SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: COMPUTER PROGRAMMING

Code No.: EDP 105-2

Program: WATER RESOURCES, PULP & PAPER AND FORESTRY, GEO

Semester: II

Date: DECEMBER, 1983

Author: S. VERMA

New: _____ Revision: X

APPROVED: _____ December, 1983
Chairperson Date

WATER RESOURCES, PULP & PAPER AND FORESTRY
EDP 105-2
COMPUTER PROGRAMMING

CALENDAR DESCRIPTION

COMPUTER PROGRAMMING	EDP 105-2
Course Name	Course Number

SPECIFIC OBJECTIVES:

GENERAL:

The objectives of this course are to introduce the student to computer concepts and the use of the BASIC language. The student will use the VAX11-780 computer system to solve a variety of technical problems, and will learn to use the system command language, the EDT Editor Program, and the basic compiler and linker programs.

BLOCK 1 - COMPUTER SYSTEM ORGANIZATION (CHAPTERS 1-2) .....4 Weeks

At the end of this block, the student will be able to:

1) Describe typical hardware components of a computer system, and their function. (Processor, Memory, Disc, Tape, Printer, Terminals, etc.)

2) Describe typical hardware components of a computer system, such as monitors, language translators (compilers and interpreters), editors, and linkers.

3) Describe the function of the important keys on the keyboard of the computer terminal.

4) Utilize the VAX DCL (Digital Control Language) to:

   a) Log On and Log Off the system
   b) Display a file on the terminal
   c) Delete files
   d) Purge files
   e) Print files
   f) Rename files
   g) Access the basic interpreter

5) Use the basic interpreter to create, modify text and save programs.

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BLOCK II - BASIC PROGRAMMING (CHAPTERS 3-10) .....8 Weeks

At the end of this block, the student will be able to:

1) Describe the form and operation of BASIC language instructions including:

   - input, output
   - arithmetic operations
   - decisions and branching
   - looping functions
   - subscripted variables
   - string variables
   - sub-routines
   - special functions

2) Utilize the basic interpreter commands to list, edit, modify, and delete instructions within a program, and to create, recall, save, unsave, append and rename programs.

3) Analyze problems for computer solution using tools such as flowcharts, and create basic programs to implement those solutions.

4) Run, test and debug programs assigned.

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BLOCK III - PROGRAM DEVELOPMENT

At the end of this block, the student will be able to:

1) Describe the process of editing, compiling, linking, and running a program, and be able to discuss the difference between basic, object, listing and executable files.

2) Use the EDT editor program to create and modify basic source programs.

3) Describe the characteristics and capabilities of the EDT editor, and demonstrate an ability to use the available facilities.

4) Describe and be able to use the various compiler options available with the VAX BASIC compiler.

* The coverage of this section will depend on the availability of time.

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TEXT:

Peckham, H.D., 1981, "BASIC: Hands-on Method," McGraw-Hill Book Company, Toronto

REFERENCES:

1. Bartee, Thomas C., 1981, "BASIC Computer Programming," Harper and Row Publishers, New York

2. Weinman, David, Barbara L. Kurshan, "Vax-BASIC," Reston Publishing Company, Inc., Reston, Virginia

3. Gottfried, Byron S., 1982, "Programming with BASIC," McGraw-Hill Book Company, Toronto

EVALUATION:

There will be two one hourly tests, each contributing 25% to the final mark and a final test to be held at the end of term.

1. To get a passing grade in this course, students are required to score equal or greater than 55%.

2. Those students scoring in the range of 45% to 54%, will be considered for supplemental examination. Those with poor attendance will certainly not be considered for a re-write.

BASIS OF FINAL MARK:

3. Student will be given a mark which is higher of either:

   (a) the final examination mark, or
   (b) a weighted mark calculated as follows:

1st mid-term	25%
2nd mid-term	25%
Final Examination & Term Paper	50%