KOENIG SOLUTIONS · COURSE OUTLINE

Certified Forward Deployed Engineer (CFDE)™ Associate

18 Days	17	20
DURATION	MODULES	TOPICS

COURSE OVERVIEW

A practical, career-focused course for engineers seeking to take responsibility for AI deployments from beginning to end. Delivered over 18 weeks in a structured online cohort, it comprises 15 weekly modules and a three-week capstone. Assessed through marked assignments and a practitioner-marked capstone. The CFDE Associate course prepares you for Forward Deployed Engineer roles, in which you take responsibility for an AI deployment from initial discovery through to hand-back. The course provides the knowledge and practical skills; the separate examination certifies them. At this level, the role encompasses the entire engagement: customer discovery, solution architecture, developing solutions within poorly structured client codebases, integrating APIs and data pipelines, selecting and configuring LLMs, building RAG systems and agents, deploying to production, and handing back to the client team. Throughout, you must also communicate with non-technical stakeholders. These areas are covered over 18 weeks, comprising 15 weekly modules followed by a three-week capstone. A continuing case study involving a UK facilities-maintenance company runs through the course, from discovery to hand-back. For the capstone, you will undertake a case of your own. Completion of the CFDE Associate course is a prerequisite for entry to the CFDE Professional course. CFDE Associate certification is also required before you can obtain CFDE Professional certification. The syllabus comprises 15 modules, studied one per week, followed by a three-week capstone. Its progression reflects the embedded-engineer model and the successive stages of the deployment lifecycle: post-sale handoff, discovery, scoping, build, deployment, iteration and hand-back.

WHO THIS COURSE IS FOR

- This course is intended for engineers and technical professionals seeking either to move into Forward Deployed Engineering or to develop further in an existing role. It is relevant to software engineers, data engineers, machine learning engineers, solutions engineers and technical consultants.

TOOLS AND REQUIREMENTS

- write and execute a short Python script;
- use a terminal to navigate between folders and execute commands;
- create basic Git commits;
- read a JSON file and interpret its structure;
- write a straightforward SQL query.
- No coding is required in Modules 1 to 3; practical coding begins in Module 4. Before the course starts, Week 0 provides an opportunity to assess your existing skills and directs you to a free learning resource for each one.
- Languages and tools used: Python is the principal programming language, alongside SQL (SQLite), JSON, terminal commands and Git. No practical exercise or assignment requires a paid account or service.

LEARNING OBJECTIVES

What You Will Learn

- You will develop the capabilities required to take responsibility for an AI deployment from beginning to end: conducting customer discovery, designing solution architecture, developing solutions within poorly structured client codebases, integrating LLMs and data pipelines, building RAG systems and agents, deploying to production, and completing a properly documented hand-back to the client team.

COURSE SYLLABUS

17 Modules, 20 Topics

MODULE 1

01

Forward Deployed Engineering: Role, Model, and Career

TOPICS

- You can explain the Forward Deployed Engineer role, how it differs from related roles, and how success is measured.

MODULE 2

02

Customer Discovery and Problem Framing

TOPICS

- You can plan and run discovery, separate evidence from assumption, and turn it into a clear, testable problem statement.

MODULE 3

03

Solution Architecture and Technical Documentation

TOPICS

- You can turn a scoped problem into testable requirements, a reviewable architecture document and a clear record of design decisions.

MODULE 4

04

Client Codebases and Legacy Systems Navigation

TOPICS

- You can find your way around an unfamiliar codebase and its data, and propose safe changes backed by evidence.

MODULE 5

05

APIs, Databases, and Data Pipelines

TOPICS

- You can connect systems through APIs, choose where data should live, and build a reliable data pipeline.

MODULE 6

06

Large Language Models: Providers, Selection, and Trade-offs

TOPICS

- You can compare language model providers on cost, speed, capability and data handling, and recommend one you can later replace.

MODULE 7

07

Prompt Architecture for Production Systems

TOPICS

- You can design prompts with checked, structured output, keep safety controls outside the model, and test every prompt change.

MODULE 8

08

Retrieval-Augmented Generation Systems

TOPICS

- You can build an assistant that answers questions from a client's own documents and shows the sources behind each answer.

MODULE 9

09

AI Evaluation and Testing Frameworks

TOPICS

- You can build an evaluation set and choose measures that show whether an AI system is reliable and fit for purpose.

MODULE 10

10

Agent Development and Orchestration

TOPICS

- You can judge when an agent is the right design and build one that asks for human approval before consequential actions.

MODULE 11

11

AI Operations and Deployment Infrastructure

TOPICS

- You can deploy an AI application with automated testing, monitoring and alerts, and keep its running cost under control.

MODULE 12

12

Model Customisation and Fine-Tuning

TOPICS

- You can decide whether fine-tuning or better prompting suits a client's need, and make a clear technical and commercial case for that choice.

MODULE 13

13

Production Deployment and Client Adoption

TOPICS

- You can plan adoption around real workflows, measure whether it is working, and deliver a documented handover that supports continued use.

MODULE 14

14

Technical Communication and Stakeholder Management

TOPICS

- You can explain technical systems to non-technical people, run productive client meetings and handle scope changes constructively.

MODULE 15

15

Rapid Delivery and Field Execution

TOPICS

- You can break a large, ambiguous problem into one-week milestones, prioritise under pressure and deliver a working first version early.

16

Capstone, weeks 16 to 18: End-to-End Client Engagement Simulation

TOPICS

- You take a case of your own through a full client engagement, delivering a capstone report, a working proof and a product-feedback note, assessed by AIU practitioner reviewers.

17

Programme Features

TOPICS

Comprehensive coverage of the deployment lifecycle

- Fifteen weekly modules and a three-week capstone span the complete deployment lifecycle, from post-sale handoff to hand-back. The material draws on engagements across regulated and general industries, while online delivery provides flexibility for practising engineers.

Weekly lessons, practice and marked assessment

- Each week includes a short introductory video, three or four written lessons with worked examples, ‘Try it’ exercises using the case company’s materials, a discussion question and a short quiz. Assessed through marked assignments and a practitioner-marked capstone: one written assignment, one hands-on, and a three-week capstone.

Guidance from practitioners

- You will have access to weekly practitioner-led discussions and feedback, as well as direct email contact with the admissions and programme team throughout the eighteen weeks.

Learning within an international cohort

- You will study alongside engineers from a range of countries and sectors, form study groups, and complete the course with a portfolio that your fellow cohort members have seen take shape.

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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