AI-Augmented Engineering Program

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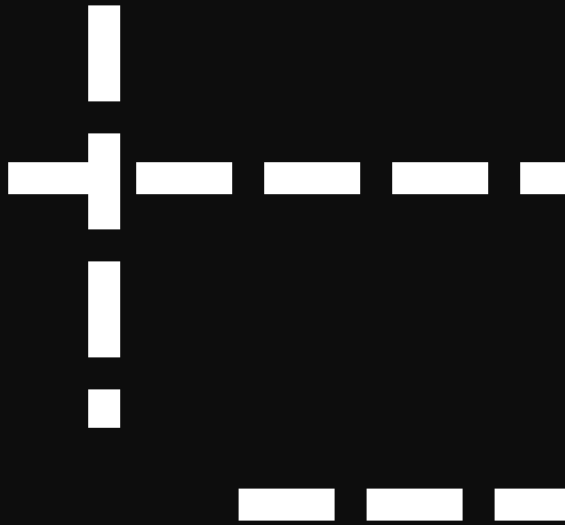
Training Programme of the Itinerary

Experience Plus 2026



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Objectives.

The AI-Augmented Engineering Program prepares engineers for their progressive incorporation into real AI initiatives at TELICE, in the field of AI engineering and delivery.
Through **1006 hours of theoretical and hands-on training**, the itinerary covers the full AI engineering cycle: from AI-assisted software development and LLM foundations to retrieval systems, agents, production deployment and governance.

- Real AI Projects
- Hands-On Technical Training
- AI Tooling
- Production Focus

Professional Growth

Participants will gain competencies in **key AI tooling** (coding agents, RAG, MCP, LLMOps) and in the **technical, regulatory and organisational processes** of production AI systems, building profiles able to ship reliable, safe and compliant AI solutions.

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Contents

Theoretical Training Modules

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Program Overview.

300 hours

~25 weeks

Module 0
Company Onboarding

30 h · Weeks 1-3

Module 1
AI-Assisted Software Engineering

28 h · Weeks 4-6

Module 2
AI & LLM Foundations

38 h · Weeks 6-9

Module 3
Retrieval & RAG Systems

35 h · Weeks 9-11

Module 4
Agent Engineering

30 h · Weeks 11-13

Module 5
Production AI: Apps, Multimodal & Deployment

125 h · Weeks 13-24

Module 6
Evaluation, Safety & Governance

14 h · Weeks 24-25

Module 0

30 h | Weeks 1-3

Company Onboarding.

Objective. To help quickly understand the organization, its culture, values, tools, policies, and ways of working. To provide the essential information they need to feel welcomed, know what is expected, find the right support, and begin contributing confidently and productively in their new role.

- Compliance
- Cybersecurity
- Occupational Health & Safety
- Self management
- Team management

Module 1

28 h | Weeks 4-6

AI-Assisted Software Engineering.

Objective. Make the trainee productive from week one by using AI as a coding partner: prompting, agentic coding tools and AI-native development workflows.

- Prompting Fundamentals for Technical Work
- AI as a Software Engineering Partner
- Agentic Coding Workflows
- Spec-Driven Development
- AI-Native IDEs and Editors

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Module 2

38 h

Weeks 6-9

AI & LLM Foundations.

Objective. Build a solid mental model of how LLMs work and how they are trained, enabling informed decisions on model selection, fine-tuning, deployment and cost.

- The Generative AI Landscape
- Python for AI Engineering
- Transformer Architecture
- Full LLM Lifecycle: Pre-training, SFT, RLHF
- Model Evaluation Foundations

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Module 3

35 h | Weeks 9-11

Retrieval & RAG Systems.

Objective. Build enterprise-grade Retrieval-Augmented Generation systems, from raw document preprocessing to optimised retrieval pipelines for real-world data.

- Unstructured Data Preprocessing
- RAG Architectures End-to-End
- Embeddings and Vector Search
- Retrieval Optimization
- RAG with Knowledge Graphs
- RAG Evaluation

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Module 4

30 h | Weeks 11-13

Agent Engineering.

Objective. Design, build and orchestrate AI agents capable of reasoning, using tools, collaborating with other agents, and being optimised programmatically.

- Agentic AI Fundamentals
- Graph-Based Agent Orchestration
- Model Context Protocol (MCP)
- Multi-Agent Systems
- Composable Agent Capabilities (Skills)
- Programmatic Prompt & Agent Optimization

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Module 5

125 h | Weeks 13-24

Production AI: Apps, Multimodal & Deployment.

