

PROMPT ENGINEERING MASTERCLASS

SYLLABUS

Module 1 — Introduction to AI & Prompt Engineering

- Generative AI fundamentals
- LLMs and AI assistants
- What is prompt engineering?
- How AI interprets instructions
- Common prompting mistakes
- AI limitations and hallucinations

Module 2 — Prompt Engineering Fundamentals

- Clear instructions
- Context
- Role prompting
- Task definition
- Constraints
- Examples
- Output formatting

Module 3 — Advanced Prompting Techniques

- Zero-shot prompting
- Few-shot prompting
- Chain-of-thought concepts
- Step-by-step task decomposition
- Structured prompting
- Prompt refinement
- Prompt templates

Module 4 — AI for Writing & Content Creation

- Articles and blogs
- Social media content
- Email and business communication
- Content rewriting
- Summarization
- Content planning
- Tone and style control

Module 5 — AI for Research & Data Analysis

- Research prompts
- Information extraction
- Document analysis
- Tables and structured data
- Comparing information
- Summarizing reports
- Creating research workflows

Module 6 — AI for Coding & Technical Work

- Coding prompts
- Debugging with AI
- Code explanation
- Refactoring
- Documentation
- SQL assistance
- Using AI coding assistants

Module 7 — AI Image & Creative Prompting

- Text-to-image prompting
- Image prompt structure
- Style and composition
- Creative workflows
- Presentation generation

- Visual content creation

Module 8 — AI Workflows, Automation & Capstone

- Multi-step AI workflows
- Prompt chains
- Reusable prompt libraries
- Business workflows
- Productivity systems
- Responsible AI
- Final practical projects