

CERTIFIED AI QUALITY MANAGEMENT PRACTITIONER (CAQMP)

COURSE OVERVIEW

This intensive 5-day Certified AI Quality Management Practitioner program equips professionals and leaders with practical skills to integrate Generative AI and Large Language Models (LLMs), such as; Gemini, ChatGPT, and Claude directly into their Quality Management Systems (QMS). Participants will master the application of these tools to achieve superior organizational performance by enhancing process efficiency, automating complex documentation, and accelerating critical analyses like Root Cause Analysis (RCA). The curriculum emphasizes crucial modern quality dimensions, focusing on AI governance, ethical deployment, and risk management, ensuring AI-driven improvements are both effective and compliant.

TARGET COMPETENCIES

- AI Quality Governance
- LLM Prompt Engineering
- Process Optimization
- Data Risk Assessment
- Advanced RCA Facilitation
- QMS Documentation Automation
- Ethical AI Deployment

TARGET AUDIENCE

This course is ideal for Quality Managers, Supervisors, Process Improvement Specialists, Leaders, and Auditors seeking practical, beginner-to-intermediate skills in leveraging AI for organizational quality implementation.

COURSE OBJECTIVES

By completely attending this course, participants will be able to:

- Integrate Generative AI tools (Gemini, ChatGPT, Claude) to accelerate common Quality Management System (QMS) tasks.
- Master prompt engineering techniques to generate reliable, verifiable output for documentation, analysis, and reporting.
- Apply AI-assisted methods to structure and facilitate complex Root Cause Analysis (RCA) and Failure Mode and Effects Analysis (FMEA).
- Develop robust governance frameworks to manage the ethical risks, bias, and potential hallucinations associated with LLM usage in quality assurance.
- Design AI-driven strategies for process mapping, waste identification, and continuous improvement initiatives.
- Translate complex quality data and audit findings into concise, audience-specific reports using AI summarization capabilities.

To register or for complete course information

Office: +971 4 430 8394 | WhatsApp: +971 50 454 9895 | Email: courses@viftraining.com

web: www.viftraining.com

COURSE METHODOLOGY

The course uses a "learn-by-doing" approach with 70% hands-on workshops and tool-specific exercises using Gemini, ChatGPT, and Claude. It combines short lectures, interactive group discussions, and realistic quality case studies for immediate skill application.

COURSE OUTLINE

INTRODUCTION TO AI & QUALITY 4.0

- Overview of AI's role in modern Quality Management and the shift to Quality 4.0.
- Key concepts of Generative AI, LLMs, and foundational terminologies.
- Challenges and opportunities of LLM adoption in quality assurance.

LLM PROMPT ENGINEERING FOR QUALITY EFFICIENCY

- Mastery of structured prompt design (Role, Task, Context) for reliable LLM output.
- The use of Gemini/ChatGPT to draft, review, and standardize QMS documentation (SOPs, work instructions).
- Leverage of LLMs for rapid data processing and summarization of text-based quality data (e.g., audit reports).
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AI-ACCELERATED PROBLEM SOLVING

- Application of Claude/Gemini to structure and facilitate Root Cause Analysis (RCA) using methods like 5 Whys.
- Brainstorming and detailing Failure Modes and Effects (FMEA) for processes using AI assistance.
- Translation of AI analysis into clear, accountable Corrective and Preventive Actions (CAPA).

AI QUALITY GOVERNANCE & RISK MANAGEMENT

- Identification and mitigation of LLM-specific risks, including data leakage and hallucination.
- Establishment of governance frameworks for the ethical and responsible use of AI in quality decisions.
- The careful balancing of innovation (using AI for analysis) with compliance (verification and human review).

AI FOR CONTINUOUS IMPROVEMENT & COMMUNICATION

- The utilization of AI tools for basic process mapping, identifying non-value-added steps, and waste reduction (Lean).
- Tailoring of quality communication using LLMs to simplify technical audit findings for different stakeholder groups.
- Development of an AI Quality Strategy and roadmap for organizational quality transformation.