

# IT-SECURITY

## LEVEL OF COURSE UNIT

Bachelor

## LEARNING OUTCOMES OF COURSE UNIT

The students know the principal goals and requirements concerning confidentiality, integrity, and availability of information systems. They are aware of the threat environment and specific types of attacks. They know how information systems can be secured against these types of attacks. They are also aware of management tasks in order to increase security for data, information, communication, and IT systems.

## COURSE CONTENTS

Contents of this course are:

- Threat environment: Goals of IT security, types of attackers and attacks, planning and managing IT security
- Cryptography and cryptographic system standards: symmetric and public/private key encryption, digital signatures, Hashing, authentication, digital certificates, TSL/SSL, IPsec, wireless security
- Access control: passwords, biometric methods, role-based access control, identity management
- Firewalls: principles, static packet filtering, stateful packet inspection, NAT, intrusion detection and
- Prevention systems, firewall architectures and management
- Host and Data Security: host hardening, vulnerability and exploits, vulnerability testing, data protection and backups
- Application Security: hardening applications, web server attacks, email security
- Incident and Disaster Response: incident response, laws and regulations, business continuity planning

## LANGUAGE OF INSTRUCTION

**English**

## NUMBER OF ECTS CREDITS ALLOCATED

3