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 <u>not</u> be used to purchase course materials.

LIBERTY UNIVERSITY

COURSE SYLLABUS

HLSC 710

CONTEMPORARY ISSUES IN CYBER SECURITY AND WMD (CBRNE) THREAT ANALYSIS

COURSE DESCRIPTION

This course will teach the student to identify the ways that cyber technology can be used by terrorists and criminals. Students completing this course will be able to appraise and assess the potential of different kinds of cyber and WMD attacks. Cyber and WMD threats and proliferation of WMD present challenges to homeland security and create legitimate concerns about our Nation's ability to prevent cyber and WMD attacks. The course examines technological advancements and the opportunities they present for terrorists and other hostile actors, as well as how one can devise plans, countermeasures, and contingencies against cyber and WMD attacks.

RATIONALE

The purpose of this course is to examine weapons of mass destruction (CBRNE & Cyber) threats posed by terrorist organizations, other adversaries, as well as accidents or naturally-occurring events. In order to prepare for, mitigate, respond to, and recover from CBRNE and Cyber incidents, it is important to not only understand the threats faced but the potential impacts from the use of such weapons.

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*. 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 the potential for different types of cyber and WMD attacks.

B. Analyze ways that cyber technology can be used by terrorists and criminals.

C. Devise plans, countermeasures, and contingencies against cyber and WMD attacks.

D. Synthesize the knowledge acquired in this course to create a robust set of best practices to prevent, detect, and respond to cyber and WMD attacks.

E. Integrate biblical principles into the decision-making processes involving cyber- and WMD-related issues.

VI. COURSE REQUIREMENTS AND ASSIGNMENTS

A. Textbook readings and lecture presentations/notes

B. Course Requirements Checklist

After reading the Course 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, demonstrate course-related knowledge, and cite at least 2 sources. 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. Research Paper 1 – A Comprehensive Examination of the Cyber Security Threat Paper

The student will complete a Research Paper which will be a Comprehensive Examination of the Cyber Security Threat. This paper will be exhaustive. The student will provide the following using these headings: historical reference points in cyber security; critical infrastructure and cyber security; cyber security and critical infrastructure protection – engineering and design concepts and include mitigation, resiliency, and redundancy; cyber intelligence, conflict, and warfare; cyber security legal issues; economic costs of cyber security, and the future threat landscape involving cyber security. The student will write at minimum a 10 full-page, research-oriented paper in current APA format. The paper must include at least 7 sources (which can include the course textbook). The paper will be submitted through SafeAssign.

E. Research Paper 2 – A Comprehensive Examination of the WMD (CBRNE) Threat Paper

The student will complete a Research Paper which will be a Comprehensive Examination of the WMD (CBRNE) Threat. This paper will be exhaustive. The student will provide the following using these headings: historical reference points in WMD use as weapons; critical infrastructure and WMD use from a preparedness as well as mitigation perspective; an examination of each CBRNE including this sub headings discussions (cover each group in their entirety before moving on to the next): brief overview of each CBRNE as a group – in other words C – Chemical weapons or agents; most common agents or weapons in the Chemical group; most common delivery systems for this group; lethality and other pertinent facts that are specific for this group; for each group discuss the impact, likelihood by probability and impact; do this for each CBRNE group. After chemical do biological, radioactive, nuclear, and finally explosive. Conclude with your thought regarding future threat landscape involving CBRNE/ WMD. Remember any one of these might be used on purpose by a terrorist or criminal, some might occur naturally, and others might be encountered through accident. The student will write at minimum a 10 full-page, research-oriented paper in current APA format. The paper must include at least 7 sources (which can include the course textbooks). The paper will be submitted through SafeAssign.

F. Training Presentation

1. Option A – A Comprehensive Examination of the Cyber Security Threat Training Presentation

   The student will prepare a PowerPoint presentation wherein he or she will design training which will cover everything discussed in the written paper he or she completed on this same topic in this course. Each section that was written and covered in the paper needs to be discussed, but the training video will end with additional information that will include contingencies and countermeasures to a cyber-attack or intrusion. A minimum of 20 content slides (not including the cover and reference slides) are required. The presentation needs to be at least 15 minutes long and should last no more than 30 minutes maximum.

2. Option B – Instructions for a Comprehensive Examination of the WMD (CBRNE) Threat Training Presentation

   The student will prepare a PowerPoint (Audio/Visual) presentation wherein he or she will design training which will cover everything discussed in the written paper he or she completed on this same topic in this course. Each section that was written and covered in the paper needs to be discussed, but the training video will end with additional information that will include contingencies and countermeasures to a WMD/CBRNE attack. A minimum of 20 content slides (not including the cover and reference slides) are required. The presentation needs to be at least 15 minutes long and should last no more than 30 minutes maximum.

VII. COURSE GRADING AND POLICIES

A. Points

Course Requirements Checklist	10
Discussion Board Forums (8 at 50 pts ea)	400
Research Paper 1 – A Comprehensive Examination of the Cyber Security Threat Paper	200
Research Paper 2 – A Comprehensive Examination of the WMD (CBRNE) Thread Paper	200
Training Presentation	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 710

Textbooks: Johnson, *Cybersecurity* (2015).
Pichtel, *Terrorism and WMDs* (2016).

MODULE/ WEEK	READING & STUDY	ASSIGNMENTS	POINTS
1	Johnson: ch. 1 Bible Readings 1 presentation 1 lecture note 1 website	Course Requirements Checklist Class Introductions DB Forum 1	10 0 50
2	Johnson: chs. 2–3 Bible Readings 1 presentation 1 lecture note 1 website	DB Forum 2	50
3	Johnson: chs. 4–5 Bible Readings 1 presentation 1 lecture note 1 website	DB Forum 3	50
4	Johnson: chs. 6–7 Bible Readings 1 presentation 1 lecture note 1 website	DB Forum 4 Research Paper 1	50 200
5	Pichtel: chs. 1, 7–8 Bible Readings 1 presentation 1 lecture note 1 website	DB Forum 5	50
6	Pichtel: chs. 2–3, 6 Bible Readings 1 presentation 1 lecture note 1 website	DB Forum 6 Research Paper 2	50 200
7	Pichtel: chs. 4–5 Bible Readings 1 presentation 1 lecture note 1 website	DB Forum 7	50

MODULE/ WEEK	READING & STUDY	ASSIGNMENTS	POINTS
8	Pichtel: chs. 9–10 Bible Readings 1 presentation 1 lecture note 1 website	DB Forum 8 Training Presentation	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**.