Lectures for the course: Information and System Security (IT 60112)

Week 1

Lecture 1 – 04/01/2007

- Introduction to the course
- Evaluation Criteria Explained
- Attendance Requirement Stated
- Text Books and Research Materials to form part of the syllabus
- Class Test dates announced

Week 2

Lecture 2 – 08/01/2007

- Computer Security Fundamentals – Confidentiality, Integrity and Availability
- Threats and Attacks
- Policy and Mechanism

Lecture 3 – 09/01/2007

- Goals of Security
- Assumptions and Trust
- Assurance

Lecture 4 – 11/01/2007

- Protection State
- Access Control Matrix

Week 3

Lecture 5 – 15/01/2007

- HRU Model

Lecture 6 – 09/01/2007

- Safety in the HRU model

Lecture 7 – 11/01/2007
• Take-Grant Protection Model

**Week 4**

**Lecture 8 – 22/01/2007**

• Bell LaPadula Model

**Lecture 9 – 23/01/2007**

• Holiday

**Lecture 10 – 11/01/2007**

• Biba’s Integrity models

**Week 5**

**Lecture 11 – 29/01/2007**

• Lecture not held

**Lecture 12 – 30/01/2007**

• Holiday

**Lecture 13 – 01/02/2007**

• Class Test 1

**Week 6**

**Lecture 14 – 05/02/2007**

• Class test scripts were shown
  • Lipner’s model

**Lecture 15 – 06/02/2007**

• Clark Wilson’s Model

**Lecture 16 – 07/02/2007**

• Chinese Wall Model
Week 7

Lecture 17 – 12/02/2007

- Authentication

Lecture 18 – 13/02/2007

- Authentication contd.
- Skeys one time password

Lecture 19 – 14/02/2007

- Classes off due to mid-sem exam

Week 8

Lecture 20 – 26/02/2007

- Kerberos Simple Dialogs

Lecture 21 – 27/02/2007

- Kerberos Complete dialog
- Kerberos realms and multiple Kerberi

Lecture 22 – 01/03/2007

- Secure System Design Principles

Week 9

Lecture 23 – 05/03/2007

- Role Based Access Control Introduction

Lecture 24 – 06/03/2007

- RBAC0
- RBAC1

Lecture 25 – 08/03/2007

- RBAC2
Week 10

Lecture 26 – 12/03/2007

• Specification of constraints in RBAC

Lecture 27 – 13/03/2007

• Introduction to Assurance
  • Impact of Life cycle on assurance

Lecture 28 – 15/03/2007

• Review and Review Effectiveness

Week 11

Lecture 29 – 19/03/2007

• Configuration Management

Lecture 30 – 20/03/2007

• Evaluating Systems
  • TCSEC

Lecture 31 – 22/03/2007

• ITSEC
  • CC

Week 12

Lecture 32 – 26/03/2007

• Malicious Logic
  • Trojan Horse
  • Virus

Lecture 33 – 27/03/2007

• Class Test 2 Held

Lecture 34 – 29/03/2007

• Class Test scripts shown
• Virus prevention mechanisms

**Week 13**

**Lecture 35 – 02/04/2007**

• Vulnerability Analysis
• Flaw testing methodology
• Different levels of penetration testing

**Lecture 36 – 03/04/2007**

• Penetration of a Burroughs system
• Social Engineering

**Lecture 37 – 05/04/2007**

• Auditing and Logging
• Components of an auditing system

**Week 14**

No Class

**Week 15**

**Lecture 38 – 16/04/2007**

• Intrusion Detection
• Misuse and Anomaly Detection
• Base Rate Fallacy

**Lecture 39 – 17/04/2007**

• Summary and Feedback