



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Introduction to Computer Programming in C++ for Engineers and Scientists

CSE 1222

Credit Hours:

3.00

Course Levels:

Undergraduate (1000-5000 level)

Course Components:

Lecture

Lab

Course Description:

Introduction to computer programming and to problem solving techniques using computer programs with applications in engineering and the physical sciences; algorithm development; programming lab experience.

Prerequisites and Co-requisites:

Concur: Math 1151, 1154, or 1161.

Course Goals / Objectives:

- Be competent with writing simple C++ programs performing numerical calculations
 - Be competent with using basic C++ constructs; declarations and various statements including loops and conditionals
 - Be familiar with using C++ functions
 - Be familiar with using C++ arrays
 - Be familiar with using file input and output
 - Be exposed to algorithms
 - Be exposed to pointers
 - Be exposed to the C++ string and vector classes
 - Be exposed to defining C++ classes
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Course Topics:

- Simple input and output, cin and cout
 - Variables and assignments
 - Selection statements, if, then, else
 - Loops, for and while
 - File input and output.
 - Formatting output
 - Functions
 - Arrays
 - 2D arrays
 - Pointers, new and delete[] operators
 - C++ string and C++ vector classes
 - Intro to defining C++ classes
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Designation:

Elective