

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 26	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"> • Homework 1 (2 Weeks; Due Sept 9)
Week 2 Sept 2	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"> • Quiz 1: (for Week 1) • Lab 1 (2 Weeks; Due Sept 16)
Week 3 Sep 9	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 2 (for Week 2) • Homework 2 (1 Week; Due: Sept 16)
Week 4 Sep 16	HRU Access Control Matrix - Foundational Result	<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 3 (1 Weeks; Due Sep 23)
Week 5 Sep 23	Confidentiality, Integrity and Hybrid Policy Models	<ul style="list-style-type: none"> • Explain the confidentiality, integrity and hybrid policy models and relate them to application needs • Employ them to new applications and synthesize solution 	<ul style="list-style-type: none"> • Quiz 3: (for Week 4) • Lab 2 (Due: Before October Break) • Homework 4 (Due: Before October Break)
Week 6 Sept 30			
Week 7 Oct 7			<ul style="list-style-type: none"> • Quiz 4: (for Week 5&6)
Oct 14	October Break		
Week 8 Oct 21	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 28	Basics of Cryptography and Network Security; Authentication and Identity	<ul style="list-style-type: none"> • <i>Recognize/explain</i> and use the basic cryptographic techniques • <i>Explain</i> and <i>employ</i> the basic network security (e.g., authentication) techniques 	<ul style="list-style-type: none"> • Homework 6 (Jumbo): Java programming Assignment (Due: Before Thanksgiving)
Week 10 Nov 4			<ul style="list-style-type: none"> • Project planning starts in week after midterm;
Week 11 Nov 11 (Conference)	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"> • Quiz 5 (for Week 9)
Week 12 Nov 18	Software Assurance; Vulnerability Analysis	<ul style="list-style-type: none"> • <i>Recognize, compare</i> and <i>contrast</i> software assurance techniques • <i>Recognize, classify</i> and <i>compare</i> vulnerability (taxonomy/classification) • <i>Show</i> the steps in penetration testing 	<ul style="list-style-type: none"> • Lab 4 (Before Final)
Week Nov 25	Thanksgiving		
Week 13 Dec 2	Malicious Code; Auditing and IDS; Watermarking	<ul style="list-style-type: none"> • <i>Recognize, compare/contrast, explain</i> different types of malicious code and watermarking techniques • Recognize, explain and analyze auditing/IDS systems 	
Week 15 Dec 9	Final		