Module code | SS-4310
---|---
Module Title | Computer Security
Degree/Diploma | Bachelor of Science (Computer Science)
Type of Module | Major Option

<table>
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<th>Modular Credits</th>
<th>4</th>
<th>Total student Workload</th>
<th>10 hours/week</th>
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<tbody>
<tr>
<td>Contact hours</td>
<td>4</td>
<td>hours/week</td>
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Prerequisite | SS-2205 Computer Networks
Anti-requisite | None

Aims
This module gives an overview of different aspects of computer security and introduces techniques to address security related issues.

Learning Outcomes
On successful completion of this module, a student will be expected to be able to:

Lower order: 20%
- explain the various aspects of computer security

Middle order: 60%
- use formal models to assess the strength of particular system configurations
- formulate protection plan against various vulnerabilities and attacks
- use cracking tools to locate security holes

Higher order: 20%
- analyse program source for security problems
- apply security tools to protect computer systems

Module Contents
- Theoretical and practical aspects of computer security
- Theoretical aspects: information theory, cryptography and formal models of belief and trust
- practical aspects: encryptions, digital certificates, authentications, access controls,
- security protocols, firewalls and filtering
- Non-technical aspects: security policy and recovery management
- Security concern: understanding attacks like memory corruption, code injection password cracking and session hijacking

Assessment
Formative assessment: Interactive Quizzes and Feedback
- Examination: 50%
- Coursework: 50%
- 2 class tests (10%)
- 2 written assignments (40%)