

## Agentic AI Foundations

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

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### 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, and how to use tools like Amazon Q, Kiro, Amazon Bedrock Agents, and Amazon Bedrock AgentCore to build autonomous, goal-driven solutions that solve real-world problems.

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### 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 Q Business, and Amazon Bedrock Agents

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### Objectives:

■ **After completing this course you should be able to:**

- Summarize the evolution of Agentic AI and define what makes something "agentic"
- Identify core components of agentic systems
- Distinguish between workflow, autonomous, and hybrid agents
- Compare AWS service options for Agentic AI

- Describe capabilities and use cases of Amazon Q Developer, Amazon Q Business, and Kiro
  - Explain Amazon Bedrock AgentCore and Amazon Bedrock Agents fundamentals
  - Identify basic implementation patterns for Agentic AI
  - Describe observability and interoperability patterns for production agentic AI systems
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### Prerequisites:

**Attendees should meet the following pre-requisites:**

- 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

**Recommended as preparation for the following exams:**

- There is no exam currently linked to this course.
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## Content:

### Module 1: From LLMs to Agents

- Understanding Large Language Models (LLMs) • Innovations powering agents
- Evolution timeline from LLMs to Agents

### Module 2: Exploring Agentic AI

- Understanding Agentic AI
- Types of AI agents
- Agentic AI applications

### Module 3: Understanding Agentic AI Workflows

- Workflow patterns
- Amazon Bedrock flows overview

### Module 4: Introducing Autonomous Agents

- How Autonomous Agents work
- ReAct
- ReWoo
- Multi-agent collaboration
- AWS Agentic AI solutions

### Module 5: Amazon Q and Agentic Development Tools

- Amazon Q Developer
- Amazon Q Business
- Amazon Q in AWS Services
- Kiro: AI-powered IDE with spec-driven development

### Module 6: Agentic AI with Amazon Bedrock

- Amazon Bedrock Agents
- Amazon Bedrock AgentCore
- Hands-on lab: Explore Amazon Bedrock Agents integrated with Amazon Bedrock Knowledge Bases and Amazon Bedrock Guardrails

### Module 7: Building DIY Solutions

- DIY solutions
- Observability and Monitoring
- Agent Interoperability

### Module 8: Course Wrap-up

- Next steps and additional resources
- Course summary

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## Further Information:

For More information, or to book your course, please call us on Head Office Tel.: +974 40316639

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