Secure coding in C++

Category: Networking & Security | **Vendor:** Various

Duration: 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

Your application written in C and C++ works as intended, so you are done, right? But did you consider feeding in incorrect values? 16Gbs of data? A null? An apostrophe? Negative numbers, or specifically -1 or -2^31? Because that’s what the bad guys will do – and the list is far from complete.

Handling security needs a healthy level of paranoia, and this is what this course provides: a strong emotional engagement by lots of hands-on labs and stories from real life, all to substantially improve code hygiene. Mistakes, consequences, and best practices are our blood, sweat and tears.

All this is put in the context of C and C++, and extended by core programming issues, discussing security pitfalls of these languages.

So that you are prepared for the forces of the dark side.

So that nothing unexpected happens.

Nothing.

About This Course

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Who Should Attend

C/C++ developers

Prerequisites & Entry Requirements

General Prerequisites:

General C++ and C development

Learning Outcomes

Upon successful completion of this course, participants will be able to:

- Getting familiar with essential cyber security concepts
- Identify vulnerabilities and their consequences
- Learn the security best practices in C and C++
- Input validation approaches and principles

Detailed Course Outline

Day 1

- Cyber security basics
- What is security?
- Threat and risk
- Cyber security threat types – the CIA triad
- Cyber security threat types – the STRIDE model
- Consequences of insecure software
- Memory management vulnerabilities
- Assembly basics and calling conventions
- Buffer overflow
- Best practices and some typical mistakes

Day 2

- Memory management hardening
- Securing the toolchain
- Runtime protections
- Non-executable memory areas
- Common software security weaknesses

- Security features

- Code quality

Day 3

- Common software security weaknesses

- Input validation

- Errors

- Wrap up

- Secure coding principles

- And now what?

Skills You Will Learn:

- Getting familiar with essential cyber security concepts
- Identify vulnerabilities and their consequences
- Learn the security best practices in C and C++
- Input validation approaches and principles

Frequently Asked Questions

Q: What delivery options are available for Secure coding in C++?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 3-day Secure coding in C++ course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Secure coding in C++ training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Secure coding in C++?

Yes, we provide corporate training, dedicated training, and closed classes for Secure coding in C++. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Secure coding in C++, Secure Coding, SECC-C

Q: Why choose Nexus Human for Secure coding in C++?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Secure coding in C++ training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

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