

### Course Description

This workshop demonstrates the tools and techniques required for software design and development using the the Vitis™ unified software platform.

The emphasis of this course is on:

- Reviewing the basics of using the Vitis platform
- Migrating existing SDK projects to the Vitis platform
- Developing software applications using the Vitis platform

**Level** – Embedded Software 3

#### Course Details

- 2 day Instructor Led Training (ILT)
- 8 lectures
- 5 labs
- 1 demo

**Price** – \$1600 or 16 Xilinx Training credits

**Course Part Number** – EMBD VITIS2

**Who Should Attend?** – Existing embedded developers using Xilinx SDK tools for software development

#### Prerequisites

- C or C++ programming experience, including general debugging techniques
- Conceptual understanding of embedded processing systems as it relates to the Xilinx ecosystem (specifically writing and modifying scripts, user applications, and boot loader operation)

#### Software Tools

- Vitis unified software platform 2019.2

#### Hardware

- Architecture: Zynq® UltraScale+™ MPSoC
- Demo board: Zynq UltraScale+ MPSoC ZCU104 board

After completing this comprehensive training, you will have the necessary skills to:

- Develop and deploy an application on a Xilinx embedded system using the Vitis unified software platform
- Migrate an existing SDK project to the Vitis platform

\*\* Check with [Morgan Advanced Programmable Systems, Inc.](http://www.morgan-aps.com/training) for the specifics of the in-class lab board or other customizations.

### Course Outline

- **Overview of Embedded Software Development**  
Overview of the process for building a user application. {Lecture}
- **Driving the Vitis Software Development Tool**  
Introduces the basic behaviors required to drive the Vitis tool to generate a debuggable C/C++ application. {Lecture, Lab}
- **Migrating from SDK to the Vitis Platform**  
Overview of migrating existing Xilinx SDK projects to Vitis software development projects {Lecture, Demo}
- **Standalone Software Platform Development and Coding Support**  
Covers the various software components, or layers, supplied by Xilinx that aid in the creation of low-level software. Also the basic services (libraries) available. {Lecture, Lab}
- **Linux Software Application Development Overview**

Highlights important parts of the underlying Linux system as it pertains to applications. {Lecture}

- **Building a Linux Application in the Vitis IDE**  
Reviews the use of the Vitis tool for Linux software development. {Lecture, Lab}
- **System Debugger**  
Describes the basics of running a debugger and illustrates the most commonly used debugging commands. {Lecture, Lab}
- **Profiling Overview**  
Introduces the purpose and techniques for profiling a user application. {Lecture, Lab}

### Register Today

Morgan Advanced Programmable Systems, Inc. (MAPS, Inc.) delivers public and private courses in locations throughout the central US region; including Iowa, Illinois, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota and Wisconsin.

Visit [morgan-aps.com/training](http://morgan-aps.com/training), for full course schedule and training information.



You must have your tuition payment information available when you enroll. We accept credit cards (Visa, MasterCard, or American Express) as well as purchase orders and Xilinx training credits.

### Student Cancellation Policy

- Students cancellations received more than 7 days before the first day of class are entitled to a 100% refund. Refunds will be processed within 14 days.
- Student cancellations received less than 7 days before the first day of class are entitled to a 100% credit toward a future class.
- Student cancellations must be sent [here](#).

### MAPS Inc. Course Cancellation Policy

- We regret from time to time classes will need to be rescheduled or cancelled.
- In the event of cancellation, live on-line training may be offered as a substitute.
- MAPS may cancel a class up to 7 days before the scheduled start date of the class; all students will be entitled to a 100% refund.
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