

AI GENERALIST

Master Generative AI, AI Agents & AI-Powered Solutions

From prompt engineering to autonomous agents, AI-built apps, automation & a capstone business solution — one practical, hands-on program.

24 HRS Theory + Hands-on Labs	13 Structured Modules	10+ Projects & Challenges	15+ AI Tools & Platforms
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Course Overview

Artificial Intelligence has evolved from simple chatbots into a powerful technology for knowledge work, content creation, research, automation, software development, business intelligence, and intelligent decision support. Modern AI professionals need more than the ability to write prompts — they need to evaluate AI tools, work with AI models, create AI assistants and agents, automate workflows, build AI-powered applications, and apply AI responsibly.

This practical AI Generalist course takes participants on a structured journey — from AI fundamentals and workplace productivity to advanced AI assistants, AI agents, automation, AI-powered applications, voice AI, multi-model AI, and local AI. The emphasis throughout is on hands-on learning and business application, not just tool demonstrations.

WHO SHOULD ATTEND

- Managers, executives & business professionals
- Consultants, entrepreneurs & freelancers
- Educators, trainers & students
- Analysts, IT professionals & developers
- Anyone who wants to evaluate, use, build, and manage AI solutions

PREREQUISITES

- Basic computer literacy
- Familiarity with common workplace applications
- Basic understanding of web browsers & online tools
- No prior AI or programming experience required
- Basic logical/problem-solving skills are a plus

What You'll Be Able To Do

- Apply ChatGPT, Gemini, Claude & other AI assistants to real workflows
- Create effective prompts, templates & structured AI workflows
- Analyze documents, reports & research with AI, with source verification
- Design custom AI assistants with instructions, knowledge & tools
- Build AI agents that plan, decide, and complete multi-step tasks
- Automate repetitive business processes end-to-end
- Create AI-powered websites, dashboards, and applications
- Implement AI-assisted development and vibe-coding workflows
- Build basic voice AI and conversational-agent solutions
- Evaluate AI models and select the right one for the job
- Use local AI models for privacy-sensitive, offline scenarios
- Assess AI risk across privacy, security, copyright, and bias
- Design and present a complete AI-powered business solution

Detailed Module Curriculum

24 hours across 13 modules, each followed by hands-on labs, projects, or challenges.

MODULE 1 AI Fundamentals & The AI-First Workplace

1.5 Hours

- Understanding Artificial Intelligence
- Evolution of Artificial Intelligence
- Artificial Intelligence versus Machine Learning
- Generative AI
- Large Language Models
- Multimodal AI
- AI Assistants
- AI Agents
- AI-Powered Applications
- Agentic AI
- Understanding the Modern AI Ecosystem
- Understanding AI Models, Tools, and Platforms
- What AI Can and Cannot Do
- AI Hallucinations and Model Limitations
- Human-in-the-Loop AI
- Identifying Tasks Suitable for AI
- Identifying Tasks Requiring Human Judgment
- AI for Productivity, Creativity, Research, and Decision Support
- AI Applications Across Industries
- Building an AI-First Mindset
- Responsible AI Fundamentals
- Privacy and Confidential Information
- Human Verification and Oversight

Hands-on Exercise: *AI Opportunity Mapping* — identify repetitive, information-heavy, creative, analytical, and decision-support tasks that can benefit from AI.

MODULE 2 Generative AI Assistants for Professional Productivity

2 Hours

- Introduction to Modern Generative AI Assistants
- ChatGPT
- Google Gemini
- Claude
- Comparing AI Assistants
- Understanding Model Capabilities
- Selecting the Appropriate AI Assistant
- Providing Effective Context
- Defining Roles and Objectives
- Setting Constraints
- Controlling Output Formats
- Working with Text
- Working with Images
- Working with Documents
- Summarizing Information
- Extracting Information
- Comparing Information
- Transforming Information
- Creating Reports
- Writing Professional Communication
- Preparing Presentations
- Brainstorming and Ideation
- Problem Solving
- Decision Support
- Personal Productivity
- Professional Productivity

Hands-on Labs: *Professional Email Generation · Document Analysis · Executive Summary Creation · Business Research · Presentation Preparation · Decision-Support Briefing*

Practical Challenge: *Raw Information → AI Analysis → Insights → Recommendation → Management Brief*

