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 461

TECHNICAL ASPECTS OF COMPUTER SECURITY

COURSE DESCRIPTION

This course introduces the following issues and principles of information system security: security policies and their mechanisms of implementation, methods used by attackers attempting to circumvent these protections, and specific defenses against these attackers.

RATIONALE

As more and more computing systems rely on networking technology, computer security is becoming more important. In addition, the skills to break software and penetrate network defenses are more widely available. As such, what is needed is for students with high moral character to learn the techniques used by attackers– both to test the systems for which they are responsible and also to construct solid defenses to protect against these attacks. This course will teach students these skills along with the necessary moral and ethical backdrop.

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

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. Apply the knowledge of computing and mathematics appropriate to the discipline of computer security.

B. Demonstrate the ability to analyze the tactics, techniques, and practices of current computer security threats.

C. Demonstrate the ability to use current tools, techniques, and skills necessary to cost-effectively respond to computer security threats.

D. Apply the appropriate mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer security systems.

E. Describe the professional, ethical, legal, and social issues and responsibilities involving secure computing.

F. Apply a biblical worldview to secure computing methods.

V. COURSE REQUIREMENTS AND ASSIGNMENTS

A. Textbook readings and lecture presentations

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 (3)

Discussion boards are collaborative learning experiences. Therefore, the student will create a thread in response to the provided prompt for each forum. Each thread must be at least 300 words and demonstrate course-related knowledge. In addition to the thread, the student will reply to the threads of at least 2 classmates. Each reply must be at least 100 words. At least 1 citation must be included in each thread and reply. Current APA formatting is required for any citations.

D. Lab Assignments (5)

Using a virtual lab environment, the student will complete computer security lab assignments that will give him or her an opportunity to demonstrate mastery of the lessons learned during the assigned or previous module/week.

E. Quizzes (4)

Each quiz will cover the Reading & Study material for the module/week in which it is assigned as well as the preceding module(s)/week(s). Each exam will be open-book/open-notes and will have a time limit of 1 hour and 30 minutes. Each quiz will contain a variety of multiple-choice and true/false questions.

F. Final Exam

The student will complete a comprehensive Final Exam which will cover all the material from the course. This exam will be open-book/open-notes, contain a variety of multiple-choice and true/false questions and have a time limit of 2 hours.

VI. COURSE GRADING AND POLICIES

A. Points

Course Requirements Checklist		10
Discussion Board Forums (3 at 50 pts ea)		150
Quizzes (4 at 50 pts ea)		200
Lab Assignments (5 at 100 pts ea)		500
Final Exam		150
	Total	1010

B. Scale

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

C. Quizzes/Tests/Exams

For timed quizzes/tests/exams, the student is required to complete the quiz/test/exam within the assigned time. For the student who exceeds this time limit, a penalty of 1 point will be deducted for each minute, or part thereof, he/she exceeds the assigned time limit.

D. Disability Assistance

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

If you have a complaint related to disability discrimination or an accommodation that was not provided, you may contact ODAS or the Office of Equity and Compliance by phone at (434) 592-4999 or by email at equityandcompliance@liberty.edu. Click to see a full copy of Liberty's Discrimination, Harassment, and Sexual Misconduct Policy or the Student Disability Grievance Policy and Procedures.

LIBERTY UNIVERSITY

COURSE SCHEDULE

CSIS 461

Textbooks: Oriyano &Varsalone, *Ethical Hacking and Systems Defense* (2016).
Oriyano, *Hacker Techniques, Tools, and Incident Handling* (2014).

MODULE/ WEEK	READING & STUDY	ASSIGNMENTS	POINTS
1	Oriyano & Varsalone: ch. 1 Oriyano: ch. 2 3 presentations	Course Requirements Checklist Class Introductions	10 0
2	Oriyano & Varsalone: ch. 2 3 presentations	DB Forum 1 Quiz 1	50 50
3	Oriyano & Varsalone: chs. 3, 10 3 presentations	DB Forum 2 Quiz 2	50 50
4	Oriyano & Varsalone: chs. 4–5 5 presentations	Lab Assignment 1 Quiz 3	100 50
5	Oriyano & Varsalone: chs. 6–7 Oriyano: ch. 12	DB Forum 3 Lab Assignment 2	50 100
6	Oriyano & Varsalone: chs. 8–9 3 presentations	Lab Assignment 3 Quiz 4	100 50
7	Oriyano & Varsalone: ch. 13 4 presentations	Lab Assignment 4	100
8	Oriyano & Varsalone: chs. 11–12 4 presentations	Lab Assignment 5 Final Exam	100 150
		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**.