Greeting

Before you begin

We strongly recommend that you review the course syllabus before jumping into the content. It provides the most important information related to the course, including:

– Course overview

– Instructors biographies and targeted audience

– Course prerequisites and length

– Course learning objectives and the outline

– edX platform guidelines

– Discussion forums, course timing, and learning aids

– Grading, progress, and course completion

– Professional Certificate Program audit and verified tracks

– The Linux Foundation's history, events, training, and certifications.

Meet Your Instructors

Jeffrey Osier-Mixon

Jeffrey "Jefro" Osier-Mixon is a Senior Principal Community Architect at Red Hat. Prior to this, he was a Program Manager for RISC-V International. Jefro comes from an open source background starting at Cygnus Support in the early 1990s, and has spent most of his career as a technical writer and developer focused on hardware and embedded systems. He served as community manager and board chair for the Yocto Project from 2011 to 2018 while working at Intel, where he also helped launch the Zephyr Project and Project ACRN, and has also worked with Kata Containers, LF Energy, and the BeagleBoard Foundation. He has been involved with the Embedded Linux Conference since 2008 and speaks at several open source conferences annually. Jefro holds a Bachelor of Arts from the University of California Santa Cruz.

Stephano Cetola

Stephano Cetola is Director of Technical Programs at RISC-V International. He has worked on and managed numerous open source initiatives in software and hardware. Before joining the RISC-V team, Stephano was employed at Intel contributing to the Yocto Project building embedded Linux distros and working on TianoCore, an open source implementation of UEFI. Along with working at RISC-V, he helps to manage the Confidential Computing Consortium and is involved in research at Portland State University focusing on Trusted Execution Environments. Throughout his career Stephano has been a tireless proponent of open source software, firmware, and hardware.

Course Agenda

This course is divided into five chapters:

— Chapter 1: Getting to Know RISC-V, which introduces RISC-V as a technology, an organization, and a community to give you a better understanding of what RISC-V is.

— Chapter 2: The RISC-V Story, which goes into great detail about the history of RISC-V, RISC-V International, the organization of RISC-V governance, working groups and committees, and how all of these people communicate effectively together.

— Chapter 3: The RISC-V Community, which outlines the processes by which the RISC-V community manages, extends, and improves all of the artifacts within RISC-V - the ISA and other specifications, working policies, development practices, and more.

— Chapter 4: Developing RISC-V, which uses all of the prior information to describe the hard details about collaboratively developing the specifications, software, compliance tests, and other related artifacts.

— Chapter 5: RISC-V in Practice the hands-on chapter where you will see the RISC-V ISA in action through the use of the QEMU emulator/virtualizer, creating a processor using SystemVerilog, and running an operating system on actual hardware.

Expected Outcome

We expect that by the end of this course, you will have a solid grounding in all of the activities related to RISC-V. You will learn how to read and understand the specifications, and understand the processes involved in curating and extending them. You will understand how to work effectively with RISC-V International and the RISC-V community. And you will understand where to go for additional information.

Where to Learn More

The center of the RISC-V universe of information is the RISC-V website at riscv.org [1]. The site has a ton of information, plus pointers to other resources that can help people at any level. Astute readers will note that the website's sections are similar to the chapters in this course:

— The **About** section contains RISC-V history as well as the latest information about the board of directors and RISC-V International staff, plus guidelines on various aspects of working with RISC-V as an organization.

— The **Membership** section has a current list of all members and a guide to member benefits as well as legal documents.

- The **Community** section is your one-stop shop for working with RISC-V, with links to the mailing lists, wiki, educational materials, regional and industry alliances, and more.
- The **Technical** section contains the latest specifications as well as links to the working documents.
- The **RISC-V Exchange** contains an extensive guide to the RISC-V ecosystem, including available boards, software, and services, including training.

The riscv.org website also contains a full news feed and blog, with news items from RISC-V International and its member organizations, all of the many events that RISC-V International organizes and those where we participate, and much more. riscv.org is truly the one-stop shop for everything related to RISC-V.

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1. RISC-V. URL: https://riscv.org/.