MODULE 3 Prompt Engineering & Context Engineering

1.5 Hours

- Understanding Prompt Engineering
- Anatomy of an Effective Prompt
- Role and Persona
- Context
- Objective
- Instructions
- Constraints
- Output Format
- Examples and Few-Shot Prompting
- Creating Reusable Prompt Templates
- Building Prompt Libraries
- Iterative Prompting
- Prompt Refinement
- Prompt Chaining
- Structured Outputs
- Asking AI to Critique Its Own Work
- AI-Assisted Prompt Improvement
- Understanding Context Engineering
- Providing Relevant Knowledge and Reference Material
- Managing Long Context
- Controlling AI Behavior
- Creating Consistent AI Workflows
- Prompts for Research
- Prompts for Analysis
- Prompts for Creativity
- Prompts for Decision-Making
- Prompts for Learning
- Prompts for Business Productivity

Hands-on Workshop: *Build a Personal AI Prompt and Context Library*

MODULE 4 AI Research, Documents & Knowledge Work

2 Hours

- AI-Powered Document Analysis
- Working with PDFs and Reports
- Extracting Information from Documents
- Summarizing Large Documents
- Comparing Multiple Documents
- Identifying Differences and Inconsistencies
- Creating Structured Information from Unstructured Data
- Creating FAQs from Documents
- Document-Based Question Answering
- AI-Assisted Web Research
- Research Planning
- Search Strategy
- Multi-Source Research
- Deep Research Workflows
- Source Evaluation
- Source Verification
- Fact Checking
- Identifying AI Hallucinations
- Research Synthesis
- Competitive Intelligence
- Market Research
- Product Research
- Creating Research Briefs
- Turning Research into Recommendations
- Knowledge Management with AI
- Building Organizational Knowledge Workflows

Hands-on Project: *Business Document → AI Analysis → Findings → Recommendations → Executive Brief*

Research Challenge: *Research Question → Sources → AI Analysis → Verification → Insights → Business Recommendation*

MODULE 5 Custom AI Assistants & Knowledge-Based AI

2 Hours

- Understanding Custom AI Assistants
- AI Assistant versus Chatbot
- AI Assistant versus AI Agent
- Designing an AI Assistant Around a Specific Role
- Defining Assistant Objectives
- Adding Reference Documents
- Knowledge-Based Question Answering
- Creating Reusable Workflows
- Testing AI Assistants
- Evaluating AI Responses

- Writing System Instructions
- Establishing Boundaries
- Providing Context
- Adding Knowledge

- Improving Assistant Instructions
- Creating Consistent AI Responses
- Designing Specialist AI Assistants

GEMINI

- Creating Custom Gems
- Defining Behavior and Instructions

- Adding Knowledge
- Creating Specialist Assistants

CLAUDE

- Working with Projects
- Managing Context

- Creating Artifacts
- Building Interactive AI Experiences

CHATGPT

- Understanding Custom GPTs
- Instructions
- Knowledge

- Capabilities
- Business Use Cases

Hands-on Project: *Build a Specialist AI Assistant*

Possible Solutions: *HR Assistant · Finance Assistant · Sales Assistant · Marketing Assistant · Study Assistant · Career Assistant · Business Research Assistant · Personal Productivity Assistant*

MODULE 6 AI Agents & Agentic Workflows

2.5 Hours

- What Is an AI Agent?
- AI Assistant versus AI Agent
- Agentic AI
- Components of an AI Agent
- Goals and Objectives
- Instructions
- Knowledge
- Tools
- Actions
- Memory Concepts
- Context
- Planning
- Reasoning
- Decision-Making
- Multi-Step Tasks
- Agent Workflows
- Human-in-the-Loop

- Autonomous versus Supervised Agents
- Agent Triggers
- Agent Actions
- Approval Points
- Agent Reliability
- Agent Evaluation
- Agent Testing
- Agent Failure Modes
- Customer-Service Agents
- Sales Agents
- Research Agents
- HR Agents
- Finance Agents
- Operations Agents
- Personal Productivity Agents
- Identifying Suitable Agent Use Cases
- Identifying Tasks That Should Not Be Automated

Agent Design Workflow: *Objective → Instructions → Knowledge → Tools → Actions → Approval → Result*

Hands-on Workshop: *Convert a Manual Business Process into an AI Agent Workflow*

Agent Challenge: *Design and prototype a practical AI agent for a real-world business scenario.*

