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

PRESCRIPTION: SD600 SYSTEMS DESIGN

AIM OF MODULE:	To introduce the student to the basic concepts of design through the study of process design, input design, output design, developing program specifications and systems design documentation.
CREDITS:	7
STUDENT LEARNING HOURS:	70
CONTENT REVISED:	1998
PRESCRIPTION EXPIRY DATE:	November 2013

Level and Assessment Schedule

	Highest Skill Level				Suggested Assessment Percentage
TOPICS	R	C	A	P	
1. Process Design			*		35
2. Input Design			*		10
3. Output Design			*		10
4. Developing Program Specifications			*		10
5. Documentation		*			20
6. Security and Audit			*		15
					100

The student will:

1 PROCESS DESIGN

R 1.1 Describe the concept of a design methodology and list the standard characteristics.

A 1.2 Given a design problem, apply a top-down (or similar) approach.

R 1.3 Describe typical documents used in systems design, including:

- organisation charts
- data flow diagrams
- data dictionaries
- structure charts

➢ Explanation should include basic characteristics, appropriate usage, cross-relationship between documents.

A 1.4 Given a simple case study, create the appropriate design documentation. This should include details of logic using tools such as Structured English, Decision Tables and Trees etc.

2 INPUT DESIGN

➢ Note: all types of input devices should be considered, and their implications for design.

R 2.1 Describe the characteristics of good input forms.

R 2.2 Describe the characteristics of good screen design.

A 2.3 Apply the above principles in the design of input forms and screens for a case study. (This should include the use of a variety of different types of dialogues).

C 2.4 Explain how such design documents should be cross-referenced to the rest of the system specification.

3 OUTPUT DESIGN

➢ Note: All types of output devices should be considered, and their implications for design.

R 3.1 Describe the characteristics of good report layouts.

R 3.2 Describe the characteristics of good output screen design. (Will be related to 2.2 above).

R 3.3 Describe the characteristics and function of turn-around documents.

A 3.4 Apply these principles in the completion of designs for a case study.

C 3.5 Explain how such design documents should be cross-referenced to the rest of the system specification.

4 DEVELOPING PROGRAM SPECIFICATIONS

C 4.1 List the basic contents of a program specification and show how the design documents produced above are incorporated.

A 4.2 Complete program specifications for a case study, using techniques of narrative and process logic expression.

C 4.3 Explain the effect of a multi-programmer team approach on the writing of program specifications.

5 DOCUMENTATION

R 5.1 Outline the importance of documentation at each stage of system development.

C 5.2 Explain the purpose and use of a documentation checklist.

C 5.3 Explain the concept and application (at a superficial level) of a recognised system of documentation (e.g. NCC, Spectrum etc.).

6 SECURITY and AUDIT

A 6.1 Apply the principles of security and audit in the completion of a case study.

NOTE TO TUTORS

➢ This subject should be based upon the completion of case studies based on on-line (i.e. interactive) applications.