



King Fahd University of Petroleum and Minerals
College of Computer Science & Engineering
Information and Computer Science Department

Short Course

Ethical Hacking

The New Approach to Security



To catch a thief, you must think like a thief

As hackers expand their knowledge, so should you

You must think like them and work like them to protect your system from them

Description:

Ethical hacking is an original approach to secure systems by trying to attack and hack them in order to find their weaknesses and vulnerabilities. In this course, students will learn how to scan computer systems and networks for vulnerabilities, how to exploit them to get access to the target's system/network, how to escalate privilege, how to bypass security measures like firewalls and antiviruses, how to crack passwords, how to sniff and modify traffic in the network, how to steal sessions, how to develop viruses and trojans, how to hack websites, etc.

This course focuses on two main aspects: (1) a deep understanding of the basics and principles of hacking techniques and (2) a practical hands-on experience of those hacking techniques. Every class/session will start by describing the background and principles of a security/hacking technique which will be followed by a set of live demos of the attacks.

Duration: 5 days

Dates: June 9-13, 2012

Location: ICS Department (KFUPM)

Instructor: Dr. Sami Zhioua

Maximum Capacity: 20 participants

Certificate: A graduate certificate will be awarded to participants

Information and Registration:

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Short Course Overview

1. Initial Hacking steps

- Scanning
- Enumeration
- Google Hacking

2. Hacking and infiltrating Operating Systems

- Creating back-doors
- Transferring and executing files in the victim
- Opening sessions

3. Detecting Vulnerabilities

- Vulnerability Scanners
- Vulnerability databases

4. Using Exploitation tools

- Writing exploits
- Meta-Exploitation Tools

5. Password Cracking

- Password cracking tools
- Using dictionaries

6. Network Hacking

- Network Sniffing to observe traffic
- ARP Poisoning attacks
- Man-In-The-Middle attacks
- Session Hijacking

7. Web Application Hacking

- Top 10 Web Application Attacks
- SQL Injection Attacks
- XSS Scripting Attacks
- Etc.

8. Hacking with Malwares and Rootkits

- Different Types of malwares
- Malware coding
- Malware binders and packers
- Bypassing Antivirus Tools
- Social Engineering Toolkits

9. Other Topics

- Software Cracking
- Anonymous Group Denial of Service Attacks
- Etc.

Website: <http://faculty.kfupm.edu.sa/ics/zhioua/EthicalHacking>