ITSS4360.501.25S Course Syllabus

Course Information

Course Prefix, Number, Section	ITSS4360.501.25S
Course Title	**Network and Information Security**
Term	Spring 2025
Days & Times	Thursday 7:00pm - 9:45pm
Classroom	JSOM 2.717

Instructor Contact Information

Instructor	Nambi Thirumalai
Email Address	Nambi.Thirumalai@utdallas.edu
Office Location	Online
Office Hours	By appointment
TA:	Lalit Kohle
Email:	lalit.kolhe@utdallas.edu
Office Location:	Online
Office Hours:	By appointment

Prerequisites: ITSS 3300 and (MATH 1326 or MATH 2414 or MATH 2419 or OPRE 3340) and (CS 2305 or MATH 2418 or MATH 2333 or OPRE 3333).

Course Description

With the advances in information technology, security of information assets has become a keenly debated issue for organizations. While much focus has been paid to technical aspects of the problem, managing information security requires more than technology. Effective information security management demands a clear understanding of technical as well as socio-organizational aspects of the problem. The purpose of this course is to prepare business decision makers to recognize the threats and vulnerabilities present in current information systems and understand how to design and develop secure systems.

Student Learning Objectives/Outcomes

The class will explore the constantly expanding cyber security space for a better understanding of its components and greater appreciation of its applications in an interactive learning environment. Besides the topic presentations and discussions, the learning activities would include online interactive sessions, games, in-class quizzes, homework assignments and exams.

Active participation online will greatly enhance the success of the students with learning.

Following are the learning objectives for the class:

- Explain networking protocols and their relationship to hardware and software, specifically, students should know the names and roles of the seven layers of the OSI model for network transmission.

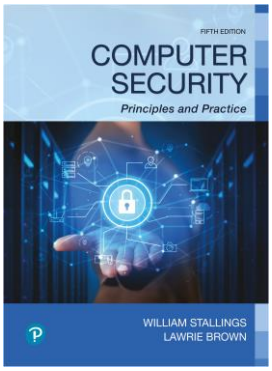
- Develop solutions for networking and security problems, balancing business concerns, technical issues and security.
- Explain the concepts of confidentiality, availability and integrity in Information Assurance, including physical, software, devices, policies and people. Analyze these factors in an existing system and design implementations.
- Explain and apply key cryptography, key management, digital signatures, and authentication protocol

Tentative Topics:

- Security Goals, Design Principles and Standards
- Risk Assessment, Security Controls and Governance
- Security Awareness, Incident Response
- Networking Foundations, OSI layers and roles, Lab
- Network Security Firewalls, DMZ, IPS
- Wireless Security, Business Continuity, Disaster Recover
- Privacy and Legal aspects
- Malicious software
- Cryptography
- Security Auditing
- Cloud Security
- Emerging trends in information security

Textbook:

William Stallings, Lawrie Brown: Computer Security: Principles and Practice, 5th Edition, 2023, Pearson ISBN-13: 9780138091675



Additional References:

David Kim; Michael G. Solomon, Fundamentals of Information Systems Security, Fourth Edition Jones & Bartlett Learning, ISBN: 9781284153040

Grading Policy

Following criteria will be used for grading the student performance:

Percentage of Total Grade	Activity
10%	Class participation and attendance
20%	Homework assignments
20%	Quizzes
10%	Term project and presentation
40%	Exams

The final grades will be mapped to the letter grades as listed below:

Final Point Total	Letter Grade
A+	96-100
A	93-95
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	59 & below

Course Policies

The information below constitutes the University's policies and procedures. All students are expected to go over the University Policies and Procedures before taking the class.

https://go.utdallas.edu/syllabus-policies

Disability Services
The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non- disabled peers.
Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation

should present the letter from the Disability services to the instructor in advance to go over the accommodations needed.

Class Conduct
The students are expected to be respectful to everyone in the class who are part of the learning environment.

Class / Participation System
Attendance is mandatory to earn the credits towards the attendance grade. Also, to take full advantage of the class, it is highly recommended that you attend class sessions. This class involves interactive exchanges of ideas and team activities. Participating in classroom activities will greatly improve your understanding of the topic being discussed. By participating in group activities, and interactive discussions students can generally score well.

Late Work
Assignments submitted beyond the specified deadlines will not be accepted unless prior arrangements have been made with me.

Course Content Repository
E-learning classes are used for classroom content (e.g., class slides, video recordings of lectures, assignment descriptions) and grading. Class announcements will be posted on e-learning. It is the responsibility of students to check e-mails and e-learning announcements on a regular basis.

All assignments must be submitted via e-learning.

Exams
The exam may include questions involving multiple choice, matching up entries, filling in the blanks, and may contain free response questions.

If you have a legitimate non-academic reason for missing any exam, you must provide verifiable documentation before the day of the exam. Contacting me after an exam is considered as missing the exam with a zero awarded for the grade.

Exam Administration
Though currently not in plan, in case of modality changes due to the pandemic by the University in the future, the course may use HonorLock, an online exam proctoring tool. If that is the case, you will get additional information when such changes are announced.

Academic Integrity
The University is committed to excellence and expects academic integrity from all members of the university community and considers it essential to promote academic honesty and integrity. It is forbidden to do the submit the work of others as one’s own(plagiarism), to obtain unauthorized assistance with assignments and using unauthorized sources during closed book exams(cheating). Penalties for academic misconduct may include an "F" grade for the course

Instructor Response Policy
The instructor will respond to all student inquiries (emails, voice messages, etc.) within 48 hours (excluding holidays and weekends).

Updates to the Syllabus
To serve the class better, I reserve the right to make updates to the syllabus as needed. Updates will be communicated accordingly.