

■ Lesson 1 Quick Reference Guide

Introduction to Artificial Intelligence

AI in one sentence

Artificial Intelligence is the field of creating computer systems that can perform tasks that normally require human intelligence.

1. Core AI Concepts

Concept	Quick meaning
Artificial Intelligence (AI)	Systems designed to perform tasks associated with human intelligence.
Machine Learning (ML)	A way for systems to learn patterns from data rather than relying only on hand-written rules.
Generative AI	AI that can create new content such as text, images, audio, code, or other outputs.
Prompt	The instruction, question, or context supplied to an AI system.

2. AI vs. Traditional Software

Traditional software: usually follows explicit rules written by a programmer.

Many AI systems: learn or infer patterns from data and use those patterns to generate predictions, classifications, recommendations, or content.

3. Common AI Applications

Search: Interpreting queries and ranking relevant results.

Recommendations: Suggesting content, products, or services based on patterns and signals.

Voice assistants: Understanding spoken language and generating responses.

Fraud detection: Identifying unusual or potentially suspicious transaction patterns.

Content creation: Generating drafts, ideas, summaries, images, code, and other media.

4. Five-Part Prompt Formula

ROLE + TASK + CONTEXT + CONSTRAINTS + OUTPUT

Example: "Act as a patient AI tutor. Explain machine learning to a complete beginner. Use simple language, avoid unnecessary jargon, and give five bullet-point examples."

5. Prompt Quality Checklist

- State the task clearly.
- Provide relevant context.
- Identify the audience or desired role when useful.
- Add constraints such as tone, length, complexity, or exclusions.
- Specify the desired output format.

- Review AI output for accuracy and relevance.

6. Practical AI Workflow

1. Define

Decide exactly what outcome you want.

2. Prompt

Give AI a clear instruction with useful context.

3. Review

Check the response for accuracy, relevance, and completeness.

4. Refine

Improve the prompt or provide follow-up instructions.

5. Apply

Use the result in your real task while retaining human judgment.

7. Key Takeaways

- AI is broader than chatbots; it includes many systems that perceive, predict, classify, recommend, or generate.
- Machine learning is one important approach within AI.
- Generative AI creates new outputs from learned patterns.
- A prompt is an instruction—not just a question.
- Better context and clearer constraints generally produce more useful AI responses.
- AI output should be reviewed rather than trusted automatically.

APEP Academy principle

Use AI to increase human capability—not to replace human judgment. The goal is practical leverage, better decisions, and better execution.