

SAULT COLLEGE  
of Applied Arts and Technology  
Sault Ste. Marie

COURSE OUTLINE

COMPUTER PROGRAMMING

EDP 105-2

revised November, 1981 by T. Black

## COMPUTER PROGRAMMING

### Course Objectives

EDP 105-2

### General Objectives

1. To familiarize students with the BASIC language to enable them to solve scientific problems related to their discipline.
2. To familiarize students with a modern computer system.

### Specific Objectives:

#### 1. System Fundamentals

- a) Command level entry to the VAX-11 system
- b) Files and Directories
- c) Use of DCL for directory management and program-development
- d) VAX-11 system concepts
- e) Editing in the BASIC environment

#### 2. BASIC Fundamentals

The student shall understand the rules governing the following

- a) Form of a BASIC statement and BASIC character set
- b) Variable and constant types and names
- c) Data formats
- d) Arithmetic operations and their hierarchy
- e) Multiple statements and extended lines (use of and )

#### 3. BASIC Statements

The student shall know the function of, and be able to use, the following statements:

- a) LET statement
- b) Comment formats and END statement
- c) INPUT from the keyboard
- d) READ, DATA and RESTORE

- e) PRINT
  - f) GOTO and ON GOTO
  - g) IF, THEN, ELSE statements
  - h) FOR - NEXT loops and nested loops
  - i) DIMENSION statement and the use of one and two-dimensional arrays
  - j) MAT operations
  - k) GOSUB and RETURN to implement subroutines
  - l) PRINT USING statement to format output.
  - m) Use of system numeric and string functions such as `SIN`, `SQR`, `EXP`, etc.
  - n) Logical and relational operations and their precedence
4. Students shall be able to incorporate the above elements into BASIC programs to solve assigned problems by
- a) accessing the system
  - b) editing their programs
  - c) running their programs and producing output on display or printer