BITS 3423

INFORMATION TECHNOLOGY SECURITY

Faculty of Information and Communications Technology

Siti Rahayu Selamat
Robiah Yusof
Mohd Faizal Abdollah
Nazrulazhar Bahaman

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Editor
Prof. Madya Dr. Shahrin Sahib@Sahibudin

Faculty of Information and Communication Technology,
Kolej Universiti Teknikal Kebangsaan Malaysia,
Karung Berkunci 1200,
75450 Melaka,
Malaysia.

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PREFACE

Overview

The greatest source of confusion in the business world today is information security. Executives read articles about the latest theft of credit cards or the billions of dollars in losses to hackers and expect that a quick solution can be found. The burden typically falls upon computer professionals who are otherwise brilliant at what they do but have little knowledge about security issues. This lab module is designed to equipped student with hands-on experience on implementing the security techniques in their study environment which is based on various security issues. It also will expose the students on how to secure their rights, protecting their computing environment and preventing unauthorized people from reading and altering messages on a network.

Approach

The objective of this module is to introduce student in preparing a secure computing environment by using secure software, hardware and network. The task will involve the managing setup process, PGP application, preventive tools, anti-virus and other security tools. These tools will help student in understanding and applying the computer and information security areas and processes. Each lab offers student many opportunities to get hands-on and build new security tools skills. The lab module also exposes students about the threats to their computing environment such as their information and network. Upon completion of this lab module the students should have:

- Substantial skills to use software or tools for managing the security of computing environment in general and IT security in particular.
- Knowledge about threats and risk that are threating the information and network.
- Skill to build a secure environment for any transaction in the network environment.

Chapter Layout

Each chapter begins with a list of objectives. These include the important concepts to be mastered within the chapter.

Extensive self-review questions and tutorial are included at the end of each chapter for self-study. They provide the student with a chance to build confidence with the lab exercises. This module contains 12 chapters which are Introduction to Information Security (Chapter 1), Authentication and Basic Cryptography (Chapters 2), Program Security (Chapter 3), Operating Systems Security (Chapter 4), Database Security (Chapter 5), Security in Networks (Chapter 6), Security in Applications (Chapter 7), Wireless Security (Chapter 8), Legal and Ethical Issues in Computer Security (Chapter 9), Cyberlaws (Chapter 10), Administering Security (Chapter 11) and Designing, Implementation and Maintaining the Recovery Solutions (Chapter 12).