

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

PRESCRIPTION: BS230 MATHEMATICS FOR COMPUTING

AIM OF MODULE:	To provide students with the basic mathematical skills relevant to the area of business computing.
CREDITS:	5
STUDENT LEARNING HOURS:	50
CONTENT REVISED:	2002
PRESCRIPTION EXPIRY DATE:	November 2013

Level and Assessment Schedule

TOPICS	Highest Skill Level				Suggested Assessment Percentage
	R	C	A	P	
1. Basic arithmetic			*		50
2. Number conversion			*		10
3. Payroll, GST and Depreciation			*		30
4. Graphs			*		10
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LEARNING OUTCOMES

The student will:

- A 1 Demonstrate the principles of basic arithmetic.
- A 2 Perform number conversions between bases.
- A 3 Perform simple calculations with payroll, Goods and Services Tax and depreciation.
- A 4 Identify and describe appropriate uses of graphs.

CONTENT

1 BASIC ARITHMETIC

- Identify different number types (integers, fractions, decimals, percentages).
- Correctly calculate equations applying the concept of arithmetic operator precedence without using a calculator
- Apply rounding and truncation.
- Calculate the average of a set of numbers.
- Perform cost and selling price calculations
- Apply estimation techniques using rounding, and approximation as methods of checking answers.
- Create and solve an equation (formula) from a given word problem.

2 NUMBER CONVERSION

- Convert decimal whole numbers to binary, octal, hexadecimal
- Convert binary, octal, hexadecimal numbers to decimal

3 PAYROLL, GST and DEPRECIATION

- Calculate payroll details for two employees including gross pay, PAYE, allowances and deductions.
- Calculate GST added to an invoice.
- From a GST inclusive invoice, calculate the GST content.
- For a fixed asset calculate one year's depreciation using either the straight line or diminishing value method. Assume no residual value.

4 GRAPHS

- List the characteristics of the following types of graphs and identify appropriate use:
 - Pie chart
 - Bar graph
 - Line graph
- Given a pie chart, bar graph or line graph, interpret the graph to explain the trends illustrated.