

Agentic AI Expert Certification

OEM: Global Skill Development Council • Duration: 5 Days (40 hrs) • Code: GSDC-AgAI

COURSE MODULES & TOPICS

1 Advanced Agentic AI Concepts and Theoretical Foundations

- Exploration of multi-agent systems and emergent behaviors
- Understanding meta-learning and self-adaptive agents
- Study of agent autonomy and goal-directed decision-making
- Review of cutting-edge research and breakthroughs in Agentic AI

2 Designing Scalable Agentic AI Architectures

- Principles of microservices architecture for AI agents
- Distributed agent orchestration and fault tolerance
- Load balancing and resource optimization for agent ecosystems
- Designing for high availability and scalability

3 Integration of Agentic AI with Emerging Technologies

- Leveraging IoT for real-time agent sensing and action
- Edge computing strategies to reduce latency and enhance privacy
- Utilizing blockchain for secure and transparent agent interactions
- Exploring potential quantum computing applications in Agentic AI

4 Advanced Large Language Models & Agent Framework Customization

- Fine-tuning LLMs for domain-specific tasks
- Mastering prompt engineering and context management
- Reinforcement Learning with Human Feedback (RLHF) techniques
- Customizing LangChain, LangGraph, AutoGen, and RAG for optimized workflows

5 Multi-Agent Coordination and Communication Protocols

- Mechanisms for agent collaboration and consensus building
- Designing competitive and cooperative agent environments
- Protocols for secure and efficient agent communication
- Conflict resolution and negotiation strategies among agents

6 Agentic AI in Enterprise-scale Use Cases

- Finance: Automated trading, fraud detection, risk management
- Healthcare: Personalized treatment plans, diagnostics, patient monitoring
- Manufacturing: Predictive maintenance, supply chain automation, quality control
- Government: Public service automation, policy simulation, crisis management

7 Governance, Compliance, and Ethical AI Leadership

- Developing AI governance frameworks and policies
- Techniques for bias detection and mitigation in agentic systems
- Navigating regulatory landscapes and compliance requirements
- Ethical decision-making and accountability in autonomous agents

8 Operationalizing Agentic AI: Monitoring, Maintenance, and Continuous Improvement

- Setting up performance monitoring and alerting systems
- Anomaly detection and fault diagnosis in agent networks
- Strategies for model retraining and continuous learning
- Incident response and rollback procedures

9 Preparing Organizations for Agentic AI at Scale

- Crafting strategic roadmaps for AI adoption and transformation
- Identifying and closing talent gaps with upskilling programs
- Building an AI-driven culture and change management best practices
- Stakeholder engagement and cross-functional collaboration

10 Capstone Project: Architecting an End-to-End Agentic AI Solution

- Requirement analysis and solution design
- Development and integration of multi-agent systems
- Deployment and real-world validation
- Documentation and presentation of project outcomes

11 Building Powerful AI Agents—No Coding Required

- Drag-and-Drop Workflow Design
- Pretrained AI Components
- Customizable Business Rules
- One-Click Deployment & Monitoring
- Collaborative Iteration & Governance

12 Personalized 1-1 & Daily Group Live Session

- Personalized 1-on-1 Trainer/SME Connect Session

- Daily Live Session with Lifelong Learning