# COURSE FILE SUMMARY

## COURSE INFORMATION

| | | | |
|---|---|---|---|
| **College / Institute / Center:** | Management & Technology | **Department:** | E-Commerce Dept. |
| **Program Title:** | Bachelor of Business Administration | **Program Code:** | ECR |
| **Course Title:** | **Information Security** | **Course Code:** | **CR415(CR443)** |
| **# Hours:** | ------- 32 hr --------- <br><br> Lecture | ------ 28 hr ------- <br><br> Lab / Tutorial | ------- 3 hr --------- <br><br> Credit |
| **Pre Requisites:** EC226,M315 | | | |

## COURSE AIM

In today's open societies people share and transfer information 24*7; while doing do one of the very important factors to consider is information security. This course covers the following topics: computer security; data integrity and privacy; operational security; organizational aspects and economics; physical security; identification and authentication; electronic and electromagnetic tampering; hardware security; memory protection; hardware realization of software functions; encryption; cryptography; transformation systems; operating system security; database security; network security.

## COURSE OBJECTIVES

Information Security is a crucial component of every E-commerce enterprise. This course provides students with the necessary knowledge and skills to accomplish the task of securing the information stored on a web site or while it is transmitted. The course plays an important role in showing students how security, privacy, and trust concerns raised in the other courses can be handled. And hence adds an important block to their knowledge about E-commerce.

## STAFF REQUIREMENTS

|  | Qualifications | Special Skills | Number |
|---|---|---|---|
| Lectures | Ph.D. CS or MIS | Practical Experience in MIS | 1 |
| Tutorials | M.Sc. CS or MIS | Practical Experience in MIS | 1 |
| Laboratories / Workshops | B.Sc. or M.Sc. CS or MIS | Practical Experience in MIS | 1 |

## LECTURE SCHEDULE

| # | Week | Hrs | Description |
|---|---|---|---|
| 1 | 1st. | 3 | Data integrity and privacy |
| 2 | 2nd. | 3 | Computer security/operational security |
| 3 | 3rd. | 3 | Organizational aspects and economics |
| 4 | 4th. | 3 | Physical security, Identification and authentication |
| 5 | 5th. | 3 | Electronic and electromagnetic tampering |
| 6 | 6th. | 3 | Hardware security |
| 7 | 7th | 3 | **7th Week Exam.** |
| 8 | 8th. | 3 | Memory protection |
| 9 | 9th. | 3 | Hardware realization of software functions |
| 10 | 10th. | 3 | Encryption & Cryptography |
| 11 | 11th. | 3 | Operating system security |
| 12 | 12th. | 3 | **12th Week Exam.** |
| 13 | 13th. | 3 | Database security |
| 14 | 14th. | 3 | Network security |
| 15 | 15th. | 3 | CIIP |
| 16 | 16th. | 3 | **Final Exam.** |

## TEXT BOOKS

| Code* | Description |
|---|---|
| TB | Information security principles and practices, Mark Merkow, Pearson ed |

## REFERENCE BOOKS

| Code* | Description |
|---|---|
| RB | - |

## TUTORIAL SCHEDULE

| # | Week | Hrs | Topic |
|---|------|-----|-------|
| | | | - **SSL-Explorer (Cryptography Application):** Details: Operating System: 32-bit MS Windows (NT/2000/XP), Programming Language: Java, User Interface: Web-based. |

## LABORATORY WORKSHOP SCHEDULE

| # | Week | Hrs. | Description |
|---|------|------|-------------|
| 1 | 1st | 2 | Password Security |
| 2 | 2nd | 2 | Network Scanners |
| 3 | 3rd | 2 | Vulnerability Scanners |
| 4 | 4th | 2 | Defense |
| 5 | 5th | 2 | Access Control |
| 6 | 6h | 2 | Organizational aspects and economics |
| 7 | 7th. | 2 | Cross Domain Security in Web Applications |
| 8 | 8th. | 2 | SQL Injection |
| 9 | 9th. | 2 | Security with Apache .htaccess |
| 10 | 10th | 2 | Encryption & Cryptography |
| 11 | 11th | 2 | Public Key Cryptography & encryption algorithms |
| 12 | 12th | 2 | Projects' Presentations |
| 13 | 13th | 2 | Key Management & exchange |
| 14 | 14th | 2 | Certification Authority |

## COMPUTER USAGE
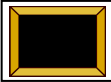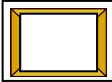
The Computer will be used in all Lab sessions.

## GRADING AND ASSESSMENT METHOD

| Week # | Points | Written | Oral | Term Paper | Continuous | Thesis | Practical | | |
|--------|--------|---------|------|------------|------------|--------|-----------|---|---|
| 7 | 30 | 30 | | | | | | | |
| 12 | 20 | 20 | | | | | | | |
| 1-15 | 10 | | | | 10 | | | | |
| 16 | 40 | 40 | | | | | | | |

## READING MATERIAL

| Code* | Description |
|-------|-------------|
| **LN** | Avoiding Credit Card Fraud |
| **LN** | How to Protect Stored Passwords by Hashing and Salting |
|  |  |

* TB : Text Book          RB: Reference Book          ST: Standards / Codes          LN: Lecture Notes

## SUPPLEMENTARY MATERIAL

| Code* | Description |
|-------|-------------|
| OS | Slides for the Lab sessions |
|  |  |
|  |  |
|  |  |

*PR: Periodical          SW: Software          VT: Video Tape          OS: Overhead Slide Projector
MD: Model          AC: Audio Cassette          NC: Notebook Computer

## EDUCATIONAL RESOURCES



**Prepared by**:

Designation:  Course Coordinator

Name: Dr. Mahmoud Youssef

Sign:

Date: 10/6/2008

**Approved by:**

Designation. Programme Manager

Name: Dr. Mahmoud Youssef

Sign:

Date: 10/6/2008