CS471
Security & Info Assurance

Welcome!
3/13/2023

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Course Schedule

Week #	Monday	Wednesday	Reading	Weekly Topic	Due	Assigned
1	01/16/23	01/18/23		Getting started		
2	01/23/23	01/25/23	Chapter 1	Introduction		Assignment 1
3	01/30/23	02/01/23	Chapter 2	Symmetric Encryption	Assignment 1	Assignment 2
4	02/06/23	02/08/23	Chapter 3	Asymmetric Encryption	Assignment 2	Assignment 3
5	02/13/23	02/15/23	Chapter 4	Key Distribution and Authentication	Assignment 3	
6	02/20/23	02/22/23	Chapters 1-4	Review : **Midterm 1**		
7	02/27/23	03/01/23	Chapter 5	Network Access Control		Assignment 4
8	03/06/23	03/08/23	Chapter 6	Transport Level Security	Assignment 4	Assignment 5
9	03/13/23	03/15/23	Chapter 7	Wireless Network Security		
10	03/20/23	03/22/23	Chapter 8	DNS and Email Security	Assignment 5	
11	03/27/23	03/29/23		Spring Break		
12	04/03/23	04/05/23	Chapters 1-8	Review : **Midterm 2**		
13	04/10/23	04/12/23	Chapter 9	IP Security		Assignment 6
14	04/17/23	04/19/23	Chapter 10	Malicious Software	Assignment 6	Assignment 7
15	04/24/23	04/26/23	Chapter 11	IDS		
16	05/01/23	05/03/23	Chapter 12	Firewalls	Assignment 7	
17	05/08/23	05/10/23		Finals Week		
	*No Meeting			Final Exam: **TBD**		

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The X.800 service categories will be important for the entire semester.

As we examine security, this will be our measure.

- **X.800 Service Categories**
  - Authentication
  - Access control
  - Data confidentiality
  - Data integrity
  - Non-repudiation

X.800 SERVICE CATEGORIES

- Authentication
- Access control
- Data confidentiality
- Data integrity
- Nonrepudiation

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Technologies that provide security services:

Confidentiality
- Encryption
- TLS
- SSH

Authentication
- EAP
- EAPOL
- Encryption

Access Control
- Kerberos
- 802.1x
- Firewall

Integrity
- Hashing
- Digital Certificates

Non-Reputability
- Asymmetric Encryption
- Digital Certificates

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***Automatic* Authentication and Confidentiality**

How can we provide *automatic* authenticity and confidentiality services to applications?

Does this work over 'any' network?
– LAN, WAN, CAN

Wireless Networks

How are wireless networks different than wired networks?

How are wireless networks the same as wired networks?

Does WIFI present any additional security risks?

Can we *provide* security over WIFI?

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Chapter 7: Wireless Security

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Assignment 5

Demonstrate network mapping using Nmap, Zenmap, and Wireshark.

Describe how network mapping software affects security. How do network mapping tools, like Nmap, increase or decrease security? How could network mapping attempts be detected and/or stopped?

Due 3/20

Questions?

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Thank you!