

# VectorCAST/C++ Unit Testing

Agenda VectorAcademy

<b>Delivery Format:</b>	This Course is offered in Classroom <b>or</b> Remote Format
<b>Duration:</b>	Classroom: 3 days Remote: 24 hours
<b>Target Group:</b>	VectorCAST user with none or little experience
<b>Prerequisites:</b>	None
<b>Goal:</b>	Gain a basic understanding of Unit Testing and Code Coverage concepts

## 1. Introduction

- > Terminology
- > Unit test concepts

## 2. Building an Environment

- > Prerequisites
- > Whitebox testing
- > Environment building assistant

## 3. Creating Test Cases

- > Specifying input & expected values
- > Data types
- > Data entry techniques
- > Compound tests

## 4. Code Coverage

- > Coverage types
- > Coverage options

## 5. Test Reports

- > Execution reports
- > Coverage reports
- > Management reports

## 6. Regression Testing

- > Creating regression scripts
- > Script syntax
- > Configuration management
- > Change-based testing
- > Command line execution

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## 7. User Code

- > Parameter user code
- > Test Case user code
- > Environment user code
- > User code syntax
- > User globals
- > Harness architecture overview

## 8. Working with Stubs

- > Creating stubs
- > Stub-by-function

## 9. Testing C++ Classes (C++ concepts will only be covered for those customers using C++)

- > Class instances and constructors
- > Inheritance & polymorphism
- > Testing in-line functions
- > Testing abstract classes
- > Testing templates

## 10. Miscellaneous (Due to time constraints, not all topics can be dealt with. Which and how many topics arise is at the discretion of the trainer)

- > MC/DC (will only be covered for those customers requesting so beforehand)
- > Managing include files
- > Control flow testing
- > Target testing concepts
- > Auto test case generation
- > Error scenarios
- > Creating tests from CSV data
- > Advanced stubbing techniques
- > Probe points