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

CSIS 335
NETWORK SECURITY

COURSE DESCRIPTION

A study of the control of unwanted intrusions into, use of, or damage to a business' computer network. This course will cover elements that prevent unwanted activities in an efficient and cost effective manner. This study will start with a focus on the business challenges and threats network professionals face in their day to day operations. It explores the nature and intent of hackers and defines preventative measures such as Intrusion Detection Systems, firewalls, and virtual private networks. (Formerly BMIS 335)

RATIONALE

In today's increasingly complex business data communications networks, it is critical to be able to secure our knowledge capital to create and maintain business competitive advantage. The most exposed link is our business networks. As an MIS professional, we must be able to advise/implement network security.

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. ADDITIONAL MATERIALS FOR LEARNING

A. Computer with basic audio/video output equipment. Telenet service must be activated on this computer.

B. Internet access (broadband recommended)

C. Blackboard recommended browsers

D. Microsoft Office

IV. **MEASURABLE LEARNING OUTCOMES**

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

    A. Discuss the relevance of course material to a biblical world view.

    B. Describe the 7 domains of a typical IT infrastructure where network security is implemented.

    C. Specify goals of network security as they would exist inside a typical organization.

    D. Compare and contrast network security concerns in wired, wireless and fiber-based networks.

    E. Describe the principles and fundamentals of firewalls.

    F. Describe the principles and fundamentals of Virtual Private Networks (VPN).

    G. Demonstrate an understanding of the concepts of network threats including but not limited to: internal versus external threats, hacker motivation, environmental threats, fragmentation attacks, and malicious code.

    H. Design a network which includes: defense-in-depth, hardening systems, encryption, and node security.

V. **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)

      Discussion boards are collaborative learning experiences. Therefore, for the first Discussion Board Forum, the student must reply to all other students' threads. For the remaining 7 Forums, the student will post a thread in response to the module/week's discussion topic and then reply to at least 1 classmate's thread.

      Threads are required to be at least 250 words, professional in content and delivery, and written in proper English. Replies must be at least 150 words, and must likewise be professional and written in proper English.

    D. Essays (8)

      The essays are network security topical and relate to the module/week's readings. They are designed to expand the student's study into specific network security areas. Essays must be 2000 - 2500 words, but need to be complete thoughts and use proper grammar. The student will post his/her essays to the proper Discussion Board Forum.

E.   Exams (2)

The exams consist of 50 multiple-choice questions covering the Reading & Study for the preceding modules/weeks. Each exam is an open-book/open-notes, open-resources exam.

II.   **COURSE GRADING AND POLICIES**

A.   Points

Course Requirements Checklist		10
Discussion Board Forums (1 at 85 pts; 7 at 45 pts ea)		400
Essays	(8 at 50 pts ea)	400
Midterm Exam	(Modules 1–4)	100
Final Exam	(Modules 5–8)	100
	Total	1010

B.   Scale

A = 900–1010   B = 800–899   C = 700–799   D = 600–699   F = 0–599

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.

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COURSE SCHEDULE

CSIS 335

Textbooks: Stewart, *Network Security, Firewalls, and VPNs* (2014).

MODULE/ WEEK	READING & STUDY	ASSIGNMENTS	POINTS
1	Stewart: ch. 1 2 presentations	Course Requirements Checklist Class Introductions DB Forum 1 Essay 1	10 0 85 50
2	Stewart: ch. 4 1 presentation	DB Forum 2 Essay 2	45 50
3	Stewart: ch. 2 1 presentation	DB Forum 3 Essay 3	45 50
4	Stewart: ch. 3 1 presentation	DB Forum 4 Essay 4 Midterm Exam	45 50 100
5	Stewart: ch. 5 1 presentation	DB Forum 5 Essay 5	45 50
6	Stewart: ch. 6 1 presentation	DB Forum 6 Essay 6	45 50
7	Stewart: ch. 7 1 presentation	DB Forum 7 Essay 7	45 50
8	Stewart: chs. 10, 15 1 presentation	DB Forum 8 Essay 8 Final Exam	45 50 100
		TOTAL	1010

DB = Discussion Board

NOTE: Each course module/week (except Module/Week 1) begins on Tuesday morning at 12:00 a.m. (ET) and ends on Monday night at 11:59 p.m. (ET). The final module/week ends at 11:59 p.m. (ET) on **Friday**.