

**NEW ZEALAND INSTITUTES OF TECHNOLOGY AND POLYTECHNIC
QUALIFICATIONS IN INFORMATION & COMMUNICATIONS TECHNOLOGY**

PRESCRIPTION: NM640 NETWORK SECURITY

| | |
|---------------------------|--|
| AIM OF MODULE: | To provide students with the knowledge and skills required to apply or improve security measures related to the use of computers and networks. |
| CREDITS: | 7 |
| STUDENT LEARNING HOURS: | 70 |
| CONTENT REVISED: | 2010 |
| PRESCRIPTION EXPIRY DATE: | November 2013 |

Level and Assessment Schedule

| TOPICS | Highest Skill Level | | | | Suggested Assessment Percentage |
|--|---------------------|---|---|---|---------------------------------|
| | R | C | A | P | |
| 1. Security vulnerabilities, threats and appropriate countermeasures | | | * | | 30 |
| 2. Encryption technologies and wireless security | | * | | | 30 |
| 3. Operational Security and disaster recovery | | | * | | 40 |
| | | | | | <hr/> <hr/> 100 <hr/> <hr/> |

LEARNING OUTCOMES

The student will:

- A 1. Establish appropriate measures to ensure that security vulnerabilities, threats and appropriate countermeasures are identified and implemented
- C 2. Explain the purpose and application of encryption technologies and wireless security
- A 3. Implement appropriate operational security and disaster recovery procedures to ensure business continuity

CONTENT

1. Security vulnerabilities, threats and appropriate countermeasures

- Securing assets.
- Assessing security threats and vulnerabilities, including the use of security tools, security updates and logs.
- Establishing, monitoring and maintaining secure baselines.
- Managing access and authentication.

2. Encryption Technologies and wireless security

- Symmetric encryption and hash functions.
- Public key encryption, certificates and related infrastructure.
- Security in wireless networking.

3. Operational Security and disaster recovery

- Securing internet traffic, including web content and email.
- Securing web, mail, DNS and RAS servers.
- Applying security policies.
- Implementing disaster recovery measures such as a disaster recovery plan, backing up and restoring data.

NOTES TO TUTORS

- Any appropriate server and client operating systems or combination of server and client operating systems can be used.