

IS2150/TEL2810 Introduction to Security
Tentative Course Schedule

Week #	Topic	Objective: The students are expected to have the following capability after the lecture	Testing
Week 1 Aug 30	Introduction (Chapter 1)	<ul style="list-style-type: none"> • <i>Define/Describe/explain</i> some key security terms • <i>Describe/explain</i> the importance of trust, assurance and operational issues within the security area 	<ul style="list-style-type: none"> • Reading Assignment
Week 2 Sept 6	Secure Design Principles; Access control in Unix and Windows	<ul style="list-style-type: none"> • <i>Explain</i> the secure design principles and its importance • <i>Recognize</i> the basic access control mechanism in OS • <i>Use</i> access control commands to <i>manipulate</i> permissions in the OS 	<ul style="list-style-type: none"> • Lab 1 (2 Weeks) • Homework 1 (2 Weeks)
Week 3 Sep 13	Mathematical Review; Security Policy	<ul style="list-style-type: none"> • <i>Write</i> a sentence in logic form and <i>interpret</i> the logic expressions • <i>Solve</i> problems using mathematical induction • <i>Interpret, analyze and construct</i> lattice structures 	<ul style="list-style-type: none"> • Quiz 1 (for Week 2) • Reading Assignment
Week 4 Sep 20	HRU Access Control Matrix -	<ul style="list-style-type: none"> • <i>Represent/Describe</i> formally the safety problem using ACM • <i>Reason and Demonstrate</i> the undecidability result related to security 	<ul style="list-style-type: none"> • Homework 2 (2 Weeks)
Week 5 Sep 27	Confidentiality, Integrity, Hybrid Policy Models	<ul style="list-style-type: none"> • <i>Explain</i> the confidentiality, integrity and hybrid policy models and <i>relate</i> them to application needs • <i>Employ</i> them to new applications and synthesize solution • <i>Understand/Explain</i> general privacy issues 	<ul style="list-style-type: none"> • Quiz 2: (for Week 4) • Lab 2 (Due: After October Break) • Homework 3 (2 Weeks)
Week 6 Oct 4	Privacy		
Oct 11	October Break (no Tuesday classes)		
Week 8 Oct 18	Basics of Cryptography Overview of Java Crypto features	<ul style="list-style-type: none"> • <i>Recognize/explain</i> and use the basic cryptographic techniques • <i>Understand and use</i> Java Cryptographic extensions 	<ul style="list-style-type: none"> • Review for midterm

Homeworks/Labs are due by the end of the due date, i.e., by 11:59PM

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Tentative Course Schedule (Cont.)

Week 9 Oct 25	Midterm	Programming Project/Assignment Java programming Assignment (Due: Dec 7)	
Week 10 Nov 1	Network Security; Authentication and Identity	<ul style="list-style-type: none"> • <i>Explain and employ</i> the basic network security (e.g., authentication) techniques 	<ul style="list-style-type: none"> • Homework 4 (Crypto/NetSec) (2 Week) • Lab 3 (firewall) given out in start of week 10 (Due: Nov 15)
Week 11 Nov 8	Security Evaluation, Risk Management, Legal and Ethical Issues	<ul style="list-style-type: none"> • <i>Explain</i> the main idea behind common criteria • <i>Recognize</i> the importance of risk management process and <i>employ</i> it to <i>assess</i> and <i>solve</i> organizational security • <i>Recognize, define/explain</i> legal and ethical concerns related to security 	<ul style="list-style-type: none"> • Reading Assignment
Week 12 Nov 15	Malicious Code, Software security	<ul style="list-style-type: none"> • <i>Recognize, compare/contrast, explain</i> different types of malicious code • <i>Recognize, compare/contrast, explain</i> different types of coding related software issues 	<ul style="list-style-type: none"> • Quiz 3 (for Week 11) • Lab 4 (Before Final)
Week 13 Nov 22	Vulnerability Analysis;	<ul style="list-style-type: none"> • <i>Recognize, classify and compare</i> vulnerability (taxonomy/classification) 	
Week 14 Nov 29	IDS; Auditing; Firewalls Misc	<ul style="list-style-type: none"> • <i>Recognize, explain and analyze</i> auditing/IDS/Auditing systems 	<ul style="list-style-type: none"> • Quiz 4 (for Week 12, 13)
Week 15 Dec 6	Misc/Review/Project demos		
Dec 13	Final		