resources

[APA Style and Format](#)

u07d1 - Resilience in CIKR

What are examples you could use as analogies to explain the meaning of *resilience* in the CIKR?

Your initial post should be at least 250 words. Support your ideas with relevant examples and evidence. Include at least one academic resource in addition to materials assigned in this course to support your reasoning. All references must be cited using current APA style and format.

Response Guidelines

Review the posts of your peers and respond to at least one, using one of the following approaches:

- Identify knowledge gaps or unknowns that were not considered in your peer's post.
- Identify an assumption on which the post seems to be based, and pose a useful alternative or contrasting approach based on a different assumption.
- Ask a probing question.
- Elaborate on a particular point.

Your response posts should be at least 75 words and substantive in nature. Support your views with reference to assigned readings, as well as other theoretical, empirical, or professional literature. If you are responding with a personal perspective or an example from your workplace experience, be sure to focus on both the theoretical and practical implications. Cite all sources in proper APA style.

Course Resources
Graduate Discussion Participation Scoring Guide
APA Style and Format
Creating Strong Discussion Posts

u07d1 - Learning Components

- Identify vulnerabilities and challenges related to critical infrastructure environments.
- Identify the critical infrastructure vulnerabilities related to cyberattacks.
- Identify the critical infrastructure vulnerabilities related to physical intrusion.
- Demonstrate effective writing skills and proper APA formatting skills.
- Recognize potential solutions for cyberattacks.

u07d2 - Unit 7 Summary

At the completion of this unit, your instructor will post a summary of key points from the week's concepts and topics.

Response Guidelines

You are not required to respond to this discussion.

Unit 8 >> Cybersecurity Issues

Introduction

In this unit, you will learn more about the threat from cyberattacks in the context of the Critical Infrastructure. We learned in previous units that security and resilience are the intended hallmarks for the CIKR system. Cyberterrorism attacks both hallmarks. It is vital to note the distinction between *hazard* and *threat* when attributing intent to do harm to a *threat*. Cyberattacks are threats.

Learning Activities

Readings

Use the Capella Library to read the following:

- Francescato, D., & Aber, M. S. (2015). [Learning from organizational theory to build organizational empowerment](#). *Journal of Community Psychology*, 717–738.
- Laursen, M. R. (2015). [CBDRM in Nepal: A matter of risk perceptions](#). *International Journal of Disaster Resilience in the Built Environment*, 6(1), 73–85.
- Sandoval, V., & Voss, M. (2016). [Disaster governance and vulnerability: The case of Chile](#). *Politics and Governance*, 4(4), 107–116.

Optional Readings

You may choose to consult the following resources:

- [Systems theory](#). In J. M. Palmisano (Ed.), *World of sociology*, Gale. Farmington, MI: Gale.
- Jordan, J. (2015). [Chaos theory](#). In D. Phillips (Ed.), *Encyclopedia of educational theory and philosophy* (Vol. 2, pp. 156–157). Thousand Oaks, CA: SAGE Publications Ltd.

u08s1 - Learning Components

- Explore national critical infrastructure protection standards, procedures and guidelines.
- Trace gaps and weaknesses in the NIPP standards, procedures, and guidelines.
- Consider solutions to address the gaps in the NIPP to enhance resilience and security of the CIKR.

u08d1 - Cyberattacks

Cyberattacks are often in the media. What theories can inform policy and practice for combating cyberattacks and why?

Your initial post should be at least 250 words. Support your ideas with relevant examples and evidence. Include at least one academic resource in addition to materials assigned in this course to support your reasoning. All references must be cited using current APA style and format.

Response Guidelines

Review the posts of your peers and respond to at least one, using one of the following approaches:

- Identify knowledge gaps or unknowns that were not considered in your peer's post.
- Identify an assumption on which the post seems to be based, and pose a useful alternative or contrasting approach based on a different assumption.
- Ask a probing question.
- Elaborate on a particular point.

Your response posts should be at least 75 words and substantive in nature. Support your views with reference to assigned readings, as well as other theoretical, empirical, or professional literature. If you are responding with a personal perspective or an example from your workplace experience, be sure to focus on both the theoretical and practical implications. Cite all sources in proper APA style.

Course Resources

Graduate Discussion Participation Scoring Guide

[APA Style and Format](#)

Creating Strong Discussion Posts

u08d1 - Learning Components

- Explore national critical infrastructure protection standards, procedures and guidelines.
- Trace gaps and weaknesses in the NIPP standards, procedures, and guidelines.
- Consider solutions to address the gaps in the NIPP to enhance resilience and security of the CIKR.
- Demonstrate effective writing skills and proper APA formatting skills.

