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Sign Up

Claude Certified Architect Professional (CCAR-P) Training

3 days (21 hours)

Overview

Claude enables you to design artificial intelligence solutions tailored to business challenges. With agent-based architectures and context engineering mechanisms associated with RAG and MCP, you have the tools to integrate models with data, tools, and business processes.

Our Claude Certified Architect Professional (CCAR-P) training will help you strengthen your skills in designing, integrating, and governing Claude solutions, while preparing you for the seven domains of the provided framework.

You'll learn how to translate business needs into coherent architectures, select models, structure prompts, and organize integrations. The workshops will allow you to compare trade-offs between accuracy, latency, and cost using a common case study.

Upon completion of the training, you will be able to define an evaluation strategy, strengthen security controls, and document your decisions. You will also know how to organize human validations and support the lifecycle of a solution.

This training also covers productivity with Claude Code and preparation for architecture-related questions. The exam is offered for 210 euros (excluding tax), subject to Anthropic's eligibility requirements.

Like all our training courses, this one will introduce you to **the latest stable version** of the technology and its new features.

Objectives

- Design a Claude architecture aligned with business needs and service commitments
- Select models and optimize prompts and context management
- Structure RAG and MCP integrations with controlled access
- Evaluate and optimize accuracy, latency, costs, and security
- Define governance and document the lifecycle of a Claude solution
- Prepare architecture scenarios based on the CCAR-P framework and improve development workflows

Target Audience

- Solution Architect
- Software architect
- AI Engineer
- Lead Developer
- AI Technical Consultant

Requirements

- Experience designing or integrating applications using REST APIs and authentication mechanisms
- Proficiency in Python and data processing scripts
- Knowledge of LLM principles and initial experience using Claude in a professional setting
- Basic understanding of software testing, application security, and the ability to read technical documentation in English

Technical Prerequisites

- Computer with an x64 or ARM64 processor; 8 GB of RAM recommended; and a working environment running Windows 11, macOS 13 or later, or Ubuntu 22.04 or later
- Python 3.11 or later with Git and Visual Studio Code installed for the exercises
- Native installation of Claude Code in a stable version validated prior to the session, with the necessary permissions to use it
- Claude Console account with an API key and available usage budget, and access to Anthropic Partner Academy to be verified for taking the exam
- Stable internet connection supporting Anthropic services and the MCP servers used; non-sensitive dataset available for the workshops

Agenda for our Claude Certified Architect Professional (CCAR-P) training course

[Day 1 - Morning]

Business Scope Definition and Architecture Design

- The seven domains of the CCAR-P framework and the expected architectural decision-making competencies
- Structured requirements gathering, stakeholders, and business success criteria
- Business value drivers: efficiency, transformation, productivity, costs, and service commitments
- The input, processing, output, and user feedback loop, and the decomposition of complex problems
- Choosing between augmented LLM, workflow, and autonomous agents; multi-agent architectures and their orchestration strategies
- Hands-on workshop: Defining the scope of an enterprise information assistant, comparing two architectures, and justify the chosen option using business criteria and SLAs.

[Day 1 - Afternoon]

Models, prompts, and context engineering

- Selecting Claude models based on capabilities, expected accuracy, latency, and budget
- System prompts, prompt templates, output formats, and behavioral safeguards
- Zero-shot and few-shot techniques, structured reasoning, and the limitations of chain-of-thought
- The context window, token budgets, information selection, and history summarization
- Reuse via prompt caching, modular prompts, and progressively loaded Skills
- Hands-on workshop: Build prompts for the case study, compare multiple configurations, and measure the effect of examples and the cache on results and token counts.

[Day 2 - Morning]

Data and Tool Integration

- Designing an RAG pipeline: document preparation, tokenization, metadata, and indexing
- Lexical, vector, and hybrid search strategies based on data structure and queries
- Choosing between MCP, API, CLI, and agent-to-agent communication based on integration constraints
- The gradual discovery of tools in the face of a monolithic context, redundant capabilities, and accuracy-latency trade-offs
- Authentication and authorization requirements, least privilege, and traceability of distributed
- Hands-on workshop: Prototype the document search for the “fil rouge” case study, connect a tool via MCP, and verify authorizations as well as the relevance of the responses.

[Day 2 - Afternoon]

Evaluation, Observability, and Optimization

- Evaluation Metrics: Accuracy, Latency, Cost, Safety, and Security

- Representative test suites, edge cases, and evaluations combining rules, human judgment, and an LLM evaluator
- A/B testing, regression testing, and iterative configuration tuning
- Diagnosing prompt failures, hallucinations, search errors, and ill-suited models
- Observability at scale: logs, traces, alerts, and optimization of tokens, latency, and cost-performance ratio
- Hands-on workshop: Evaluate two variants of the prototype on a test corpus, analyze their traces, and propose quantifiable optimizations.

[Day 3 - Morning]

Governance, security, and risk management

- Mapping LLM risks, limitations, and failure modes in agent-based systems
- Safeguards, input and output validation, and protection against prompt injection
- Human validation, escalation thresholds, and control of sensitive actions
- GDPR, HIPAA, and FedRAMP requirements based on context, data protection, and documentation requirements
- Responsible AI: bias, fairness, transparency, and communicating limitations to users
- Hands-on workshop: Subjecting the prototype to adversarial scenarios, building a risk register, and defining the necessary controls and human validations.

[Day 3 – Afternoon]

Lifecycle, tools, and CCAR-P preparation

- Communicating decisions, architectural trade-offs, and aligning expectations around SLAs
- Delivery documentation, implementation guidelines, and handoff to Operational
- The lifecycle: discovery, design, handoff, monitoring, and iteration based on stakeholder feedback
- Configuring Claude Code for a team, permissions, project conventions, and assisted debugging
- CCAR-P preparation: decision-making scenarios, reviews based on the weightings of the seven domains, and procedures for taking the proposed exam
- Hands-on workshop: Finalizing the architecture proposal, diagnosing an incident with Claude Code, and complete a practice questionnaire with a detailed answer key.

Target Companies

This training is intended for both individuals and companies—large or small—seeking to train their teams in new, advanced IT technologies or to acquire specific professional knowledge or modern methodologies.

Entry-Level Assessment

The pre-training assessment complies with Qualiopi quality standards. Upon final registration, the learner receives a self-assessment questionnaire that allows us to evaluate their estimated proficiency level across various types of technologies, as well as their expectations and personal goals for the upcoming training, within the limits imposed by the selected format. This questionnaire also allows us to anticipate certain connection or internal security issues within the company (intra-company or virtual classroom) that could pose challenges for monitoring and ensuring the smooth running of the training session.

Teaching Methods

Hands-On Training: 60% Practical, 40% Theoretical. Training materials distributed in digital format to all participants.

Organization

The course alternates between theoretical input from the instructor—supported by examples and reflection sessions—and group work.

Assessment

At the end of the session, a multiple-choice quiz is administered to verify that participants have successfully acquired the skills.

Certification

A certificate will be issued to each trainee who has completed the entire training program.