FIREFLY

CISCO PARTNER Platinum Learning

Cisco AI Technical Practitioner Advanced • AITECHA

DURATION: 2 DAYS | **PRICE:** USD 1995 | **CLCs:** 20 | **CE:** 21

COURSE CODE: AITECHA | **FORMAT:** Lecture & Lab

COURSE DESCRIPTION

The Cisco AI Technical Practitioner Advanced (AITECHA) training is an expert-level continuation of the Cisco AI Technical Practitioner (AITECH) Learning Path, designed for practitioners building production-grade agentic AI systems. The living domain-driven design structure ensures the curriculum evolves as the technology landscape changes. Through this training, you'll gain an understanding of the full engineering stack for production agentic AI systems. You will start by building a working agent from the ground up, learn to structure its outputs for reliable downstream integration, connect it to external tools via the Model Context Protocol (MCP), instrument and monitor it in production, give it memory and retrieval capabilities, and finally harden it against the security threats that come with autonomous tool use. Each course builds on the last—by the end you have the skills to design, deploy, and operate agents that are production-ready, not just demo-ready.

HOW YOU'LL BENEFIT

This training will help you:

- Gain expertise in building production-grade agentic AI systems using industry-standard frameworks
- Develop skills to construct and integrate fully functioning AI agents with structured outputs for reliable downstream system use
- Learn to configure MCP servers and integrate external tools into AI-powered applications
- Acquire the ability to monitor, maintain, and secure AI agents in production using observability tools, KPI frameworks, and Cisco AI Defense solutions
- Earn 21 CE credits toward recertification

WHO SHOULD ENROLL

- IT and Network Engineers
- Data Analysts
- AIOPs Specialists
- Solutions Architects
- Technical Leads

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COURSE OBJECTIVES

• Construct a functioning AI agent using industry-standard agentic frameworks and debugging practices
• Parse and route structured agent outputs to enable reliable downstream system integration
• Configure MCP servers and integrate external tools into AI-powered applications
• Implement memory, state management, and context retrieval within AI agent systems
• Design and build a production multi-agent pipeline in LangGraph using supervisor routing, specialist subgraphs, and parallel execution with structured state handoffs
• Monitor and maintain AI agents in production using observability tooling, KPI frameworks, and cost management strategies
• Evaluate agentic AI security risks and the technical configuration of Cisco AI Defense, DefenseClaw, and Splunk for threat detection and mitigation

COURSE PREREQUISITES

There are no prerequisites for this training. However, the knowledge and skills you are recommended to have before attending this training are:

• Completion of Cisco AI Technical Practitioner (AITECH) Learning Path
• Comfortable with Python, REST APIs, and LLM API usage

These skills can be found in the following Cisco Learning Offerings:

• Cisco AI Technical Practitioner (AITECH)
• Programming for Network Engineers (PRNE)

COURSE OUTLINE

• Build Your First Agent
• Structured Outputs and Agent Integration
• Equip the Agent: Tools, Skills, and MCP
• Memory, State, and Context Management
• Multi-Agent Orchestration with LangGraph
• Production AI Monitoring and Evaluation
• AI Agent Security and Defense

LAB OUTLINE

• Build, Extend, and Debug an Agent
• Build the Structured Output Pipeline
• Extend and Decompose an Agent
• Build a Memory- and RAG-Augmented Agent
• Build the Multi-Agent Pipeline
• Instrument the Multi-Agent Pipeline
• AI-Driven Data Exploration

Instructor Led Training

To view the schedule and secure your site

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