

Fundamentals of ARM Architecture

Training

Let MindShare Bring “Fundamentals of ARM Architecture” to Life for You

This course is designed to provide hardware and software engineers new to ARM processors with the essential basic information that they will need to be aware of to start ARM-based designs. It can also be useful to non-technical staff who require a basic understanding of ARM technology.

You Will Learn:

- Variety of ARM processors
- Terminology
- 32-bit and 64-bit architectures
- System buses
- Software development environment

Course Length: 1-Day

Target Audience:

This course is aimed at managers, marketing personnel, FAEs, hardware and software developers who are seeking to understand the landscape of ARM processors, their ISAs, pipelines, related system buses and software development environment.

Course Outline:

- Introduction to ARM
 - Provides an introduction to ARM the company and the ARM architecture (processor modes, register set, instruction set, etc.)
- ARM Processor Cores
 - Discusses the ARM architecture v4, v5 and v6 cores
 - Covers the ARM architecture v7-A/R, v6-M, v7-M and Secure cores
- ARM System Design
 - Describes the AMBA bus, AXI, APB, etc.
 - Debug logic of ARM cores
- Writing Software for ARM Processors
 - Introduces the ARM software development tools as well as provides a discussion of exception and interrupt handling in ARM
 - Goes over some topics for embedded software development like compiler optimization options, scatterloading and more
 - ARM development targets (development boards and fast models)

Recommended Prerequisites:

Computer architecture knowledge

Course Materials:

Students will be provided with an electronic version of the slides used in class.