CS 6353
Unix and Network Security
Syllabus

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Class Time: Monday, Wednesday 4:00 pm - 5:15 pm
Class Location: HSS 3.04.08
Class Webpage: http://www.cs.utsa.edu/ ∼ tosun/TEACHING/CS6353SP11/index.html
Office Hours: Monday, Wednesday 2:00 pm- 3:30 pm

Textbook: No required textbook

References:
1. Network Security Private Communication in a Public World
   Charlie Kaufman, Radia Perlman, Mike Speciner
2. Cryptography and Network Security
   William Stallings
3. Applied Cryptography
   Bruce Schneier
4. Hackers Beware
   Eric Cole
5. Hacking Exposed: Network Security Secrests & Solutions
   Stuart McClure, Joel Scambray, George Kurtz
6. Security in Computing
   Charles Pfleeger, Shari Pfleeger

Objectives: In this course you will learn
1. How hackers work and the tools they use
2. Terminology, underlying concepts and principles of network security
3. How to apply cryptographic tools to networking problems
4. How to do literature search, read research paper, write research paper

Prerequisites: Introductory computer networks course, programming experience in C, knowledge of Unix operating system

Grading: **Based on Curve**
Homeworks: 15% 4 Homeworks, lowest one dropped
Midterm 1: 20% Wednesday, March 2
Midterm 2: 20% Wednesday, April 6
Presentation: 10%
Project: 30% Wednesday, April 27
Attendance: 5%

Topics: Information Gathering about Networks
Session Hijacking
Buffer Overflow Attacks
Denial of Service Attacks
Viruses, Worms and Trojan Horses
Firewalls
Public Key Cryptography
Symmetric Ciphers
Cryptographic Hash Functions
Digital Signatures
IP Security
Secure Sockets Layer
Key Management
IP Traceback
Security in Sensor Networks
Secure Routing
Security in P2P networks
Other topics depending on availability of time

Project: Form groups of 2-4 students
Find a relevant topic on network security
Do literature search (find related material) 5%
Read related material and implement a prototype
Write a 10 page report in LATEX format 20%
Presentation of the topic to class 5%

This Syllabus is provided for informational purposes regarding the anticipated course content and schedule of this course. It is based upon the most recent information available on the date of its issuance and is as accurate and complete as possible. I reserve the right to make any changes I deem necessary and/or appropriate. I will make my best efforts to communicate any changes in the syllabus in a timely manner. Students are responsible for being aware of these changes.