Objective. Move from prototypes to production systems with enterprise-grade quality: secure APIs, scalable deployment, observability, cost control and multimodal document processing.

- LLM Applications at Scale
- Inference Efficiency and FinOps
- MLOps for AI in Production
- Automated Testing for LLMOps
- Rapid Prototyping for Validation
- Observability & Debugging for GenAI
- Workflow Orchestration for GenAI
- Multimodal & Document Processing
- Database & Structured-Data Agents
- Improving Accuracy of LLM Apps
- Embeddings in Production
- AI-Amplified DevOps & DevSecOps

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Module 6

14 h | Weeks 24-25

Evaluation, Safety & Governance.

Objective. Ensure the AI systems shipped from this program are evaluable, safe, and compliant with European regulation.

- Systematic Agent Evaluation
- Evaluating Data & Tool-Using Agents
- Output Safety and Guardrails
- Red Teaming LLM Applications
- AI Governance
- EU AI Act Compliance
- Closing Assessment

Estimated training calendar.

Start date: 01/09/2026
End date: 22/03/2027
Planned delivery: approx. 25 weeks at 40 h/week (130 days)

Training location.

On-site
Telice
Polígono Industrial de Onzonilla.
Fase 2. M24

Faculty assigned per module/block

Training tutors.

- Cesáreo González Álvarez
- Rubén Puente Martinez
- Violeta López Valentín

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Module 0.
Company Onboarding
Trainer: Violeta López Valentín

1-2

Modules 1-2.
AI Engineering Foundations
Trainer: Cesáreo González Alvarez

3-6

Modules 3-6.
Applied AI Systems & Production
Trainer: Rubén Puente Martínez

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Specific Access Requirements.

- Degree in Computer Science, Software, Telecommunications or Industrial Engineering.
- Higher VET (FP) in Multi-platform or Web Application Development (DAM/DAW) or Network Systems Administration (ASIR).

Itinerary Evaluation System.

Minimum attendance: 75% · Final theoretical evaluation (Module 6).

Daily schedule in case of dual training.

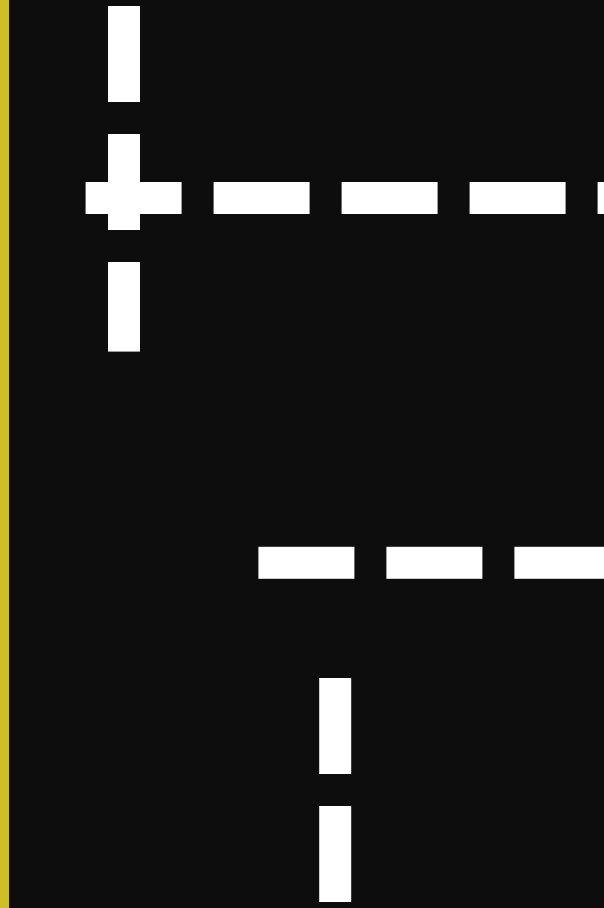
Theory: mornings from 8:00 to 10:00. Monday to Friday-
Hands-on: 10:00 - 14:00 Monday to Friday & 14.30:17:30 Monday to Thursday.

Additional Remarks

The itinerary will adapt to the pace and needs of the company's ongoing innovation and/or AI delivery projects.

AI-Augmented Engineering Program

Learn, apply and grow building real AI systems.



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