University of North Texas at Dallas
Fall 2013
SYLLABUS

CSCE 4560: Secure E-Commerce 3Hrs

Department of	Mathematics and Information Sciences	Division of	Liberal Arts and Sciences

Instructor Name:	Mohamad Bayan
Office Location:	DAL2 305
Office Phone:	972-338-1501
Email Address:	Mohamad.Bayan@unt.edu
Office Hours:	Monday/Wednesday 6:50-7:30 PM or by Appointment
Virtual Office Hours:	
Classroom Location:	DAL2 242
Class Meeting Days & Times:	Monday/Wednesday 5:30-6:50 PM
Course Catalog Description:	Electronic commerce technology, models and issues, with emphasis on security issues. Supporting technology such as cryptography, digital signatures, certificates and public key infrastructure (PKI). Security-conscious programming for web-based applications. Exposure to interaction between technical issues and business, legal and ethical issues.
Prerequisites:	CSCE 2110
Co-requisites:	
Required Text:	1. "Secure Electronic Commerce: Building the Infrastructure for Digital Signatures and Encryption" 2nd Edition by Warwick Ford & Michael S. Baum, 2001, ISBN: 9780130272768, Prentice Hall 2. How to Break Web Software: Functional and Security Testing of Web Applications by Mike Andrews & James A. Whittaker, 2006, ISBN: 9780321369444, Addison-Wesley Professional
Recommended Text and References:	"Web Security: A Step-by-Step Reference Guide" by Lincoln D. Stein, 1998, ISBN: 0201634899
Access to Learning Resources:	UNT Dallas Library: phone: (972) 338-1616; web: http://www.untdallas.edu/our-campus/library/library-resources

Course Goals or Overview:

The goal of this course is to provide an introduction to the fundamentals of Secure E-Commerce. Topics include Internet Network Infrastructure, Internet Security (Client and Server side), Cryptography and Cryptographic tools, Public Key Infrastructure (PKI), and Certificate Authorities.

Learning Objectives/Outcomes:

1	Introduction to basic concepts of Secure E-commerce
2	Introduction to underlying network infrastructure of Internet
3	Introduction and implementations on the operations and security for the Client Side and Server Side of Internet
4	Introduction and implementations on secure web based application development using various technologies such as XML, Perl, PHP, ASP, JSP and JavaScript
5	Implementing cryptographic tools to support confidentiality, integrity, authentication, digital signature, non-repudiation services for electronic transmissions and transactions.
6	Introduction to Public Key Infrastructure (PKI) and Certificate Authorities and X.509 standard Security Schemes such as IPSec, SSL, Kerberos, PGP and SET
7	Introduction to digital payment systems

Course Outline

This schedule is subject to change by the instructor. Any changes to this schedule will be communicated by the Blackboard or in class. Blackboard will be used to communicate class notes and other course materials, to post homework assignments, and to post grades.

TOPICS	TIMELINE
1. Class Introduction, Syllabus Overview, and Introduction to E-Commerce	8/28/2013 & 9/4/2013
2. E-Commerce Infrastructure – Internet, Web and Mobile Platforms	Week of 9/9/2013
3. Information Security Technologies	Week of 9/16/2013
4. Information Security Technologies & Internet Security	Week of 9/23/2013
5. Exam 1 & Internet Security	Week of 9/30/2013
6. Cryptography and Public Key Infrastructure (PKI)	Week of 10/7/2013
7. Cryptography and Public Key Infrastructure (PKI)	Week of 10/14/2013
8. User Authentication and Message Authentication	Week of 10/21/2013
9. Digital Signatures and Transport Layer Security (SSL)	Week of 10/28/2013
10. Exam 2 and Attacking the Client & State-Based Attacks	Week of 11/4/2013
11. User-Supplied Input Data & Language-Based Attacks	Week of 11/11/2013
12. Attacking the Server	Week of 11/18/2013
13. Authentication, Privacy, & Web Services	Week of 11/25/2013
14. Secure Electronic Transaction and Payment Systems (SET)	Week of 12/2/2013
15. Final Exam	Mon. 12/9/2013 5:00 PM - 7:00 PM

Course Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Exams – written tests designed to measure knowledge of course material.
Assignments – written assignments designed to supplement and reinforce course material.
Class Participation – attendance and participation in class discussions.

Grading Matrix:

Instrument	Value (points or percentages)	Total
Exam 1	25%	25%
Exam 2	25%	25%
Assignments & Quizzes	20%	20%
Class Participation/Attendance	5%	5%
Final Exam	25%	25%
Total:		**100%**

Grade Determination:

A: 90% or greater
B: at least 80% and less than 90%
C: at least 70% and less than 80%
D: at least 60% and less than 70%
F: less than 60%

University Policies and Procedures

Students with Disabilities (ADA Compliance):
The University of North Texas Dallas faculty is committed to complying with the Americans with Disabilities Act (ADA). Students' with documented disabilities are responsible for informing faculty of their needs for reasonable accommodations and providing written authorized documentation. Grades assigned before an accommodation is provided will not be changed as accommodations are not retroactive. For more information, you may visit the Student Life Office, Suite 200, Building 2 or call 972-780-3632.

Student Evaluation of Teaching Effectiveness Policy:
The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SETE to be an important part of your participation in this class.

Assignment Policy:
Assignments should be submitted on time. No late assignments will be allowed except in the case of documented emergencies.

Exam Policy:
Exams should be taken as scheduled. No makeup examinations will be allowed except for documented emergencies (See Student Handbook).

Academic Integrity:
Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Academic Integrity at http://www.untdallas.edu/financial-aid/financial-aid-office/policies-consumer-information/academic-integrity for complete provisions of this code.

Bad Weather Policy:
On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campuses main voicemail number (972) 780-3600 or search postings on the campus website http://www.untdallas.edu.Students are encouraged to update their Eagle Alert contact information, so they will receive this information automatically.

Attendance and Participation Policy:
The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Attendance and participation in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. Students are responsible to notify the instructor if they are missing class and for what reason. Students are also responsible to make up any work covered in class. It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes, if they are absent.

Diversity/Tolerance Policy:
Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Office of Student Life as the instructor deems appropriate.

Optional Policies:
Food, drink, cell phones and other electronic/noise-making gadgets are prohibited in the classroom. The use of laptops is allowed only for class-related activities.