MODULE 7 AI-Powered Websites & Applications

2 Hours

- The Rise of AI-Powered Software Creation
- Planning an Application Using AI
- Converting an Idea into Requirements
- Generating Website Structure
- Generating Website Content
- Creating Navigation and Sections
- Creating Calls-to-Action
- AI-Assisted Branding
- Generating User Interfaces
- Creating Forms
- Creating Calculators
- Creating Dashboards
- Creating Business Utilities
- Adding AI Functionality
- Creating Interactive Applications
- Understanding AI-Generated Code
- Testing AI-Generated Applications
- Debugging with AI
- Improving Applications Using Natural Language
- Security Considerations
- Publishing and Sharing AI-Generated Applications

Hands-on Project: *Build an AI-Powered Website or Application*

Possible Projects: *Personal Portfolio · Business Website · Product Landing Page · Course Website · AI Resume Analyzer · AI Interview Coach · AI Meeting Analyzer · AI Research Assistant · AI Report Generator · AI Business Calculator · AI Content Generator · Department Information Portal*

Build Cycle: *Idea → Requirements → Prompt → Prototype → Test → Improve → Share*

MODULE 8 AI-Assisted Development & Vibe Coding

2 Hours

- Understanding AI-Assisted Development
- Traditional Development versus AI-Assisted Development
- Understanding Vibe Coding
- Natural-Language Software Development
- Converting Business Requirements into Software Requirements
- Generating Application Architecture
- Generating User Interfaces
- Generating Code
- Working with AI Coding Assistants
- Understanding Generated Code
- Iterative Development with AI
- Debugging with AI
- Error Analysis
- Testing AI-Generated Code
- Improving Application Functionality
- Refactoring with AI
- Security Considerations
- Code Quality
- Human Review of AI-Generated Code
- Deploying AI-Generated Applications
- Understanding the Limitations of AI-Assisted Development

Hands-on Project: *Build and Improve a Small AI-Powered Application*

Development Workflow: *Idea → Requirements → AI Generation → Test → Debug → Improve → Deploy*

MODULE 9 AI Automation & Workflow Orchestration

2 Hours

- Understanding AI Automation
- Workflow Automation versus AI Automation
- Identifying Automation Opportunities
- Email Automation
- Document Automation
- Reporting Automation

- Workflow Triggers
- Workflow Actions
- AI Decision Steps
- Data Extraction
- Data Transformation
- AI Classification
- AI Summarization
- AI-Based Routing
- Human Approval Steps
- Connecting Applications
- Lead Processing Automation
- Customer-Service Automation
- Research Automation
- Meeting Follow-Up Automation
- AI-Powered Business Workflows
- Monitoring Automated Workflows
- Handling Workflow Failures
- Human Oversight
- Automation Security and Privacy
- Measuring Business Impact

Hands-on Project: *Design an AI-Powered Business Automation*

Example Workflow: *Email → AI Analysis → Extract Information → Decision → Application/Database → Notification*

Automation Challenge: *Identify one repetitive workplace process and redesign it as an AI-assisted workflow.*

MODULE 10 Voice AI, Meetings & Workplace Productivity

1.5 Hours

VOICE AI

- Understanding Voice AI
- Chatbot versus Voice AI
- Voice AI Architecture
- Speech-to-Text
- AI Reasoning
- Text-to-Speech
- Designing Voice Conversations
- Creating Voice Agent Instructions
- Handling User Interactions
- Customer-Service Scenarios
- Lead Qualification
- Employee Support
- Information Agents
- Appointment Scenarios
- Testing Voice Agents

AI-POWERED MEETINGS

- AI Meeting Assistants
- Meeting Transcription
- Meeting Summaries
- Extracting Decisions
- Extracting Action Items
- Generating Follow-Up Tasks
- Meeting Intelligence

AI-POWERED COMMUNICATION

- Voice Dictation
- AI-Assisted Writing
- Professional Communication
- AI-Generated Emails
- Presentation Preparation
- Report Creation
- Content Repurposing
- Personal Productivity Workflows

Tools: *Vapi · Fireflies.ai · Wispr Flow · Supergrow*

Hands-on Project: *Build a Basic Voice AI Agent*

Hands-on Workflow: *Meeting → Transcript → Summary → Decisions → Action Items → Follow-Up Email*

