

Note:

Course content may be changed, term to term, without notice. The information below is provided as a guide for course selection and is not binding in any form, and should not be used to purchase course materials.

COURSE SYLLABUS

HLSC 720

CRITICAL INFRASTRUCTURE: VULNERABILITY ANALYSIS AND PROTECTION

COURSE DESCRIPTION

This course explores the assessment and management of risk. Focuses on analytical techniques that assess risk; the primary application will be threats to critical infrastructure. Students will learn to conduct a risk and vulnerability analysis of a specific target, city, or region using various assessment techniques and to manage that risk by assessing the efficacy of both prevention, mitigation, and response measures. The techniques covered will be both quantitative and qualitative.

RATIONALE

The purpose of this course is to examine the risk analysis process along with accompanying mitigation strategies for critical infrastructures. It is necessary to properly assess the various threats and hazards we face in order that we may properly mitigate against such events.

I. PREREQUISITE

For information regarding prerequisites for this course, please refer to the [Academic Course Catalog](#).

II. REQUIRED RESOURCE PURCHASE

Click on the following link to view the required resource(s) for the term in which you are registered: <http://bookstore.mbsdirect.net/liberty.htm>

III. RECOMMENDED RESOURCE

American Psychological Association. *Publication manual of the American Psychological Association* (Current ed.). Washington, DC: Author.

IV. ADDITIONAL MATERIALS FOR LEARNING

- A. Computer
- B. Internet access (broadband recommended)
- C. Blackboard [recommended browsers](#)
- D. Microsoft Word
- E. Microsoft Office Mix

V. MEASURABLE LEARNING OUTCOMES

Upon successful completion of this course, the student will be able to:

- A. Assess and manage risk to critical infrastructures.
- B. Employ analytical techniques that assess risk to critical infrastructure.
- C. Devise plans, countermeasures, and contingencies against cyber and WMD attacks, and all hazards.
- D. Conduct a risk and vulnerability analysis of critical infrastructures.
- E. Manage risk by assessing the efficacy of prevention, mitigation, and response measures.
- F. Integrate biblical principles into the holistic process of critical infrastructure protection.

VI. COURSE REQUIREMENTS AND ASSIGNMENTS

- A. Textbook readings and lecture presentations/notes
- B. Course Requirements Checklist

After reading the Syllabus and [Student Expectations](#), the student will complete the related checklist found in Module/Week 1.

- C. Discussion Board Forums (8)

There will be 8 Discussion Board Forums throughout this course. Discussion boards are collaborative learning experiences. Therefore, the student is required to create a thread in response to the provided topic for each forum. Each thread is to be at least 250 words, cite at least 2 sources in addition to the Bible, and demonstrate course-related knowledge. In addition to the thread, the student is required to reply to 2 other classmates' threads. Each reply must be at least 100 words.

- D. Risk Assessment: Part 1

The student will write a 7-page research-based paper in current APA format that focuses on what risk assessment, vulnerability analysis, and critical infrastructure mean. The paper must include at least 7 sources and cover the following topics: the role of the government and the private sector in conducting risk assessments, the best practices used for critical infrastructure identification, the use of GIS data and mapping, and how National Preparedness and Homeland Security directives affect critical infrastructure assessment. The paper will be submitted via SafeAssign.

E. Risk Assessment: Part 2

The student will build upon the work completed for the Risk Assessment: Part 1. The student must provide a detailed overview, an in-depth data profile, and ample GIS data and mapping data of the overall assessment area. The student will use CARVER along with various tables and formulas to complete the assessment. He or she will also identify the top ten critical infrastructures in the area and explain his or her reasoning.

F. Risk Assessment: Part 3

The student will build upon the work completed for the Risk Assessment: Parts 1 and 2. The student must provide a single unit/station assessment, a key asset screening assessment, as well as four structural and four non-structural mitigation strategies. He or she must suggest principles of protective security and security countermeasures for this unit. The student must also provide a high-level assessment of the findings that address the potential for resiliency for the agency or business/community, address the level of preparedness, redundancy, etc., and offer best practices that benefit the agency or business/community that he or she conducted the overall assessment for as well as the single unit assessment.

VII. COURSE GRADING AND POLICIES

A. Points

Course Requirements Checklist	10
Discussion Board Forums (8 at 50 pts. ea.)	400
Risk Assessment: Part 1	200
Risk Assessment: Part 2	200
Risk Assessment: Part 3	200
Total	1010

B. Scale

A = 940–1010 A- = 920–939 B+ = 900–919 B = 860–899 B- = 840–859
 C+ = 820–839 C = 780–819 C- = 760–779 D+ = 740–759 D = 700–739
 D- = 680–699 F = 0–679

C. Disability Assistance

Students with a documented disability may contact Liberty University Online’s Office of Disability Academic Support (ODAS) at LUOODAS@liberty.edu to make arrangements for academic accommodations. Further information can be found at www.liberty.edu/disabilitysupport.

COURSE SCHEDULE

HLSC 720

Textbook: Bennett, *Understanding, Assessing, and Responding to Terrorism* (2018).

MODULE/ WEEK	READING & STUDY	ASSIGNMENTS	POINTS
1	Bennett: chs. 2, 12 Bible Readings 1 presentation 1 lecture note 1 website	Course Requirements Checklist Class Introductions Assessment Location DB Forum 1	10 0 0 50
2	Bennett: ch. 6 Bible Readings 1 presentation 1 lecture note 1 website	DB Forum 2	50
3	Bennett: ch. 7 Bible Readings 1 presentation 1 lecture note 1 website	DB Forum 3	50
4	Bennett: chs. 8–9 Bible Readings 1 presentation 1 lecture note 1 website	DB Forum 4 Risk Assessment: Part 1	50 200
5	Bible Readings 1 presentation 1 lecture note 3 articles 1 website	DB Forum 5	50
6	Bennett: chs. 1, 3, 5 Bible Readings 1 presentation 1 lecture note 1 website	DB Forum 6 Risk Assessment: Part 2	50 200
7	Bennett: chs. 4, 11 Bible Readings 1 presentation 1 lecture note 1 website	DB Forum 7	50

MODULE/ WEEK	READING & STUDY	ASSIGNMENTS	POINTS
8	Bennett: ch. 10 Bible Readings 1 presentation 1 lecture note 1 website	DB Forum 8 Risk Assessment: Part 3	50 200
TOTAL			1010

DB = Discussion Board

NOTE: Each course module/week begins on Monday morning at 12:00 a.m. (ET) and ends on Sunday night at 11:59 p.m. (ET). The final module/week ends at 11:59 p.m. (ET) on **Friday**.