

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 Kerber

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