

KOENIG SOLUTIONS · COURSE OUTLINE

AI-Assisted Embedded Development

3 Days

DURATION

1

MODULES

11

TOPICS

AC6402

COURSE CODE

COURSE OVERVIEW

Bring AI coding agents into embedded development without losing engineering rigor. Firmware is bound to specific hardware, so an agent's plausible guess can compile cleanly and still fail on the target. This course teaches an evidence-first workflow that keeps AI-generated firmware controlled, tested, and defensible. Contribute to AI-assisted firmware work with the ability to explain and defend each generated change in a design review. These are practical skills for senior developer and technical lead roles as embedded teams adopt AI-assisted development.

WHO THIS COURSE IS FOR

- For embedded engineers, firmware developers, and technical leads who want to put AI coding agents to work in real development while keeping full control over what reaches hardware.

PREREQUISITES

- Working knowledge of C, hands-on experience with embedded targets, and basic comfort with Git and the command line. No prior AI experience is required.

Lab Info

- For virtual classes, you need a computer with a web browser and a stable internet connection, and your corporate VPN, proxy, or firewall must allow access to the remote lab services. The course provides the software, AI access, and lab materials, so no personal AI subscription, API key, or tool license is required.

LEARNING OBJECTIVES

What You Will Learn

- Write functional specification documents that steer AI coding agents, ground them in SVD files, reference manuals, and errata, and extend them with MCP servers and reusable skills. Review, test, and simulate the generated firmware to confirm it runs correctly on the hardware.

COURSE SYLLABUS

1 Module, 11 Topics

01

Course Modules

TOPICS

- Course Introduction
- The AI tooling landscape for embedded engineers
- Prompting for embedded problems
- Spec-driven development and functional specification documents
- AI Assistants in your IDE and CLI
- Datasheets, SVDs, reference manuals and project context
- Model Context Protocol (MCP)
- Designing AI agents for embedded development
- Skills, reusable configuration and multi-tool orchestration
- Validating AI-generated embedded code
- AI Security and audits

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training

Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

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