Knowledge Engineering Training Course

Professional Development Training Course Outline

Category	Library Institute	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Knowledge Engineering is a strategic discipline that enables organizations to capture, organize, model, automate, and optimize knowledge for intelligent decision-making, artificial intelligence, digital transformation, expert systems, machine learning, semantic technologies, and enterprise knowledge management. Modern organizations increasingly rely on knowledge engineering to improve operational efficiency, support predictive analytics, automate business processes, strengthen innovation, and create intelligent decision support systems. Knowledge Engineering Training Course equips participants with practical techniques for designing knowledge-based systems, knowledge representation, ontology development, rule-based reasoning, knowledge acquisition, and AI-powered organizational intelligence while aligning with emerging Industry 4.0 and digital business requirements.

Participants will gain practical experience in developing structured knowledge repositories, designing semantic models, implementing knowledge graphs, applying inference mechanisms, and integrating knowledge engineering with artificial intelligence, machine learning, cloud computing, natural language processing, and enterprise information systems. The course emphasizes international best practices, real-world implementation strategies, and globally recognized methodologies that enhance organizational learning, digital innovation, automation, and competitive advantage.

Programme Curriculum

Knowledge Transfer Strategies Training Course

Introduction

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Course Objectives

By the end of this course, participants will be able to:

1. Understand modern Knowledge Engineering principles and frameworks.
2. Design intelligent knowledge-based systems.
3. Apply knowledge acquisition techniques from domain experts.
4. Develop knowledge representation models using semantic technologies.
5. Build ontologies for enterprise knowledge management.
6. Implement rule-based reasoning and inference engines.
7. Integrate AI and Machine Learning with knowledge engineering.
8. Develop enterprise knowledge graphs.
9. Improve organizational decision support systems.
10. Enhance digital transformation through knowledge automation.
11. Evaluate knowledge quality, consistency, and governance.
12. Implement knowledge sharing and collaboration strategies.
13. Apply global best practices in Knowledge Engineering projects.

Organizational Benefits

- Improved organizational knowledge retention.
- Faster and smarter decision-making.
- Increased operational efficiency.
- Enhanced innovation capabilities.
- Better AI implementation readiness.
- Improved knowledge sharing culture.
- Reduced dependency on individual expertise.
- Stronger digital transformation initiatives.
- Enhanced business intelligence capabilities.
- Sustainable competitive advantage.

Target Audience

- Knowledge Engineers

- AI Engineers
- Data Scientists
- Business Analysts
- Digital Transformation Managers
- IT Professionals
- Research Scientists
- Knowledge Management Specialists

Course Duration: 5 days

Course Modules

Module 1: Foundations of Knowledge Engineering

- Fundamentals of Knowledge Engineering
- Knowledge lifecycle management
- Types of organizational knowledge
- Knowledge engineering frameworks
- AI-driven knowledge systems
- Global Case Study: IBM Watson Knowledge Engineering implementation

Module 2: Knowledge Acquisition

- Knowledge elicitation techniques
- Expert interviews and workshops
- Knowledge discovery methods
- Knowledge validation processes
- Documentation best practices
- Global Case Study: NASA Expert Knowledge Capture Program

Module 3: Knowledge Representation

- Logic-based representation
- Semantic networks
- Frames and scripts
- Rule-based knowledge models
- Ontology fundamentals
- Global Case Study: Stanford Protégé Ontology Development

Module 4: Ontology Engineering

- Ontology design principles
- Taxonomy development

- Semantic interoperability
- Ontology evaluation
- Enterprise ontology implementation
- Global Case Study: European Bioinformatics Institute Ontology Project

Module 5: Knowledge-Based Systems

- Expert system architecture
- Inference engines
- Rule management
- Decision support integration
- Knowledge repository development
- Global Case Study: Medical Expert Diagnostic Systems

Module 6: Knowledge Graphs and AI

- Knowledge graph concepts
- Graph databases
- AI integration techniques
- Natural Language Processing applications
- Intelligent search optimization
- Global Case Study: Google's Knowledge Graph

Module 7: Knowledge Governance

- Knowledge quality management
- Governance policies
- Knowledge security
- Compliance and ethics
- Knowledge lifecycle optimization
- Global Case Study: Microsoft Enterprise Knowledge Governance

Module 8: Emerging Trends and Implementation

- Generative AI applications
- Intelligent automation
- Digital transformation roadmap
- Enterprise implementation strategy
- Performance measurement
- Global Case Study: Siemens Digital Knowledge Engineering Initiative

Training Methodology

- Interactive instructor-led presentations
- Practical demonstrations and guided exercises
- Hands-on knowledge modeling workshops
- AI and ontology development laboratories
- Individual and group assignments
- Global case study discussions
- Knowledge graph design exercises
- Scenario-based simulations
- Group presentations and peer learning
- Course assessment and expert feedback

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to DATASTAT CONSULTANCY LTD account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price

07 Sep 2026	11 Sep 2026	Online	$1,000
07 Sep 2026	11 Sep 2026	Physical	$1,500
14 Sep 2026	18 Sep 2026	Online	$1,000
14 Sep 2026	18 Sep 2026	Physical	$1,500
21 Sep 2026	25 Sep 2026	Online	$1,000
21 Sep 2026	25 Sep 2026	Physical	$1,500
28 Sep 2026	02 Oct 2026	Online	$1,000
28 Sep 2026	02 Oct 2026	Physical	$1,500

Ready to enroll or request a customized program? Book online or contact us:

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