

SAP Certified – SAP Generative AI Developer (C_AIG_2412)

COURSE CONTENT

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About Multisoft

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About Course

SAP Certified – SAP Generative AI Developer (C_AIG_2412) Training by Multisoft Systems provides structured learning for professionals who want to understand Generative AI application development in the SAP ecosystem. The program covers SAP Business AI, SAP BTP, SAP AI Core, SAP AI Launchpad, generative AI hub, foundation models, LLM interaction, prompt engineering, embeddings, vector search, grounding, RAG, application integration, security, and responsible AI. Practical exercises and certification-oriented preparation help participants understand how Generative AI capabilities can be applied to modern SAP business scenarios.

Module 1: Introduction to Generative AI and SAP Business AI

- ✓ Artificial Intelligence, Machine Learning, and Generative AI
- ✓ Evolution of generative AI technologies
- ✓ Generative AI terminology and concepts
- ✓ Foundation Models
- ✓ Large Language Models (LLMs)
- ✓ Tokens and context windows
- ✓ Transformer-based AI concepts
- ✓ Understanding prompts and completions
- ✓ Generative AI capabilities and limitations
- ✓ Enterprise applications of generative AI
- ✓ Introduction to SAP Business AI
- ✓ Generative AI within the SAP ecosystem
- ✓ Overview of SAP AI Foundation
- ✓ Generative AI developer responsibilities
- ✓ Common SAP generative AI business scenarios

Module 2: SAP AI Core and SAP AI Launchpad

- ✓ Introduction to SAP AI Core
- ✓ Role of SAP AI Core within SAP BTP
- ✓ SAP AI Core architecture concepts
- ✓ Introduction to SAP AI Launchpad
- ✓ Relationship between AI Core and AI Launchpad
- ✓ SAP BTP account considerations
- ✓ Service provisioning concepts

- ✓ Service instances and service keys
- ✓ Resource groups
- ✓ AI API concepts
- ✓ Connections between SAP AI Launchpad and AI Core
- ✓ Roles and authorizations
- ✓ Managing AI workloads
- ✓ Model deployment concepts
- ✓ Monitoring AI resources
- ✓ Working with AI scenarios and configurations

Module 3: SAP Generative AI Hub

- ✓ Introduction to generative AI hub
- ✓ Position of generative AI hub within SAP AI Core
- ✓ Generative AI hub capabilities
- ✓ Accessing generative AI hub
- ✓ Understanding available foundation models
- ✓ Model providers and model families
- ✓ Model selection considerations
- ✓ Model deployment concepts
- ✓ Creating model deployments
- ✓ Accessing deployed models
- ✓ Model configuration parameters
- ✓ Temperature
- ✓ Maximum tokens
- ✓ Top-p and related generation settings
- ✓ Managing model versions

- ✓ Model lifecycle considerations
- ✓ Secure consumption of LLM services
- ✓ Working with generative AI hub through SAP AI Launchpad
- ✓ Programmatic access to generative AI capabilities

Module 4: Prompt Engineering Fundamentals

- ✓ Introduction to prompt engineering
- ✓ Anatomy of an effective prompt
- ✓ System instructions
- ✓ User prompts
- ✓ Context and constraints
- ✓ Prompt clarity and specificity
- ✓ Zero-shot prompting
- ✓ One-shot prompting
- ✓ Few-shot prompting
- ✓ Role-based prompting
- ✓ Instruction-based prompting
- ✓ Contextual prompting
- ✓ Structuring complex prompts
- ✓ Controlling response formats
- ✓ Using examples within prompts
- ✓ Improving response consistency
- ✓ Handling ambiguous prompts
- ✓ Prompt iteration techniques
- ✓ Common prompt engineering mistakes
- ✓ Enterprise prompt design considerations

Module 5: Advanced Prompt Engineering and Prompt Management

- ✓ Advanced prompt engineering concepts
- ✓ Meta-prompting
- ✓ Prompt decomposition
- ✓ Structured prompting strategies
- ✓ Managing prompt variables
- ✓ Dynamic prompt construction
- ✓ Reusable prompt templates
- ✓ Introduction to Prompt Registry
- ✓ Creating and managing prompt templates
- ✓ Prompt versioning
- ✓ Prompt lifecycle management
- ✓ Maintaining reusable prompts
- ✓ Testing prompt variations
- ✓ Comparing prompt responses
- ✓ Selecting prompts for business scenarios
- ✓ Prompt governance considerations
- ✓ Managing prompts across development stages

Module 6: Developing with SAP Cloud SDK for AI

- ✓ Introduction to SAP Cloud SDK for AI
- ✓ SDK role in generative AI application development
- ✓ Development environment considerations
- ✓ Connecting applications with generative AI hub

- ✓ Authentication and connectivity concepts
- ✓ Accessing LLM deployments programmatically
- ✓ Sending prompts through application code
- ✓ Handling LLM responses
- ✓ Working with chat completion scenarios
- ✓ Passing model parameters
- ✓ Managing prompt templates programmatically
- ✓ Error handling
- ✓ Response processing
- ✓ Integrating generative AI into SAP applications
- ✓ Designing reusable AI services
- ✓ Application architecture considerations
- ✓ Testing LLM integrations

