

Revised 3/02

NVCC COLLEGE-WIDE COURSE CONTENT SUMMARY

ETR 106 – BASIC PROGRAMMING APPLIED TO ELECTRICAL/ELECTRONIC CALCULATIONS (2 CR.)

COURSE DESCRIPTION

Teaches the application of a high-level language to electrical and electronic problem solving and circuit analysis. Introduces an operating system. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

GENERAL COURSE PURPOSE

ETR 106 is a programming course offered to engineering technology students. This course concentrates on conveying the rudiments of computer programming by means of the fundamental statements with application to engineering problems suitable to numerical analysis. This course is suitable for students entering industry or whose present employer requires computer knowledge. The information required is taught by lecture, performance of writing problems and actual programming of certain problems for running on the NVCC computer.

ENTRY LEVEL COMPETENCIES

Prerequisite or corequisite for this course is MTH 166 – "Precalculus with Trigonometry".

COURSE OBJECTIVE

- A. Introduce the engineering technology student to the general purpose of digital computers
- B. Convey an understanding of the various levels of programming that exist in the digital computer world
- C. Develop in the student ability to use a programming language through its principal statements and syntax
- D. Insure that the student acquires the Fundamental philosophy of basic algorithms
- E. Convey to the student fundamental skills in processing important classes of engineering problems numerically on the digital computer, including numerical integration

MAJOR TOPICS TO BE INCLUDED

- A. Introduction to Computers
- B. Program Development
- C. Fundamentals of a Programming Language
- D. Subroutine

E. Strings

F. Arrays