

**Department:** Math  
**Course #:** 40473OW

**Course Title:** COMPUTER PROGRAMMING USING C++ online

## DESCRIPTION OF COURSE:

Students will use the Microsoft Developer Studio to learn the fundamentals of programming in the C++ language. The course begins with learning the basics of structured programming including if.. else, loops and functions. The student will then move on to the concepts of object-oriented programming. The student will learn to use ready-made classes to simplify work with strings, arrays, stacks and queries. Students will demonstrate their achievement of the outcomes of the course through the completion of programs, projects, and tests.

REQUIRED TOPICS OF STUDY	SUGGESTED INTRUCTIONAL TIME	STANDARDS/ ASSESSMENT ANCHORS
Introduction to Computer Components and Languages	5 days	3.7.10.C.3.7.10.D.3.7.10.E.3.7.12.C.3.7.12.D.3.7.12.E. Science and Technology
How Computers are Programmed	5 days	3.7.10.C.3.7.10.D.3.7.10.E.3.7.12.C.3.7.12.E.
Entering, Compiling, and Running a Program	5 days	3.7.10.C.3.7.10.D.3.7.10.E.3.7.12.C.3.7.12.D.3.7.12.E.
Using Variables, Constants, and Math Operators	5 days	3.7.10.C.3.7.12.C.3.7.12.D.3.7.12.E.
Using Math Operations	5 days	3.7.10.C.3.7.10.D.3.7.10.E.3.7.12.C.3.7.12.D.3.7.12.E.
Programming Using Strings	5 days	3.7.10.C.3.7.10.D.3.7.10.E
Programming with Selections Structures	12 days	3.7.10.C.3.7.10.D.3.7.10.E.3.7.12.C.3.7.12.D.3.7.12.E.
Programming with Loops	12 days	3.7.10.C.3.7.10.D
Using Functions	12 days	3.7.10.C.3.7.10.D.3.7.10.E.3.7.12.C.3.7.12.D.3.7.12.E.
Pointers, Enum, and Structures	12 days	3.7.10.C.3.7.10.D.3.7.10.E.3.7.12.C.3.7.12.D.3.7.12.E.
Data File Basics	12 days	3.7.10.C.3.7.10.D.3.7.12.E.

## INSTRUCTIONAL RESOURCES:

ISBN 0-538-67600-0 Intro to Computer Science using C\_++ / Todd Knowlton; presented with PC output projection facility, web sites, LAN, WAN network.