ARM Cores

Courses on ARM cores

ACSYS offers a large set of courses on ARM processor cores.
Each course details both hardware and software implementation of these cores.
Programming examples are provided to clarify the operation of complex assembly instructions and to explain the parameterizing of the ARM linker. **AAA - ARM Cortex-A and R Architecture** This course explains the ARM Cortex-A and R global architecture. It provides the prerequisites needed to start learning the various ARMv7 A&R specific cores.It also briefly outlines the ARMv8 64bit architecture.

AAM - ARM Cortex-M Architecture This course explains the ARM Cortex-M global architecture. It provides the global understanding of the ARMv7 and v8 Cortex-M architecture needed to efficiently program MCU based on such cores.

RA0 - Cortex-A5 implementation This course covers the ARM Cortex-A5 CPU

RA1 - Cortex-A8 implementation This course covers the Cortex-A8 high-end ARM core

RA2 - Cortex-A9 implementation This course covers both Cortex-A9 single and multiple core high-end ARM CPUs

RA3 - Cortex-A15 implementation This course covers Cortex-A15 high-end ARM CPU

RA4 - Cortex-A7 implementation This course covers Cortex-A7 ARM CPU

RA5 - Cortex-A17 implementation This course covers the Cortex-A17 cluster

RA6 - CORTEX-A57 implementation, ARM Architecture V8 This course covers the Cortex-A57 and AARCH64

RA7 - CORTEX-A53 implementation, ARM Architecture V8 This course covers the Cortex-A53 and AARCH64

RA8 - CORTEX-A72 implementation, ARM Architecture V8 This course covers the Cortex-A72 and AARCH64

RA9 - CORTEX-A73 implementation, ARM Architecture V8 This course covers the Cortex-A73 and AARCH64

RC1 - NEON-v7 programming This course explains how to use ARMv7 NEON SIMD instructions to boost multimedia algorithms

RC2 - NEON-v8 programming This course explains how to use ARMv8 NEON SIMD instructions to boost multimedia algorithms

RI0 - AXI3 / AXI4 INTERCONNECT This course covers the AXI bus protocol, described in ARM AMBA v3 and v4

RM0 - Cortex-M0 / Cortex-M0+ implementation This course covers both Cortex-M0 and Cortex-M0+ ARM CPUs

RM1 - Cortex-M1 implementation This course covers the Cortex-M1 ARM core targetting FPGA SoCs

RM2 - Cortex-M3 implementation This course covers the Cortex-M3 ARM core

RM3 - Cortex-M4 / Cortex-M4F implementation This course covers both Cortex-M4 and Cortex-M4F (with FPU) ARM core

RM4 - Cortex-M7 implementation This course covers the Cortex-M7 V7E-M compliant CPU

RM5 - Cortex-M33 Implementation This course covers the Cortex-M33 ARMv8 core

RR0 - Cortex-R4 implementation This course covers the Cortex-R4 ARM core

RR1 - Cortex-R5 implementation This course covers the Cortex-R5 / Cortex-R5F ARM cores

RR2 - Cortex-R7 implementation This course covers the Cortex-R7MP ARM cores

RR3 - ARM Cortex-R52/R52+ Implementation and software design This course provides a deep dive into the ARM v8-R architecture and Cortex-R52/R52+ processors, focusing on pipeline behavior, exception handling, and memory management. Participants will explore advanced features like virtualization, safety mechanisms, and synchronization techniques, essential for developing robust real-time systems.