Cisco AI Technical Practitioner- Advanced

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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.

This training also earns you 21 Continuing Education (CE) credits toward recertification.

How you'll benefit

This class 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

Course Duration
2 days

Course Price
$1,995.00 or 20 CLCs

Methods of Delivery
- Instructor Led
- Virtual ILT
- On-Site

Why Attend with Current Technologies CLC

- Our Instructors are in the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

Who Should Attend

The primary audience for this course is as follows:

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

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

OUTLINE

Module 1: Build Your First Agent

Module 2: Structured Outputs and Agent Integration

Module 3: Equip the Agent: Tools, Skills, and MCP

Module 4: Memory, State, and Context Management

Module 5: Multi-Agent Orchestration with LangGraph

Module 6: Production AI Monitoring and Evaluation

Module 7: AI Agent Security and Defense

Lab Outline

Lab 1: Build, Extend, and Debug an Agent

Lab 2: Build the Structured Output Pipeline

Lab 3: Extend and Decompose an Agent

Lab 4: Build a Memory- and RAG-Augmented Agent

Lab 5: Build the Multi-Agent Pipeline

Lab 6: Instrument the Multi-Agent Pipeline

Lab 7: AI-Driven Data Exploration