At the completion of this unit, your instructor will post a summary of key points from the week's concepts and topics.

Response Guidelines

You are not required to respond to this discussion.

Unit 9 >> CIKR Security and Resilience: Theoretical Bases

Introduction

In this unit, we are reminded that throughout all of the courses in the Emergency Management curriculum in the School of Public Service Leadership, a major guideline is teaching *theory informs policy and practice*. Now it is time to reflect as you finish the theoretical bases section of the course project. Which theories make sense in providing a program which ensures security and resilience? Which theories strongly suggest further research to firmly establish or disprove support for the program?

Learning Activities

u09s1 - Studies

Readings

Use the Capella Library to read the following:

- De Dominicis, S., Crano, W. D., Ganucci Cancellieri, U., Mosco, B., Bonnes, M., Hohman, Z., & Bonaiuto, M. (2014). [Vested interest and environmental risk communication: Improving willingness to cope with impending disasters](#). *Journal of Applied Social Psychology*, 44(5), 364–374.
- [Symbolic interactionism](#). In D. Jary & J. Jary (Eds.), *Collins dictionary of sociology* (4th ed.). London, UK: Collins.
- Carter, M. & Fuller, C. (2016). [Symbols, meaning and action: The past, present and future of symbolic interactionism](#). *Current Sociology Review* 64(6), 931–961.
- Boin, A., & McConnell, A. (2007). [Preparing for critical infrastructure breakdowns: The limits of crisis management and the need for resilience](#). *Journal of Contingencies & Crisis Management*, 15(1), 50–59.

Optional Readings

- Waks, L. (2014). [Complexity theory](#). In D. Phillips (Ed.), *Encyclopedia of educational theory and philosophy* (Vol. 2, pp. 168–170). Thousand Oaks, CA: SAGE Publications Ltd.

u09s1 - Learning Components

- Explore national critical infrastructure protection standards, procedures and guidelines.
- Trace gaps and weaknesses in the NIPP standards, procedures, and guidelines.
- Consider solutions to address the gaps in the NIPP to enhance resilience and security of the CIKR.

u09s2 - Assignment Preparation

Next week you will submit the final component of your final project. Take time this week to review the earlier components of the project and feedback obtained from the instructor to create a sound revision plan. Contact your instructor early in the week with any questions about the expectations of the project. Conduct research in the Capella Library that will allow you to do the following:

- Compare and contrast national critical infrastructure protection standards, procedures and guidelines.
- Determine gaps and weaknesses in the NIPP standards, procedures, and guidelines.
- Recommend potential solutions to address the gaps in the NIPP to enhance resilience of the CIKR.

- Recommend potential solutions to address the gaps in the NIPP to enhance security of the CIKR.

Before you start a rough draft of your work, carefully read the grading criteria for this final assignment as well as the project overview to ensure you understand all of the requirements for success.

You are encouraged to refer to the *APA Manual* to ensure you are citing all your sources appropriately in your assignment as this is part of the grading requirements. APA Style Central has additional guidance, examples, and tools you can use for researching, writing, and formatting your paper and for citing and referencing resources in APA style. See the APA Style and Format section of the Writing Center for instructions on accessing and using APA Style Central.

Course Resources

[APA Style and Format](#)

Publication Manual of the American Psychological Association

u09d1 - Theory Informs Policy

Which theories best fits the design and development guideline for *theory informs policy and practice* in the overall CIKR system?

Your initial post should be at least 250 words. Support your ideas with relevant examples and evidence. Include at least one academic resource in addition to materials assigned in this course to support your reasoning. All references must be cited using current APA style and format.

Response Guidelines

Review the posts of your peers and respond to at least one, using one of the following approaches:

- Identify knowledge gaps or unknowns that were not considered in your peer's post.
- Identify an assumption on which the post seems to be based, and pose a useful alternative or contrasting approach based on a different assumption.
- Ask a probing question.
- Elaborate on a particular point.

Your response posts should be at least 75 words and substantive in nature. Support your views with reference to assigned readings, as well as other theoretical, empirical, or professional literature. If you are responding with a personal perspective or an example from your workplace experience, be sure to focus on both the theoretical and practical implications. Cite all sources in proper APA style.

Course Resources

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Creating Strong Discussion Posts

u09d1 - Learning Components

- Explore national critical infrastructure protection standards, procedures and guidelines.
- Trace gaps and weaknesses in the NIPP standards, procedures, and guidelines.
- Consider solutions to address the gaps in the NIPP to enhance resilience and security of the CIKR.
- Demonstrate effective writing skills and proper APA formatting skills.

u09d2 - Unit 9 Summary

At the completion of this unit, your instructor will post a summary of key points from the week's concepts and topics.

