

# visualATE 7 Applications

Market Leading Low-Cost Mixed Signal and Analog Test Solutions



Automotive



Mobility



IoT/IoV & Optoelectronics



Computing & Network



Industrial & Medical



Consumer

## Course Description

The purpose of this course is to introduce students to the software, system operating environments, and the available instrument cards. This is accomplished by a combination of lectures and lab exercises and online learning materials. Upon completion of the course, the student will be able to: generate Test Functions, assemble Test Programs, debug test code, and understand the basic functions of the MUX, DVI, OVI, TMU, XVI, ACS, DDD, and DDP instruments. Students must complete the online pre-course before attending the class. Login information for the online materials will be emailed upon confirmation of registration.

## Course Outline

- Foundations and Program Development Steps with DVI & MUX
- Visual Studio Code Debugger and visualISE Hardware Debugger with OVI and TMU
- XVI
- Waveform Generation with ACS
- Digital Pattern Generation with DDD
- DDP Instrument Introduction

## Course Structure

- Five days, including classroom and practical exercises

## Prerequisites

- Six months test program experience

## Recommended Skills

- C or C++ programming
- Familiarity with Windows operating system
- English - written and spoken

## Online Pre-Course Content

Completed prior to attending classroom session:

- Hardware overview: ASL<sub>x</sub> and/or ASL1000
- Software overview
- Test Program Files

## Who Should Attend

- Test program development engineers
- Test program support engineers

- Multisite capability resulting in higher throughput
- 20 instrument slot configuration

- Air cooled architecture and instruments
- Compact low power technology

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## Course Modules

### 1 - Foundations and Program Development Steps with DVI & MUX

- Programming Syntax and Conventions
- MUX instrument hardware and software
- DVI instrument hardware and software
- System interconnects
- Program development steps
- Lab exercises covering resistance measurement, current measurement, LED voltage versus current measurement

### 2 - Visual Studio Code Debugger and visualISE Hardware Debugger with OVI and TMU

- Datalog Functions
- OVI instrument hardware and software
- TMU instrument hardware and software
- Visual Studio code debugger
- visualISE
- Lab exercises covering DUT Continuity, Vol/Voh measurements, Vil/Vih measurements, OVI and DVI Rise/Fall time measurements, DUT Propagation Delay measurement, and DUT Rise/Fall Time measurements

### 3 - XVI

- XVI hardware and software
- Lab exercises covering current measurement and differential voltage measurement

### 4 - Waveform Generation with ACS

- ACS hardware and software
- Lab exercises covering True RMS measurements and Frequency measurement

### 5 - Digital Pattern Generation with DDD

- DDD hardware and software
- Lab exercises covering DUT Icc measurement, DUT Functional tests and ACS external clock
- visualATE Import/Export Functions

### 6 - DDP Instrument Introduction

This unit introduces the student to the DDP Digital Subsystem, including:

- The hardware components
- A basic functional test example using an AND gate