

TRAINING GOALS:



Artificial Intelligence Essentials (AIE) is EC-Council's foundational AI literacy certification. It equips professionals and students with a practical understanding of how AI works, how it is used, and how to engage with it responsibly in real-world environments.

Essential Skills You Will Gain with AIE:

- Understand AI Fundamentals
 - Explain how AI systems generate outputs and learn from data
 - Differentiate between AI, Generative AI, LLMs, and traditional software systems
 - Recognize AI limitations and points of failure
- Use AI Tools Effectively
 - Structure prompts for clear, accurate, and useful responses
 - Operate leading AI tools for text, image, audio, and automation tasks
 - Integrate AI outputs into workflows responsibly
- Apply Responsible AI Practices
 - Identify bias, hallucinations, and ethical concerns in AI outputs
 - Apply privacy, governance, and ethical standards in AI usage
 - Make informed decisions based on AI outputs, not blind trust
- Prepare for Advanced AI Learning
 - Build foundational knowledge for AI, ML, or Generative AI certifications

- Develop confidence for professional or academic AI applications

Who is AI|E Ideal For:

- Students & Early Learners
 - Build AI literacy and foundational knowledge before advanced technical AI tracks
- IT Professionals & Engineers
 - Gain AI understanding to complement technical expertise or transition to AI-focused work
- Non-IT Working Professionals
 - Acquire practical AI skills for business, operations, marketing, healthcare, or finance
- Educators & Trainers
 - Integrate AI literacy into teaching and professional development
- Entrepreneurs & Decision-Makers
 - Use AI responsibly to support innovation, strategy, and operational decisions
- General Enthusiasts
 - Develop AI confidence for everyday life and career applications
- Analysts, Project & Operations Managers
 - Learn how AI can support planning, analysis, and decision-making in everyday workflows
- HR, L&D & People Professionals
 - Understand AI concepts and tools relevant to workforce planning, learning, and people operations

Each participant in an authorized training AIE - Artificial Intelligence Essentials held in Compendium CE will receive a free AIE certification exam voucher.

CONSPECT:

- Module 1 - Introduction to Artificial Intelligence
 - Understand the Similarities, Differences, and Collaboration between Human and Artificial Intelligence
 - Human Intelligence
 - What is Artificial Intelligence?
 - AI vs Human Intelligence

- AI and Human Intelligence: Partners, Not Competitors
- Human-AI Collaboration: Skills and Mindsets for Success
- What is NOT AI?
- Limitations of Current AI
- Explain How Data, Algorithms, and Models form the Foundation of AI Systems
 - Fundamental Concepts of AI
 - Role of Data and Algorithms in AI
 - Model: The Outcome of Learning
 - How AI Works Differently from Traditional Software
 - AI vs Traditional Software: Key Capabilities
- Summarize Major Milestones and Developments in the Evolution of AI
 - Early AI History
 - Modern AI History
- Explore Recent Advancements and Future Directions Shaping AI Technologies
 - Emerging Trends in AI
 - Technological Advancements Driving AI
 - The Road Ahead: Opportunities and Challenges
- Module 2 - Everyday AI Tools and Use cases
 - Identify Common AI Technologies Used in Daily Life
 - Impact of AI in Daily Life
 - AI in Entertainment
 - AI as Personal Assistants
 - AI in Smart Homes
 - AI in Fitness
 - AI in Shopping and E-Commerce
 - AI in Customer Service
 - AI in Travel and Navigation
 - AI in Budgeting
 - Recognize AI Tools in the Workplace and How they Improve Workflow and Decision-Making
 - AI: The Smart Work Companion
 - Optimize Workplace Productivity with AI
 - AI-Driven Collaboration in the Workplace
 - AI-Driven Decision-Making at Work
 - AI-Powered Financial Decision Support
 - Optimize Hiring and Job Search with AI

- AI Tools in Workspace
- Explain How AI Improves Manufacturing and Industrial Processes
 - Smart Industry with AI
 - AI-Powered Predictive Maintenance of Machinery
 - Product Quality Inspection with AI
 - AI in Supply Chain Optimization
 - AI-Powered Cobots in Manufacturing
- Explain How AI Improves Transportation Safety, Efficiency, and Sustainability
 - Making Travel Smarter with AI
 - AI in Autonomous Vehicles
 - Smart Traffic Management with AI
 - Smart Logistics and Fleet Management
 - Safety and Collision Detection Systems
 - Disaster Management: Google AI for Wildfire Detection
 - Sustainability: John Deere's AI for Precision Agriculture
 - Renewable Energy Management using AI
- Identify How AI Personalizes Learning and Provides Feedback
 - AI in Education: Transforming the Future of Learning
 - AI-Driven Intelligent Tutoring Systems
 - AI-Driven Grading and Feedback Systems
 - AI-Driven Student Performance Analytics
 - AI-Driven Adaptive Learning Platforms
- Identify How AI Improves Security by Detecting Threats, Protecting Data, and Ensuring Privacy
 - Smarter Security Starts with AI
 - AI in Cybersecurity
 - AI for Data Privacy & Identity Verification
- Module 3 - Building Blocks of AI
 - Understand the Role of Data for Effective AI Systems
 - Data
 - Importance of Data Quality for Effective AI
 - AI Data Categories and Origins
 - Types of AI Data
 - AI Data Flow Basics
 - Structured vs. Unstructured Datasets
 - Labeled vs. Unlabeled Datasets

