

Computer Architecture with an Industrial RISC-V Core [RVfpga] (LFD119x)

RISC-V, an open-standard computer architecture, is transforming processor design and software/hardware co-design, including enabling open source hardware implementations. This means that software development can occur alongside hardware development, accelerating the design process. Enroll today to develop your understanding of the RISC-V architecture and its ecosystem and get familiar with the RISC-V cores and system-on-chip.

Duration: 5 Days

Prerequisites for this course

Knowledge prerequisites:

- Learners should have a fundamental understanding of the following topics: digital logic design, high-level programming (such as C programming), assembly programming, RISC-V instruction set architecture, processor microarchitecture, and memory and input/output systems.

Outline for this course

Chapter 1 – Installation and Initial Demonstrations

Chapter 2 – C Programming with the RVfpga SoC

Chapter 3 – RISC-V Assembly Programming with the RVfpga SoC

Chapter 4 – RISC-V Function Calls

Chapter 5 – Mixing C and Assembly Functions in a Program

Chapter 6 – Introduction to Peripherals and Input/Output

Chapter 7 – More I/O: 7-Segment Displays

Chapter 8 – More I/O: Timers

Chapter 9 – Interrupts

Chapter 10 – Delving Deeper into the RISC-V VeeR Core