

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

PRESCRIPTION: SD310 PROGRAMMING A

AIM OF MODULE:	To introduce students to basic programming logic and structured programming techniques.
CREDITS:	5
STUDENT LEARNING HOURS:	50
CONTENT REVISED:	2001
PRESCRIPTION EXPIRY DATE:	November 2013

Level and Assessment Schedule

TOPICS	Highest Skill Level				Suggested Assessment Percentage
	R	C	A	P	
1. Basic Principles			*		30
2. Programming			*		70
					<hr/> 100 <hr/> <hr/>

LEARNING OUTCOMES

The student will:

- A 1 Identify the elements of logical structures and document them.
- A 2 Code a program from a given design (eg structure diagram or pseudocode).

CONTENT

1 BASIC PRINCIPLES

- Given processes of varying complexity, identify separate steps, sequencing of steps, decision processes and repetitive processes
- Represent the logical structures identified above, using tools such as:
 - Structure diagrams
 - Pseudocode
- Identify likely inputs and expected outputs from the logical structure using structured walkthroughs or deskchecking

2 PROGRAMMING

- Create a program from a solution (e.g. structure diagram) that incorporates the following:
 - Keyboard input and screen output
 - Variables and Expressions
 - Sequence of steps
 - Simple decisions
 - Simple repetitions (not nested)
 - Meaningful documentation