# Course : Advanced Generative AI Development on AWS

**Official AWS Course**

*Practical course - 3d - 21h00 - Ref. AW2*
*Price : 2570 € E.T.*

NEW

In this course, you'll learn how to design production-ready generative AI solutions on Amazon Web Services by mastering models, data, agent-based systems, security, optimization, monitoring, and deployment—from experimentation to production.

## Teaching objectives

**At the end of the training, the participant will be able to:**

- Design secure, scalable, and production-ready generative AI solutions on AWS.
- Select and deploy models using robust architectures (fault tolerance, multi-region).
- Set up data pipelines, vector databases, and data retrieval.
- Master prompt engineering, agent-based systems, and enterprise integration.
- Ensure security, performance, cost control, monitoring, and continuous quality.

## Intended audience

Software developers and technical professionals.

## Prerequisites

Ideally, candidates should have a basic understanding of AWS, more than 2 years of production experience (AI/ML/data), and 1 year of experience with generative AI. Good written English skills are required.

## Course schedule

**PARTICIPANTS**

Software developers and technical professionals.

**PREREQUISITES**

Ideally, candidates should have a basic understanding of AWS, more than 2 years of production experience (AI/ML/data), and 1 year of experience with generative AI. Good written English skills are required.

**TRAINER QUALIFICATIONS**

The experts who lead the training courses are specialists in the subjects covered. They are approved by the publisher and certified for the course. They have also been validated by our teaching teams in terms of both professional knowledge and teaching skills for each course they teach. They have at least three to ten years of experience in their field and hold or have held positions of responsibility in companies.

**ASSESSMENT TERMS**

Assessment of targeted skills prior to training.
Assessment by the participant, at the end of the training course, of the skills acquired during the training course.
Validation by the trainer of the participant's learning outcomes, specifying the tools used: multiple-choice questions, role-playing exercises, etc.
At the end of each training course, ITTCERT provides participants with a course evaluation questionnaire, which is then analysed by our teaching teams. Participants also complete an official evaluation of the publisher.
An attendance sheet for each half-day of attendance is provided at the end of the training course, along with a certificate of completion if the participant has attended the entire session.

## 1 Models, Data, and Retrieval

- Evaluation and Selection of Foundation Designs.
- Dynamic Selection Architectures and Resilient Systems.
- Cost Optimization and Economic Modeling.
- Data Validation and Quality Assurance.
- Multimodal data pipelines and input optimization.
- Vector-Based Architectures.
- Document Processing and Segmentation Strategies.
- Implementation of retrieval (RAG).

### Hands-on work

Implementation using Amazon Bedrock AgentCore.

## 2 Prompt engineering and agent-based AI

- Advanced prompt engineering frameworks.
- Orchestration of complex prompts.
- Governance and Management of Prompts in the Workplace.
- Agent-based AI frameworks.
- Implementation using Amazon Bedrock AgentCore.

### Hands-on work

Development of conversational patterns.

## 3 Security, Performance, and Costs

- Content Security and Filtering.
- Privacy Policy.
- Governance and Compliance.
- Performance Optimization.
- Cost Management and Token Efficiency.
- Implementation of intelligent caching systems.

### Hands-on work

Secure generative AI with guardrails.

## 4 Monitoring, Quality, and Integration

- Model monitoring systems.
- Observability and Measurement of Business Value.
- Troubleshooting and Problem Solving.
- AI Testing and Evaluation Frameworks.
- Quality Assurance and Continuous Improvement.
- Evaluation and Optimization of RAG Systems.
- Enterprise integration and connectivity.
- Access and Identity Management.
- Hybrid and multi-environment deployments.
- Conclusion, Next Steps, and Resources.

**TEACHING AIDS AND TECHNICAL RESOURCES**

The teaching resources used are the publisher's official materials and practical exercises.

**TERMS AND DEADLINES**

Registration must be completed 24 hours before the start of the training course.

**ACCESSIBILITY FOR PEOPLE WITH DISABILITIES**

Do you have specific accessibility requirements? Contact Ms FOSSE, disability advisor, at the following address: psh-accueil@orsys.fr so that we can assess your request and its feasibility.

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## Dates and locations

**REMOTE CLASS**
2026 : 30 Nov.

2027 : 31 Mar., 26 May, 30 June, 8 Sep., 17 Nov., 15 Dec.

**NANTES**
2027 : 31 Mar., 30 June, 8 Sep., 15 Dec.

**PARIS LA DÉFENSE**
2027 : 31 Mar., 26 May, 30 June, 8 Sep., 17 Nov., 15 Dec.

**LYON**
2027 : 31 Mar., 30 June, 8 Sep., 17 Nov.