

**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:	2004 (new)
PRESCRIPTION EXPIRY DATE:	Nov 2011 (not currently offered by an ITP)

**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
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## 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.