Professor's Contact Information

Office Phone	972-883-6616
Other Phone	None
Office Location	ECSS 3.225
Email Address	muratk
Office Hours	Fridays 3pm-5pm or by appointment
Other Information	All announcements will be made in class, course web page and/or via UT Dallas email.

General Course Information

Pre-requisites, Co-requisites, & other restrictions	CS 5343 and knowledge of SQL
Course Description	The course will teach principles, technologies, tools and trends for data and applications security. Topics to be covered include: confidentiality, privacy and trust management; secure databases; secure distributed systems, data privacy.
Learning Outcomes	- Ability to understand and use basic cryptographic techniques and tools for data security - Ability to understand and use discretionary and mandatory access controls - Ability to understand and use integrity policies - Ability to understand and use database access control tools - Ability to understand and use defensive tools against common data management system cyber attacks - Ability to understand and use basic privacy-enhancing technologies
Required Texts & Materials	None.
Suggested Texts, Readings, & Materials	Very useful reference: Database and Applications Security: Integrating Information Security and Data Management by Bhavani Thuraisingham Publisher: Auerbach Publications; first edition ISBN-10: 0849322243, ISBN-13: 978-0849322242 Please check course web page for additional reading material. http://www.utdallas.edu/~muratk/courses/dbsec17s.htm

Assignments & Academic Calendar

01.13.17	• Access control basics • Reading: Fred B. Schneider's book chapter (pdf)
01.20.17	• Access Control Foundations • Reading: Fred B. Schneider's book chapter (pdf) • Reading: HRU paper (pdf)
01.27.17	• Access control models
02.03.17	• Access control models cont.
02.10.17	• Integrity/Hybrid Models
02.17.17	• Basic Cryptography Overview • Authentication • Reading: Fred B. Schneider's book chapter (pdf) • **Homework 1 is available on elearning.** • **Project Description is available on elearning**
02.24.17	• Bitcoin/Block Chain and Data Integrity • Reading: Block chain overview, Etherium overview
03.03.17	• Database Security • Encrypted Data storage in Databases • Reading: Please read the following overview paper (pdf) • Reading: Intel Sgx Overview (link) • Reading: Please read the following tutorial from Microsoft Research (pdf) • **Homework 2 is available on elearning.**
03.10.17	• Access control in distributed systems • Reading: Please read the following overview paper
03.17.17	• **Spring Break !!!**
03.24.17	• **Midterm !!!** • **Homework 3 is available on elearning.**
03.31.17	• SQL and Code injection attacks • Reading: Please see the tutorial from Oracle.
04.07.16	• Introduction to Data Privacy • Reading: K-annonymity (pdf), l-diversity (pdf), differential-privacy (pdf), • privacy-preserving distributed data mining (pdf) • **Homework 4 is available on elearning.**

04.14.17	• Introduction to Data Privacy cont.
04.21.17	• **NO Class today.**
04.22.17 Saturday	• Introduction to Data Privacy cont • **Please note this is a Saturday ! Exact time and location will be determined.**
04.28.17	• Policy, legal etchics and compliance • Economics of data security and privacy • Reading: Economics of privacy ([pdf](#)) .
05.06.17 Saturday	• We will have the final exam at the time scheduled by the university. • **It will be held at 5/6/2017, Saturday, 11:00AM - 1:45PM at ECSS 2.203**

Course Policies

Grading (credit) Criteria	Grading on a curve technique will be used. Homeworks % 16 (4 homeworks, each worth 4%) Project % 24 (Group project that may require programming) Midterm % 25 Final % 35
Make-up Exams	No make-up exam will be given.
Extra Credit	None.
Late Work	**Late submissions will not be graded.**
Special Assignments	**None.**
Class Attendance	**Strongly recommended.**
Classroom Citizenship	**Good classroom citizenship is expected.**
Comet Creed	*This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:* *"As a Comet, I pledge honesty, integrity, and service in all that I do."*
UT Dallas Syllabus Policies and Procedures	*The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.* *Please go to http://go.utdallas.edu/syllabus-policies for these policies.*

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.