

## **Title: Introduction to Artificial Intelligence**

### **Section 1: What is AI?**

Artificial Intelligence (AI) is the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. Key areas include machine learning, natural language processing, and computer vision.

### **Section 2: Machine Learning**

Machine learning is a subset of AI that enables systems to learn from data and improve over time without being explicitly programmed. Common algorithms include regression, classification, and clustering.

### **Section 3: Generative AI**

Generative AI refers to models that can create new content, such as text, images, or code. Examples include large language models like GPT and image generators like DALL·E.

### **Section 4: Applications**

AI is used in healthcare (diagnosis and treatment recommendations), finance (fraud detection, stock prediction), and customer service (chatbots).

### **Section 5: Ethics and Responsibility**

Responsible AI practices ensure fairness, transparency, and accountability. Bias mitigation, data privacy, and explainability are critical considerations.