Module 7: Generative AI Hub Orchestration Service

- ✓ Introduction to Orchestration Service
- ✓ Purpose of orchestration in enterprise AI
- ✓ Orchestration architecture
- ✓ Creating orchestration configurations
- ✓ Model configuration
- ✓ Template configuration
- ✓ Prompt templating
- ✓ Input and output handling
- ✓ Content filtering
- ✓ Data masking
- ✓ Managing sensitive information

- ✓ Grounding integration
- ✓ Translation capabilities where applicable
- ✓ Combining orchestration modules
- ✓ Calling orchestration services from applications
- ✓ Error handling and troubleshooting
- ✓ Designing reusable orchestration workflows
- ✓ Enterprise orchestration scenarios

Module 8: Embeddings, Vector Search, and RAG

- ✓ Introduction to embeddings
- ✓ Text representation using vectors
- ✓ Semantic similarity concepts
- ✓ Embedding models
- ✓ Generating embeddings
- ✓ Vector storage concepts
- ✓ Similarity search
- ✓ Semantic search versus keyword search
- ✓ Introduction to SAP HANA Cloud Vector Engine
- ✓ Storing embeddings in SAP HANA Cloud
- ✓ Querying vector information
- ✓ Introduction to Retrieval-Augmented Generation
- ✓ RAG architecture
- ✓ Retrieval pipeline
- ✓ Context augmentation
- ✓ Combining retrieved information with prompts
- ✓ Improving LLM responses with enterprise information

- ✓ Reducing hallucinations through grounding
- ✓ RAG design considerations

Module 9: Document Grounding with Generative AI Hub

- ✓ Introduction to document grounding
- ✓ Business need for grounded AI responses
- ✓ Document grounding architecture
- ✓ Knowledge bases
- ✓ Preparing enterprise documents
- ✓ Document ingestion concepts
- ✓ Document processing
- ✓ Chunking strategies
- ✓ Embedding document content
- ✓ Creating vector knowledge bases
- ✓ Semantic retrieval
- ✓ Configuring Document Grounding
- ✓ Integrating grounding with Orchestration Service
- ✓ Connecting prompts with retrieved context
- ✓ Generating context-aware responses
- ✓ Evaluating grounded responses
- ✓ Managing enterprise knowledge sources
- ✓ Grounding versus general-purpose LLM responses
- ✓ Document grounding use cases

Module 10: Model and Prompt Evaluation

- ✓ Importance of generative AI evaluation
- ✓ Evaluating prompt effectiveness
- ✓ Evaluating LLM responses
- ✓ Accuracy and relevance
- ✓ Consistency
- ✓ Completeness
- ✓ Response quality
- ✓ Comparing different models
- ✓ Comparing prompt variants
- ✓ Model selection based on use case
- ✓ Quality versus cost considerations
- ✓ Latency considerations
- ✓ Automated prompt evaluation concepts
- ✓ Testing business scenarios
- ✓ Identifying hallucinations
- ✓ Improving unreliable responses
- ✓ Iterative optimization
- ✓ Establishing evaluation criteria for enterprise applications

Module 11: Responsible AI, Security, and Enterprise Governance

- ✓ Responsible AI principles
- ✓ Risks associated with generative AI
- ✓ Hallucination risks

- ✓ Bias and fairness
- ✓ Transparency considerations
- ✓ Data privacy
- ✓ Sensitive enterprise information
- ✓ Personally identifiable information considerations
- ✓ Data masking
- ✓ Content filtering
- ✓ Prompt injection awareness
- ✓ Secure prompt handling
- ✓ Access control
- ✓ Roles and authorizations
- ✓ Model access governance
- ✓ Enterprise AI security considerations
- ✓ Monitoring generative AI usage
- ✓ Human oversight
- ✓ Designing trustworthy AI applications

Module 12: End-to-End Generative AI Application and Certification Preparation

- ✓ Identifying an enterprise generative AI use case
- ✓ Translating business requirements into an AI solution
- ✓ Selecting an appropriate foundation model
- ✓ Configuring model access
- ✓ Designing prompts
- ✓ Creating reusable prompt templates

- ✓ Configuring orchestration
- ✓ Integrating SAP Cloud SDK for AI
- ✓ Incorporating enterprise information
- ✓ Implementing document grounding or RAG
- ✓ Evaluating generated responses
- ✓ Applying content filtering and data protection
- ✓ Testing the end-to-end solution
- ✓ Troubleshooting common implementation issues
- ✓ Performance and cost considerations
- ✓ Deployment considerations
- ✓ Generative AI application architecture review
- ✓ C_AIG_2412 topic revision
- ✓ Scenario-based exercises
- ✓ Practical exercises
- ✓ Certification-oriented practice scenarios