

CET 106

INTRODUCTION TO PROGRAMMING

OBJECTIVES 1990

GENERAL

This course is an introductory programming course that uses the Fortran language on the VAX computer to develop fundamental computer operation and programming skills. It is not intended to be a rigorous problem-solving course, but rather a course in which the student will learn the necessary skills to use the computer in successive courses. The student will study the organization of the VAX computer, the use of Digital Command Language (DCL) to manage computer resources, and learn to create and test Fortran programs on the VAX. The course is continued in second semester in CET 129, Structured Program Development.

BLOCK 1 VAX FUNDAMENTALS

At the end of this block the student shall be able to:

1. Describe the typical components of a VAX computer system and their function.
2. Describe the typical software components of the system.
3. Discuss the concept of files, and describe the file-naming conventions on the VAX.
4. Discuss the form of commands in the Digital Command Language (DCL), and use DCL to perform the following operations:
  1. Log on and off the system.
  2. Create text files from the keyboard.
  3. Display the contents of files on the screen.
  4. Get hard copies of files on the printer.

5. Delete, purge, rename and copy files.
5. Use the EDT and EVE editors to create text files.
6. Describe the process of editing, compiling, linking and running a program.
7. Discuss the differences between source, object, list and executable files.

#### BLOCK 2 - PROGRAMMING IN FORTRAN

At the end of this block the student shall be able to:

1. Describe the fundamental constructs of a programming language, and the fundamental approach to solving problems using a computer.
2. Write, test, and debug programs using the following Fortran language capabilities:
  1. Describe the real, integer and character data types, and the conventions for naming variables in Fortran.
  2. Describe the arithmetic operators in Fortran, and their precedence, and write valid Fortran expressions.
  3. Perform simple input and output in Fortran programs using the terminal.
  4. Discuss intrinsic functions available to Fortran programs, and their uses.
  5. Use the IF statement to allow programs to make decisions.
  6. Perform repetition using the DO and WHILE statements.



BLOCK 3 - VAX UTILITIES

At the end of this block the student shall be able to use the following VAX utilities:

1. HELP
2. MAIL
3. PHONE

NOTE:

The blocks of objectives will not necessarily be covered separately, or in order. Before tests are given the instructor will provide sufficient notice of the objectives to be tested.

ASSESSMENT

Marks for the courses will be determined as follows:

TESTS AND QUIZZES 75%  
LAB WORK AND ASSIGNMENTS 25%

The instructor may modify the final mark by up to 10% based on attendance and participation.

Grades will be assigned as follows:

A+	90 - 100 %
A	80 - 89 %
B	66 - 79 %
C	50 - 65 %
R	0 - 49 %

Lab work and assignments must be complete to the instructors satisfaction for a passing grade to be achieved. Makeup work and/or tests may be given at the instructors discretion.