



FIREWALL AND NETWORK
ITSY 2301
COURSE SYLLABUS

REVISED: 09-10

FIREWALL AND NETWORK

ITSY 2301

Course Description:

Instructs on the elements of firewall design, types of security threats and responses to security attacks. Students learn how to use best practices to design, implement, and monitor a network security plan. Examine security incident postmortem reporting and ongoing network security activities. Semester Hours 3 (2 lec/2 lab).

Prerequisites and/or Corequisites:

Prerequisite: ITSY 1342 and a networking class (ITCC 1310, ITNW 1354 or ITNW 1320).

Required Text & Materials:

- A. Guide to Firewalls and Network Security: With Intrusion Detection and VPNs, 2nd Edition, Whitman, Mattord, Austin and Holden, Course Technology, ISBN:1-4353-2016-0
- B. USB drive, 1GB or larger

Course Objectives and/or Competencies:

- A. **Course Competencies:** Upon successful completion of ITSY 2301, student will be able to:
 - 1. Demonstrate system security skills through firewall implementation and testing;
 - 2. Use system tools, practices, and relevant technologies to implement a security plan;
 - 3. Evaluate practices, tools, and technologies to identify security breaches, sources of attacks, and protect mission critical systems;
 - 4. Establish an appropriate level of security based on an analysis of security logs;
 - 5. Use relevant tools to secure a network, respond to and follow up on various types of attacks.
- B. **Evaluation:**
 - 1. Written objective and/or subjective exams
 - 2. Practical laboratory exams
 - 3. Class discussion and participation
 - 4. Homework and class assignments
 - 5. Attitude and work habits

Course Outline:

Tentative Course Schedule: 16 Weeks – Complete textbook		
Week	Date	Topic & Chapter
1		Introduction to the course Ch 1 Introduction to Information Security
2		Ch 2 An Introduction to Networking
3		Ch 3 Security Policies, Standards, and Planning
4		Ch 4 Finding Network Vulnerabilities
5		Review & Exam
6		Ch 5 Firewall Planning and Design
7		Ch 6 Packet Filtering
8		Ch 7 Working with Proxy Servers and Application-Level Firewalls
9		Ch 8 Firewall Configuration and Administration
10		Ch 9 Encryption and Firewalls
11		Review & Exam 2
12		Ch 10 Authenticating Users
13		Ch 11 Setting Up A Virtual Private Network
14		Ch 12 Contingency Planning
15		Ch 13 Intrusion Detection and Prevention Systems
16		Ch 14 Digital Forensics
Final Exam		Review & Exam 3

MCC Attendance Policy:

Regular and punctual attendance is expected of all students, and each instructor will maintain a complete record of attendance for the entire length of each course, including online and hybrid courses. Students will be counted absent from class meetings missed, beginning with the first official day of classes. Students, whether present or absent, are responsible for all material presented or assigned for a course and will be held accountable for such materials in the determination of course grades. In the case of online and hybrid courses, attendance will be determined in terms of participation, as described in the course syllabus.

Absence from 25 percent of scheduled lecture and/or laboratory meetings will be taken as evidence that a student does not intend to complete the course, and the student will be withdrawn from the course with a grade of W. The instructor may reinstate the student if satisfied that the student will resume regular attendance and will complete the course. If the student's 25 percent absences are reached after the official drop date, the instructor may assign a W, if the student is passing and requests to be withdrawn. However, if a student who is not passing reaches the 25 percent point after the official drop date, the student will receive an F. In extenuating circumstances, the instructor may assign a W to a student who is not passing.

Each absence will count toward attendance requirements in each course.

Students will be permitted to make up class work and assignments missed due to absences caused by (1) authorized participation in official College functions, (2) personal illness, (3) an illness or a death in the immediate family, or (4) the observance of a religious holy day. Also, the instructor has the prerogative of determining whether a student may make up work missed due to absences for other reasons. It is the student's responsibility to inform the instructor of the reason for an absence and to do so in a timely fashion.

Student Absences on Religious Holy Days

McLennan Community College shall excuse a student from attending classes or other required activities including examinations for the observance of a religious holy day, including travel for that purpose. Students are required to file a written request with each instructor for an excused absence. A student whose absence is excused for this observance may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. Religious holy day means a holy day observed by a religion whose places of worship are exempt from property taxation under the Texas Tax Code. McLennan Community College may not excuse absences for religious holy days which may interfere with patient care.

Note: Students interested in seeing the class attendance policy in its entirety should check the Highlander Guide or the MCC policy manual.

ADA Statement:

In accordance with the requirements of the Americans with Disabilities Act (ADA), and the regulations published by the United States Department of Justice 28 C.F.R. 35.107(a), MCC's designated ADA co-coordinators, Mr. Gene Gooch - Vice President, Finance and Administration and Dr. Santos Martinez – Vice President, Student Services shall be responsible for coordinating the College's efforts to comply with and carry out its responsibilities under ADA. Students with disabilities requiring physical, classroom, or testing accommodations should contact Mr. Marcus Sweatt, Disabilities Specialist, at 299-8122 or msweatt@mclennan.edu.

Course Competencies	Workplace Competencies															Foundation Skills																							
	Resources				Interpersonal					Information				Systems			Technology			Basic Skills					Thinking Skills					Personal Qualities									
	A	B	C	D	A	B	C	D	E	F	A	B	C	D	A	B	C	A	B	C	A	B	C	D	E	A	B	C	D	E	F	A	B	C	D	E			
Demonstrate system security Skills through firewall implementation and testing					X						X	X	X	X	X	X				X			X						X	X	X	X							
Use system tools, practices and relevant technologies to implement a security plan											X	X	X	X	X								X				X		X	X	X								
Evaluate practices, tools and technologies to identify security breaches, sources of attacks, and protect mission critical systems											X	X	X	X	X	X	X	X	X				X	X		X	X		X	X	X	X							
Establish an appropriate level of security based on an analysis of security logs											X	X	X	X	X	X	X	X	X				X	X			X		X	X	X	X	X						
Use relevant tools to secure a network, respond to and follow up on various types of attacks											X	X	X	X	X	X	X	X	X				X	X					X	X	X	X							