

# The DSP Design Curriculum Path

Xilinx Education Services is ready to help you use DSP solutions in your next design.

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Xilinx® Education Services (XES) programs provide targeted, high-quality education products and services that are designed by experts in programmable logic design and delivered by Xilinx-qualified trainers. XES offers targeted courses at all levels of programmable logic design and creates an engaging learning environment by blending lecture, hands-on labs, interactive discussions, tips, and best practices. By leveraging our global network of Authorized Training Providers (ATP) and online learning systems, we can offer courses in 26 languages at 110 locations around the world.

By becoming proficient with advanced programmable logic design techniques and methodologies, you will be able to take full advantage of all of the DSP capabilities available from today's leading FPGAs. The knowledge you gain will reduce your R&D costs through greater efficiency in the design process, and reduce production costs through the use of smaller devices in a slower speed grade. This expertise can greatly improve your organization's time to market, driving greater market success.

The Xilinx DSP Design Curriculum Path provides a recommended course sequence. You should meet the prerequisites of each class to gain the full benefit of each course. The curriculum path includes courses delivered by Xilinx and additional courses offered by The MathWorks. To view the DSP Design Curriculum Path in its entirety, visit [www.xilinx.com/support/training/cur\\_paths/atp-dsp.htm](http://www.xilinx.com/support/training/cur_paths/atp-dsp.htm).

The DSP Curriculum Path comprises these courses:

- DSP Design Using System Generator
- Introduction to AccelDSP™ Synthesis Tool
- The MathWorks Simulink for Xilinx
- DSP Implementation Techniques

## DSP Design Using System Generator

This course allows you to explore the System Generator for DSP tool and gain the expertise required to develop advanced, low-cost DSP designs. This intermediate course focuses on using System Generator for DSP, design implementation tools, and hardware-in-the-loop verification. Through hands-on exercises, you will implement a design from algorithm concept to hardware verification with Xilinx FPGAs.

## Introduction to AccelDSP Synthesis Tool

This course will teach you how to synthesize an algorithm written in the language of MATLAB software into a design that is optimized for a Xilinx FPGA. You'll learn how to make coding changes in MATLAB to improve area and per-

formance, and how to use the floating-point and design exploration features of the AccelDSP synthesis tool to achieve maximum results.

## The MathWorks Simulink for Xilinx

This course covers the basics of using Simulink, an interactive, graphical environment for modeling and simulating dynamic systems. This course covers all aspects of system modeling with Simulink, including creating a model, simulating the system, and analyzing the results. Advanced simulation concepts and simulations from the command line are also explained. The final section discusses refining models by providing additional functionality with S-functions, block masks, and GUIs for interaction with your system.

## DSP Implementation Techniques

This course will show you how to take advantage of Xilinx FPGA architectures to effectively implement DSP algorithms. The techniques also demonstrate which system-level decisions have the greatest impact on the implementation process and product costs. ●●●

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