Response Guidelines

Unit 10 >> Critical Infrastructures: Planning for Resilience

Introduction

This course presented you with a large amount of information on ways to assess the current Critical Infrastructure and Key Resources (CIKR) national strategies, National Infrastructure Protection Plan (NIPP), authorities, and policies. You also had the opportunity to identify the requirements and responsibilities for management of the national system and analyze various theories and policies that can best protect sustainable, resilient critical infrastructure systems. The information you have learned here and the discoveries you have made will be relevant in the other courses in the CIKR concentration in the Capella PSL Emergency Management curriculum.

Learning Activities

u10s1 - Studies

There are no readings assigned in this unit because you should devote your time to revising your final project components as you prepare for its final submission. Consult the Capella Library as you refine your selection of scholarly readings that will most accurately support your arguments and observations. Consult with your instructor on questions you may still have about the project or other matters related to the course.

u10s1 - Learning Components

- Explore national critical infrastructure protection standards, procedures and guidelines.
- Trace gaps and weaknesses in the NIPP standards, procedures, and guidelines.
- Consider solutions to address the gaps in the NIPP to enhance resilience and security of the CIKR.

u10a1 - CIKR Environment Resilience Plan

In the final component of your course project, you will write a longer research paper in which you develop a plan for ensuring resilience in the CIKR program. The main goals of your final project in this course has been to (1) facilitate your understanding of the basic structure of the National Infrastructure Protection Plan authorities, and policies, and (2) facilitate your understanding of the requirements and responsibilities for management of the national system and analyze various theories and policies that would protect sustainable, resilient critical infrastructure systems.

This final paper is intended to be the "capstone" learning opportunity for this course. In this paper, you will develop a plan that will help establish and confirm the correlations between security and resilience. Each of the other three assignments had a dual purpose: (1) assess learning, and (2) develop a specific part of your plan for resilience and security, which you are now expected to piece together in a cohesive and logical manner.

While this final component is intended to include work you have already started and been graded upon, it is not intended as a space where you can simply cut and paste content from the other three assignments. Instead, you are challenged to expand upon observations already made and research already conducted to reach new conclusions and engage in critical thinking.

This assignment requires you to do the following:

- Compare and contrast national critical infrastructure protection standards, procedures and guidelines.
- Determine gaps and weaknesses in the NIPP standards, procedures, and guidelines.
- Recommend potential solutions to address the gaps in the NIPP to enhance resilience of the CIKR.
- Recommend potential solutions to address the gaps in the NIPP to enhance security of the CIKR.

Submission Requirements

- **Written communication:** Your writing should clearly identify where each grading criteria or part of the assignment is addressed. Your points must be logical, substantive, and relevant based on the evidence presented. The writing must be free of errors that detract from the overall message.
- **APA guidelines:** Resources and citations must be formatted according to current APA style and formatting. When appropriate, use APA-formatted headings.
- **Resources:** Your ideas must be supported with relevant recent, scholarly sources that are properly cited and referenced in current APA style.

- **Length of paper:** 8–10 typed, double-spaced pages, not including the title page and references.
- **Font and font size:** Times New Roman, 12 point.

Writing assistance is available at the Writing Center or Smarthinking, a free online writing tutorial and review service. Both are linked in the Resources.

Review the scoring guide for the grading criteria for this assignment.

Course Resources

[APA Style and Format](#)

u10d1 - Course Reflections

In this course, you were invited to assess the current Critical Infrastructure and Key Resources (CIKR) national strategies, National Infrastructure Protection Plan (NIPP), authorities, and policies. Additionally, you had to identify the requirements and responsibilities for management of the national system and analyze various theories and policies that would protect sustainable, resilient critical infrastructure systems.

Discuss how you will apply what you have learned in this course to your professional practice or future research in the emergency management field. Support your ideas with relevant examples and evidence. Include at least one academic resource in addition to materials assigned in this course to support your reasoning. All references must be cited using current APA style and format.

You may refer to specific theories, concepts, research knowledge when commenting on ways the course content and experiences are relevant to your work life.

Response Guidelines

Review the posts of other learners and respond to at least one, commenting on the learner's course reflection and offering support and encouragement.

Course Resources

Graduate Discussion Participation Scoring Guide

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Creating Strong Discussion Posts

u10d1 - Learning Components

- Explore national critical infrastructure protection standards, procedures and guidelines.
- Trace gaps and weaknesses in the NIPP standards, procedures, and guidelines.
- Consider solutions to address the gaps in the NIPP to enhance resilience and security of the CIKR.
- Demonstrate effective writing skills and proper APA formatting skills.

u10d2 - Unit 10 Summary