MODULE 11 AI Content, Creativity & Personal Branding

1.5 Hours

- AI-Assisted Professional Writing
- Marketing Content
- Social-Media Content
- Presentation Content
- Campaign Ideas
- Content Calendars
- Personal Branding
- Content Repurposing
- AI-Assisted Brainstorming
- Creative Ideation
- AI-Generated Audio
- AI-Generated Music
- Transforming Long-Form Content into Short-Form Content
- Creating Multi-Channel Content
- Building an AI Content Workflow
- Evaluating AI-Generated Content
- Maintaining Human Creativity and Editorial Control

Tools: ChatGPT · Gemini · Claude · Suno

Hands-on Challenge: One Idea → Complete AI Content Campaign

Deliverables: Article · LinkedIn Post · Email · Presentation Outline · Short-Form Content · AI-Generated Audio/Music

MODULE 12 Multi-Model AI & Local/Private AI

1.5 Hours

MULTI-MODEL AI

- Understanding Multi-Model AI
- Why Use Multiple AI Models?
- Model Specialization
- Comparing AI Models
- Model Selection
- Model Capabilities
- Model Limitations
- Free AI Models
- Model Routing
- Running the Same Prompt Across Multiple Models
- Evaluating Model Outputs
- Selecting the Best Model for a Requirement

LOCAL & PRIVATE AI

- Understanding Local AI
- Cloud AI versus Local AI
- Benefits of Local AI
- Privacy and Data Ownership
- Offline AI
- Hardware Considerations
- Local AI Limitations
- Introduction to Ollama
- Installing Ollama
- Downloading Local Models
- Running Models Locally
- Interacting with Local Models
- Local Document Analysis
- Local Coding Assistance
- Local AI Assistants
- Enterprise Use Cases for Private AI

Tool: OpenRouter · Ollama

Hands-on Challenge: One Business Problem → Multiple Models → Compare → Evaluate → Select

Hands-on Lab: Install → Download Model → Run → Prompt → Analyze → Compare

Business Exercise: Evaluate Cloud AI versus Local AI for a Privacy-Sensitive Business Scenario

MODULE 13 Responsible AI, Governance & AI Transformation Capstone

2.5 Hours

RESPONSIBLE AI

- AI Hallucinations
- Verification and Fact Checking
- Human Oversight
- Confidential Information
- Personal Information
- Organizational Data
- Privacy
- Intellectual Property
- Copyright
- AI Bias
- Responsible AI Principles
- AI Risk Assessment
- AI Security Considerations
- Human Approval
- Departmental AI Guidelines
- When AI Should Not Be Used

AI TRANSFORMATION WORKSHOP

- Identifying Repetitive Tasks
- Identifying Manual Processes
- Identifying Information-Heavy Activities
- Identifying Communication Bottlenecks
- Identifying Reporting Activities
- Identifying Research Activities
- Identifying Meeting Activities
- Identifying Customer and Employee Enquiries
- Prioritizing AI Opportunities
- Estimating Business Impact
- Selecting the Appropriate AI Approach
- AI Assistant
- AI Agent
- AI Application
- AI Workflow
- Local AI
- Human + AI
- Traditional Automation

CAPSTONE PROJECT: BUILD AN AI-POWERED BUSINESS SOLUTION

- Define a Real-World Business Problem
- Identify the AI Opportunity
- Define the Desired Business Outcome
- Select the Appropriate AI Solution
- Select the Appropriate AI Tools
- Define AI Instructions and Context
- Identify Required Knowledge and Data
- Design the AI Workflow
- Define Human Oversight
- Build or Prototype the Solution
- Test the Solution
- Evaluate AI Output
- Identify Risks and Limitations
- Improve the Solution
- Estimate Expected Business Benefits
- Prepare the Final Demonstration
- Present the AI-Powered Solution

Hands-on Exercise: *AI Risk Assessment*

Scenario Classification: *Safe to Automate · AI-Assisted · Human Approval Required · Not Suitable for AI*

Final Capstone Workflow: *Business Problem → AI Opportunity → Solution Design → Tool Selection → Prompt/Context → Knowledge → Workflow/Agent → Prototype → Testing → Human Oversight → Business Value*

Final Deliverable: *Each participant or team presents a practical AI-powered solution addressing a real-world business or professional requirement.*