- Creating Datasets for AI Models
- Ways to Sample Data
- Identify the Different AI Models and Explain How They are Developed and Trained
 - Key Features of AI Models
 - Types of AI Model
 - AI Model Development Process
 - How AI Models are Trained
 - Challenges in Training AI Models
 - Testing AI Models
 - Improving AI Models
 - Evaluating Model Performance
- Understand Machine Learning and Neural Networks
 - What is Machine Learning?
 - Machine Learning Algorithms
 - How Machine Learning Improves Decision-Making
 - Limitations of Machine Learning
 - Neural Networks
 - Layers, Nodes, and Weights in Neural Networks
 - Deep Learning (DL)
 - How DL Overcomes Limitations of ML
 - Working of DL
 - DL Algorithms
 - Computer Vision
- Understand Natural Language Processing (NLP) and its Role in AI
 - Natural Language Processing (NLP)
 - Why NLP is Important in AI
 - How NLP Processes Human Language
 - Processing Text for NLP Tasks
 - Key NLP Tasks
 - Sentiment Analysis in NLP
 - Text Summarization in NLP
 - Language Translation in NLP
 - Challenges in NLP
- Explain Generative AI (GenAI) and Large Language Models (LLMs)
 - What is Generative AI?
 - Traditional AI vs Generative AI

- Foundation Models of Generative AI
- Popular GenAI Tools
- Large Language Models (LLMs)
- Small vs. Large Language Models
- Key Terms for GenAI and Language Models
- Understand Advanced AI Systems and Technologies
 - Robotics
 - Multimodal AI
 - AI Agents
 - Agentic AI
 - XAI (Explainable Artificial Intelligence)
 - Expert Systems
- Select the Appropriate Tools Based on AI Project Requirements
 - Select the Appropriate Tools for AI Projects
 - Understand Project Type
 - Consider Tool Characteristics
 - Recommended AI Tools by Use Case
- Module 4 - Prompt Crafting for Effective AI Interactions
 - Understand the Basics of Prompt Engineering
 - What is a Prompt?
 - How AI Responds to Prompts
 - What is Prompt Engineering?
 - Why is Prompt Engineering Important?
 - How does Prompt Engineering Work?
 - How Different AI Models Interpret Prompts
 - Comparison of AI Platform Responses
 - Learn How to Craft Effective Prompts
 - Key Principles of Crafting Effective Prompts
 - Ask the Right Question
 - Make Prompts Clear
 - Make Prompts Specific
 - Make Prompts Relevant
 - Test and Refine Prompts
 - Handle Unsatisfactory Responses
 - Rephrasing Prompts
 - Learn Prompt Engineering Techniques

- Prompting Techniques for Written Projects
- Prompting Techniques for Image or Video Project
- Prompting Techniques for Multimodal AI
- Chain of Thought (CoT) Prompting Techniques
- Iterative Prompting Techniques
- Managing Long Conversations
- Module 5 - AI Ethics and Responsible AI
 - Identify Key Ethical, Societal, and Security Concerns in AI Systems
 - AI Concerns
 - AI Ethical Concern: Bias and Discrimination
 - AI Ethical Concern: Lack of Transparency
 - AI Ethical Concern: Accountability and Responsibility
 - AI Ethical Concern: Intellectual Property and Copyright Violations
 - Ethical Concerns Introduced by GenAI
 - Privacy and Security Concern: Privacy and Surveillance
 - Real-world Privacy and Data Protection Implications
 - Privacy and Security Concern: Cyber Attacks
 - Societal Concern: Job Displacement
 - Societal Concern: Mental Health Impact
 - Societal Concern: Hallucinations
 - Societal Concern: Misinformation and Deepfakes
 - Long-Term Concerns: Autonomous Weapons
 - Long-Term Concerns: Emergence of AGI
 - Explain the Principles and Importance of Using AI Ethically and Fairly
 - What is Responsible AI?
 - Why Responsible AI Use Matters?
 - Using AI Responsibly in Daily Life
 - Apply Responsible Practices, Governance, and Global Standards in AI Usage.
 - Maintain Accountability in AI Usage
 - Avoid Over-Reliance on AI
 - Configure Privacy Settings in AI Tools
 - Setting Up Privacy Controls in ChatGPT
 - Exercise Caution Sharing Personal Data with AI Tools
 - Managing AI App Permissions Effectively
 - Stay Updated on AI Policy Changes and News
 - Regularly Update and Audit AI Tools

- Use AI Applications Ethically
- Ethical AI Design: Key Considerations
- Considerations for Navigating GenAI Ethical Challenges
- Safeguard Against AI Security Risks
- Regulation and Governance in AI
- Responsible AI Global Initiatives
- Legal Foundation of Responsible AI
- AI Regulations in Action: GDPR, CCPA, and DPDP Act
- Building a Responsible AI Future

REQUIREMENTS:

There are no formal requirements for this foundational course. However, participants should have a basic understanding of computer operations and a general familiarity with IT concepts. A fundamental interest in how AI impacts business and technology is highly recommended.

Difficulty level



CERTIFICATE:

The participants will obtain certificates signed by EC-Council (course completion). This course will help prepare you also for the AIE certification exam.

AIE v1 exam details:

- Exam Code : 112-59
- Number of Questions : 75
- Duration : 2 hours
- Availability: ECC Exam Portal
- Test Format : Multiple Choice Question

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TRAINER:

Certified EC-Council Instructor (CEI)

ADDITIONAL INFORMATION:

The training materials include official EC-Council electronic courseware, 180-day access to iLabs, and an exam voucher.