Syllabus for Introduction to C++

Course Introduction

In this course, Introduction to C++, you will be exposed to the basics of the C++ language. Most of the concepts are common across programming languages but C++ does things a little differently.

The course consists of four modules that will serve as an introduction to the C++ language and will form part of a series on C++ programming.

By the end of this course, you will be able to

- Create and use variables and constants
- Work with numeric and character data in C++ programs
- Create and use complex data structures such as arrays, structs, unions, and enumerations
- Create and use flow control statements for decisions and repetition
- Create and use functions
- Create and use simple classes in C++

Course Prerequisites

This course assumes no prior programming experience. However, you should be familiar with:

- your operating system
- how to install and use application programs

Grading Policy

In order to pass this course, the students must get a pass of 70% in the overall weighting

- Peer Review participation counts for 15%
- Knowledge Check counts for 85%

Certification

You will need to get a total of 70% or higher to earn a completion certificate.

Click the *Introduction to C++* course enrollment page to pursue a verified certificate.

To know more about the types of certificates offered in edX, visit [Student FAQs](#) (CERTIFICATES & CREDITS section) on the edX website.

Course Outline / Agenda

Module 1 Introducing C++

What exactly is C++?

The C++ Language

C++ a History
C++ Program Structure

Portability, Compiling, and Linking

C++ Apps on Different Platforms

The C++ Compilation Process

The Role of the Linker

C++ Editors

C++ Fundamentals

C++ Code Formatting

C++ Statements

Module 2 Data Types in C++

Available Data Types

Numeric Data Types

Character Data Types

Other Data Types

Choosing Data Types

Variables and Constants

Introducing Variables

Introducing Constants

Constants Demo

Module 4 Functions and Objects

Introducing Functions

Introduction to Functions

Function Prototypes

Function Parameters

Inline Functions

Storage Classes and Scope

Function Demo

Introducing Objects (Classes)

Introduction

Creating Classes

Class Initialization

Class Initialization Demo

Encapsulation

Introducing Encapsulation

Encapsulation Demo

Const Objects

Introducing Const Objects

Const Objects Demo

Time Commitment - Expected Effort

Course Length

This course is Self-Paced

Weekly Commitment

4-5 hours per week. This includes the time spent in going through the course materials (videos and reading materials), doing the assessments and participating in the discussion forums.

Discussion

We encourage all students to submit questions, observations, and comments in the Discussion section. If you have any issues while working on the course, check here first – your fellow students may have already found a resolution!

Please remember that the discussion forum is open to all students and staff, and while we love to see passionate engagement, abusive or inflammatory behavior will not be tolerated.

Due to the volume of students attending this course, it will not be possible for the course staff to answer every question individually. You should still post questions however, because in many cases, your fellow students may be able to help.

Getting Help - Course Discussion Board

Many modules have discussion boards designed specifically for the material in that module. Use the general discussion board to talk about the course in general, get help, or to provide feedback. Be sure to choose the appropriate topic area to more easily facilitate discussion. Please follow basic internet etiquette and post comments that are thoughtful, constructive, and clear.

Also, as your first assignment, create a new post and introduce yourself! Tell us a bit about where you're from, what you do, and what you hope to get out of this course (choose the Introductions topic area for this). This will give you an opportunity to get to know your fellow students and for them to get to know you. You never know--you may be taking this course with someone else in your hometown!