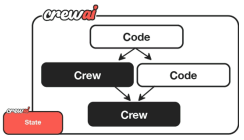
Agentic AI with CrewAI

Duration: 3 days Price: € 2250

Open Schedule



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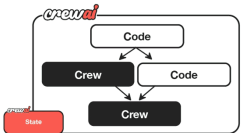

Audience Course Agentic AI with CrewAI

This course is intended for AI developers, software engineers, and data scientists who want to build multi-agent AI systems using CrewAI.

Prerequisites Course Agentic AI with CrewAI

Participants should know Python programming and understand of AI and LLM concepts. Familiarity with prompt engineering and API integration is beneficial.

Realization Training Agentic AI with CrewAI

The training combines theoretical instruction with hands-on labs guided by a trainer. Participants build real multi-agent systems throughout the course.

Agentic AI with CrewAI Certificate

After successful completion, participants receive a certificate of participation in Agentic AI with CrewAI.

Content Agentic AI with CrewAI

The course Agentic AI with CrewAI from SpiralTrain teaches you how to build sophisticated multi-agent AI systems using the CrewAI framework. You will learn how to create autonomous agents with specialized roles, orchestrate collaborative workflows, integrate tools and APIs, and develop production-ready agentic applications that solve complex business problems through agent collaboration.

CrewAI Fundamentals

The course Agentic AI with CrewAI begins with an overview of CrewAI and multi-agent concepts. Installation, core components, agent basics, crew structure, task fundamentals, process types, and sequential workflows are explored.

Agent Design

This module covers designing effective agents including defining roles, goals, backstories, creating specialized agents, delegation strategies, autonomy levels, agent memory, personality design, communication styles, and agent development best practices.

Tasks and Workflows

Here participants learn task definition including descriptions, expected outputs, dependencies, context management, callbacks, error handling, validation, asynchronous tasks, and optimization strategies for efficient workflow execution.

Tools Integration

This part focuses on integrating tools including built-in tools, custom tool creation, API integration, search capabilities, file operations, database access, web scraping, code execution, error handling, and tool best practices.

Advanced Orchestration

Advanced orchestration patterns are addressed including hierarchical processes, manager agents, conditional workflows, parallel execution, dynamic crew building, agent handoffs, workflow branching, optimization, and complex orchestration patterns.

Memory Systems

Memory management is explored covering short-term and long-term memory, entity memory, conversation history, storage solutions, retrieval strategies, context management, optimization, shared knowledge systems, and state persistence.

Production Deployment

Deployment considerations include strategies, environment configuration, API development, monitoring, logging, error recovery, performance optimization, cost management, security, testing strategies, and production deployment checklists.

Real-World Applications

Practical applications are covered including research automation, content generation, data analysis, customer service, marketing campaigns, business intelligence, process automation, decision support systems, industry-specific solutions, and case studies.

Advanced Topics

The course concludes with advanced subjects including human-in-the-loop systems, guardrails implementation, quality assurance, agent evaluation, prompt optimization, LLM integration, CrewAI ecosystem, troubleshooting, future trends, and capstone project

Modules Agentic AI with CrewAI

Module 1: CrewAI Fundamentals	Module 2: Agent Design	Module 3: Tasks and Workflows
CrewAI Overview	Agent Roles	Task Definition
Multi-Agent Concepts	Agent Goals	Task Description
Installation and Setup	Agent Backstory	Expected Output
Core Components	Specialized Agents	Task Dependencies
Agent Basics	Agent Delegation	Task Context
Crew Structure	Autonomy Levels	Task Callbacks
Task Fundamentals	Agent Memory	Error Handling
Process Types	Agent Personality	Task Validation
Sequential Workflows	Communication Styles	Async Tasks
Best Practices	Agent Best Practices	Task Optimization
Module 4: Tools Integration	**Module 5: Advanced Orchestration**	**Module 6: Memory Systems**
Built-in Tools	Hierarchical Process	Short-Term Memory
Custom Tool Creation	Manager Agents	Long-Term Memory
API Integration	Conditional Workflows	Entity Memory
Search Tools	Parallel Execution	Conversation History
File Operations	Dynamic Crew Building	Memory Storage
Database Access	Agent Handoffs	Memory Retrieval
Web Scraping	Workflow Branching	Context Management
Code Execution	Process Optimization	Memory Optimization
Tool Error Handling	Complex Orchestration	Shared Knowledge
Tool Best Practices	Workflow Patterns	State Persistence
Module 7: Production Deployment	**Module 8: Real-World Applications**	**Module 9: Advanced Topics**
Deployment Strategies	Research Automation	Human-in-the-Loop
Environment Configuration	Content Generation	Guardrails Implementation
API Development	Data Analysis	Quality Assurance
Monitoring and Logging	Customer Service	Agent Evaluation
Error Recovery	Marketing Campaigns	Prompt Optimization
Performance Optimization	Business Intelligence	LLM Integration
Cost Management	Process Automation	CrewAI Ecosystem
Security Considerations	Decision Support	Troubleshooting
Testing Strategies	Industry Solutions	Future Trends
Production Checklist	Case Studies	Capstone Project

SpiralTrain BV
Standerdmolen 10, 2e verdieping
3995 AA Houten

info@spiraltrain.nl
www.spiraltrain.nl
Tel.: +31 (0) 30 – 737 0661

Locations
Houten, Amsterdam, Rotterdam, Eindhoven, Zwolle, Online