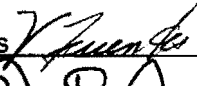


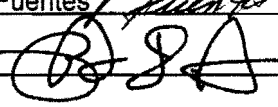
COUNTY COLLEGE OF MORRIS

Course Information Outline

Course Title Technical Computer Programming PREFIX&NUMBER ENR 120

Lecture Hours 2 Laboratory Hours 2 Credit Hours 2 Course Fee Yes

Department Chairperson Approval V. L. Fuentes  Date 2/21/2012

Division Dean Approval P. J. Enright  Date 3/1/12

General Education Information:

Categories:

- | | | | |
|--|---|---|--------------------------------------|
| <input type="checkbox"/> Communications | <input type="checkbox"/> History | <input type="checkbox"/> Humanities | <input type="checkbox"/> Mathematics |
| <input type="checkbox"/> Science | <input type="checkbox"/> Social Science | <input type="checkbox"/> Technological Competency | |
| <input type="checkbox"/> Diversity (check if course also meets diversity category) | | | |

Integrated Goals: (check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Ethical Reasoning and Action | <input type="checkbox"/> Information Literacy |
|---|---|

1. Catalog Course Description

This course is an introduction to computer programming with application to engineering technology. Microcomputers will be used to develop application programs in a programming language.

2. Prerequisite(s)

MAT 014 Basic Algebra I or equivalent

3. Co-requisite(s)

4. Textbooks

- Deitel, *Simply Visual Basic, An Application-Driven Tutorial Approach*, latest edition, Prentice Hall
- Zak, *Introduction to Programming with C++*, latest edition, Course Technology (needed only when C++ is taught)

5. Supplementary Books and/or Materials

6. Specialized equipment, supplies, facilities, for classes limited by enrollment or restricted by accreditation and/or equipment limitations. (Information will be used to determine differential funding category.)

7. Course Content (List of Topics)

Introductory Concepts-
 The Integrated Design Environment (IDE)
 Objects, Forms, properties
 Visual BASIC language elements
 Problem Solving Techniques
 Control Structures-Decision and loops
 Functions
 Time and Timers
 Global Variables

Revised 12/7/2011

8. Statement of Course LEARNING OUTCOMES

Upon completion of this course, the student will be able to:

- Describe basic programming language components such as translation, development system and syntax
- Describe event driven code, object oriented programming and object properties
- Design programs using techniques and approaches typically encountered in project development
- Translate program requirements and specifications into program code
- Debug and test program code
- Understand various data types to create programs using variables, constants and operators, and examine program execution
- Develop programs using sub procedures, functions, arguments and event procedures
- Understand the development of codes to execute programs involving decision logic and repetition
- Develop algorithms for a variety of applications

9. Statement of Relation to Curriculum(s)

A required course for Electronics and Mechanical Engineering Technology, the Biomedical Equipment option, and Computer Integrated Manufacturing technology, and is a recommended elective for other technology programs.

10. Format for offering the course (check all that apply)

X Traditional

☐

On-Line

X Hybrid