

Programming: C

Developed by [C++ Institute](#)

CLA: Programming Essentials in C Course Overview

Version 1 | Released February 2017

CLA: Programming Essentials in C covers the basics of programming in the C programming language for entry-level IT and software development jobs. The course includes hands-on labs, quizzes and assessments to learn how to utilize the skills and knowledge gained on the course and interact with some real-life programming tasks and situations.

By the end of the course, students will be able to:

- Understand common computer programming concepts
- Learn the syntax, semantics and basic data types of C
- Apply programming skills using hands-on lab activities and by writing their own C programs
- Develop logic-building skills and algorithmic thinking,

The 70-hour, instructor-led course includes hands-on practice activities, lab exercises to reinforce learning, quizzes and chapter assessments, and pre-final and final tests to measure understanding.

Requirements

The curriculum is designed for upper secondary schools, technical schools, and colleges or universities.

For Students

- No prerequisites.

For Instructors

- No requirements, however it is recommended that instructors earn a [CLA – C Programming Language Certified Associate Certification](#) prior to teaching the course.

For Institutions

- If offered face-to-face: a dedicated classroom with reliable Internet access

Languages

- English

Certification and Careers

CLA: Programming Essentials in C will round out students' IT skills to set them apart and prepare them for careers in any of the following pathways: software development, systems administration, network administration, device management, network management, and systems operations. The course is aligned to the vendor neutral certification:

[CLA – C Programming Language Certified Associate Certification](#)

CLP: Advanced Programming in C Course Overview

Version 1 | Released August 2018

CLP: Advanced Programming in C will familiarize the student with C advanced topics. The main learning objectives are: gain knowledge of the syntax and semantics of the C language, as well as advanced data types offered by the language, advanced libraries, the universal concepts of computer programming and developer tools, ability to identify code bugs and bottlenecks, programming of advanced data structures, solving non-trivial problems with the use of data structures and algorithms, designing and writing programs using standard language infrastructure regardless of the hardware or software platform.

The 70-hour, instructor-led course includes hands-on practice activities, lab exercises to reinforce learning, quizzes and chapter assessments, and pre-final and final tests to measure understanding.

Requirements

The curriculum is designed for upper secondary schools, technical schools, and colleges or universities.

For Students

- CLA: Programming Essentials in C or equivalent is required

For Instructors

- No requirements, however it is recommended that instructors earn a [CLP – C Certified Professional Programmer Certification](#) prior to teaching the course.

For Institutions

- If offered face-to-face: a dedicated classroom with reliable Internet access

Languages

- English

Certification and Careers

CLP: Advanced Programming in C will help you significantly develop your IT skills, advance your career, and increase your earning potential. The C language can be used for embedded systems, systems programming, open source software, language compilers, assemblers, print spoolers, data bases, utilities, network drivers. The course is aligned to the vendor neutral certification:

[CLP – C Certified Professional Programmer Certification](#)