I.   EFFECTIVE DATE OF OUTLINE
Spring Semester, 2006. To be reviewed by the department annually.

II.   CATALOG DESCRIPTION
A.   CSCI 1111
B.   Introduction to Programming in C
C.   4 credits
D.   Offered Fall and Spring Semesters
E.   Prerequisite: CSCI 1101
F.   Problem solving using the C programming language. Topics will include the syntax of the language, operators and expressions, control structures, scoping rules, functions, parameter passing, arrays, strings, pointers, structures, type definitions, file handling and libraries.

III.   RECOMMENDED ENTRY SKILLS/KNOWLEDGE
Before taking CSCI 1111, students should be able to:
A.   Use a top-down approach to problem-solving, designing procedures and functions to modularize problem solutions.
B.   Express problem solutions as algorithms, using some sort of algorithmic representation, e.g., flowchart or pseudocode.
C.   Complete traces of algorithms showing their dynamics.
D.   Use structured programming and program documentation.
E.   Use a variety of control structures and data structures, e.g., iteration and arrays.
F.   Program in some programming language.

IV.   OUTLINE OF MAJOR CONTENT AREAS
A.   Computer operations and operating system issues
B.   Operators, operands
C.   Identifiers, expressions, syntax
D.   Data types, variables, variable scope
E.   Functions
F.   Parameter passing
G.   Control structures
H.   Arrays
I.   Multidimensional arrays
J.   Pointers
K.   Arrays of pointers
L.   Structures
M.   File handling
N.   Libraries

V.   LEARNING OUTCOMES
Upon successful completion of CSCI 1111, students will be able to:
A.   Design C computer programs that are thoroughly documented and tested, generally of high quality, and incorporating all principles of good design.
B.   State and apply the rules of the C programming language.
C.   Successfully operate the computers in the Normandale Community College Computer Center or another system of their choice.

VI.   METHODS USED FOR EVALUATION OF STUDENT LEARNING
The instructor will choose from among various evaluation techniques including – but not limited to – in-class testing, take-home testing, assignments, quizzes, attendance, group or individual projects, and research. The instructor will also choose a method for end-of-the-semester evaluation.