

## Agentic AI Foundations

**Duration: 1 Day**    **Course Code: GK910031**    **Version: 1.1.9**

### Overview:

**In this course, you'll explore the core principles and strategies for designing agentic AI systems using AWS services.**

You'll learn how agentic AI differs from traditional conversational systems. You'll also discover how to use tools like Amazon Q Developer, Amazon Quick Suite, Kiro, Strands Agents SDK, and Amazon Bedrock AgentCore to build autonomous, goal-driven solutions that solve real-world problems.

- Course level: Fundamental
- Duration: 1 day

*Updated August 2026*

### Target Audience:

**This course is intended for:**

- Software developers new to agentic AI seeking foundational knowledge
- Technical professionals exploring AI capabilities and interested in core components and applications of agentic AI
- Development teams evaluating agentic AI solutions and needing to differentiate between agent types
- AWS Users expanding into agentic AI, including current users of Amazon Q Developer, Amazon Quick Suite, and Amazon Bedrock AgentCore

### Objectives:

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| <ul style="list-style-type: none"><li>■ <b>After this course participants should be able to:</b></li><li>■ Summarize the evolution of agentic AI and define what makes something agentic</li><li>■ Identify core components of agentic systems</li><li>■ Distinguish between workflow, autonomous, and hybrid agents</li><li>■ Identify basic implementation patterns for agentic AI</li><li>■ Compare AWS service options for agentic AI</li></ul> | <ul style="list-style-type: none"><li>■ Describe capabilities and use cases of Amazon Quick Suite, Amazon Q Developer, and Kiro</li><li>■ Explain Strands Agents framework and its applications</li><li>■ Build and customize a basic AI agent using Strands Agents SDK</li><li>■ Develop a simple task-specific agent for real-world application using Strands Agents SDK</li><li>■ Explain Amazon Bedrock AgentCore</li><li>■ Describe observability and interoperability patterns for production agentic AI systems</li></ul> |
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### Prerequisites:

**We recommend that attendees of this course have:**

- Generative AI Essentials or equivalent work experience
- Basic AWS knowledge and software development experience
- GK4501 - AWS Technical Essentials
- GK910027 - Generative AI Essentials on AWS

### Testing and Certification

None

## Follow-on-Courses:

The following courses are recommended for further learning and development:

- GK910010 - Developing Generative AI applications on AWS

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## Content:

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| Day 1                                                                                                                                                                                   | Module 3: Understanding Agentic AI Workflows                                                                                                                                                                                                                                                                             | Module 6: Building Custom Solutions                                                                                                                          |
| Module 1: From LLMs to Agents                                                                                                                                                           | <ul style="list-style-type: none"><li>■ Workflow patterns</li><li>■ Amazon Bedrock flows overview</li></ul>                                                                                                                                                                                                              | <ul style="list-style-type: none"><li>■ Customizing agentic infrastructure</li><li>■ Observability and monitoring</li><li>■ Agent interoperability</li></ul> |
| <ul style="list-style-type: none"><li>■ Limitations of Large Language Models (LLMs)</li><li>■ Innovations powering agents</li><li>■ Evolution from LLMs to agentic AI systems</li></ul> | Module 4: AWS Agentic Development and Productivity Tools                                                                                                                                                                                                                                                                 | Module 7: Course Wrap-up                                                                                                                                     |
| Module 2: Exploring Agentic AI                                                                                                                                                          | <ul style="list-style-type: none"><li>■ AWS agentic AI solutions</li><li>■ Amazon Quick Suite</li><li>■ Amazon Q Developer</li><li>■ Hands-on lab: Accelerating software development using Amazon Q Developer</li><li>■ Kiro: AI-powered integrated development environment (IDE) with spec-driven development</li></ul> | <ul style="list-style-type: none"><li>■ Next steps and additional resources</li><li>■ Course summary</li></ul>                                               |
| <ul style="list-style-type: none"><li>■ Understanding agentic AI</li><li>■ Types of AI agents</li><li>■ Agentic AI applications</li></ul>                                               | Module 5: Implementing agentic AI Frameworks with Amazon Bedrock AgentCore                                                                                                                                                                                                                                               |                                                                                                                                                              |
|                                                                                                                                                                                         | <ul style="list-style-type: none"><li>■ Agentic AI frameworks</li><li>■ Hands-on lab: Getting started with Strands Agents</li><li>■ Amazon Bedrock AgentCore</li></ul>                                                                                                                                                   |                                                                                                                                                              |

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## Additional Information:

### Activities :

This course includes presentations, hands-on labs, and group exercises.

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## Further Information:

For More information, or to book your course, please call us on 00 20 (0) 2 2269 1982 or 16142

[training@globalknowledge.com.eg](mailto:training@globalknowledge.com.eg)

[www.globalknowledge.com/en-eg/](http://www.globalknowledge.com/en-eg/)

Global Knowledge, 16 Moustafa Refaat St. Block 1137, Sheraton Buildings, Heliopolis, Cairo