

Training: EC-Council  
CAIPM - Certified AI Program Manager

**EC-Council**  
Building A Culture Of Security

## TRAINING GOALS:



Certified AI Program Manager (C|AIPM) credential is designed to transform experienced professionals into enterprise-ready AI program managers. This program bridges the gap between technical AI knowledge and business execution, equipping professionals to align AI with strategy, people, governance, risk management, and measurable ROI.

C|AIPM prepares you to:

- Assess AI readiness across teams and processes
- Prioritize AI use cases tied to business outcomes
- Design adoption and rollout roadmaps
- Coordinate delivery across cross-functional teams
- Implement governance, Responsible AI, and security controls
- Track performance and ROI to prove value

Certified AI Program Manager (C|AIPM) is not about building models. It is about making AI work on an enterprise scale predictably, securely, and sustainably.

Essential Skills You Will Gain with C|AIPM:

- Strategize and Lead Adoption
  - Translate business goals into AI roadmaps
  - Define KPIs, measure ROI, and drive change
- Operationalize AI
  - Understand MLOps and life cycle practices needed for production
  - Plan scalable AI architectures and operational workflows
- Secure and Govern AI
  - Apply Responsible AI and risk governance
  - Integrate AI-specific security and compliance Practices
- Harness Generative AI
  - Use GenAI safely and effectively for business outcomes
  - Apply prompt engineering methods to improve output quality
- Deploy and Scale
  - Execute real-world rollouts across industries (e.g., finance, healthcare, manufacturing)
  - Drive adoption, usability, and sustained performance

#### Who is C|AIPM Ideal For:

- Program and Technology Leadership
  - Program managers leading AI initiatives
  - Technology strategists and system integrators enabling AI missions
- Policy, Risk, and Compliance
  - Policymakers overseeing responsible AI adoption
  - Compliance officers governing AI operational risk
- Business and Operations
  - Business leaders aligning AI investments to ROI
  - Operations managers driving AI-enabled transformation
- Security and IT Operations
  - Cybersecurity professionals involved in AI adoption and transformation
  - IT administrators supporting AI integration and deployment
- Data and Analytics
  - Data analysts transitioning into AI operations roles
  - Data engineers supporting AI deployment pipelines

*Each participant in an authorized training CAIPM - Certified AI Program Manager held in Compendium*

*CE will receive a free CAIPM certification exam voucher.*

## CONSPECT:

- Module 1 - AI Fundamentals for Business Adoption
  - Define AI and Distinguish it from Automation and Analytics in Business Contexts
    - Artificial Intelligence (AI)
    - Benefits and Limitations of AI
    - Evolution of AI
    - Automation, Analytics, and AI
    - AI as Augmentation vs. Automation
  - Identify Core AI Capabilities, Data Dependencies, and Common Failure Modes in Practice
    - How AI Transforms Data into Insights
    - AI Functional Capabilities
    - Data Dependencies
    - Common Failure Modes
    - Misinterpretations of AI Outputs
  - Differentiate Between Machine Learning, Deep Learning, Generative AI, and Agent Technologies
    - Types and Categories of AI
    - Types of AI in Business
    - Comparing AI Types for Business
    - What is Machine Learning?
    - Machine Learning Concepts
    - Neural Networks
    - Neural Network Architecture
    - Deep Learning (DL)
    - How DL Overcomes Limitations of ML
    - Working of DL
    - Large Language Models (LLMs)
    - Small vs. Large Language Models
    - Computer Vision
    - Natural Language Processing (NLP)
    - What is Generative AI?
    - Traditional AI vs Generative AI

- Foundation Models
- AI Agents and Copilots
- Workflow Automation with AI
- Embedded AI in Enterprise Applications
- Key Terms for GenAI and Language Models
- Identify Real-world AI Applications and Their Impact Across Industries
  - AI for Transforming Business Operations
  - AI for Business Collaboration
  - AI-Powered User Support
  - AI for Decision Quality Improvement and Business Innovation
  - AI Applications Healthcare and Finance
  - AI Applications in E-commerce and Manufacturing
  - AI Applications in Automotive and Telecommunications
  - AI Applications in Education and Utilities
  - AI Applications in Logistics and Media
  - AI Applications in Agriculture and Security
- Understand AI Project Lifecycle and the Role of MLOps And DataOps In AI Adoption
  - Data Operations (DataOps) in AI Technology Stack
  - AI Development and Operations (MLOps) Lifecycle
  - Integration of DataOps, MLOps, and DevSecOps in AI
  - AI Project Lifecycle Phases and Gates
  - Initiation and Concept Development
  - Data Collection and Preparation
  - Model Development and Experimentation
  - Model Training, Validation, and Testing
  - Deployment and Release Management
  - Monitoring and Performance Tracking
  - Maintenance and Model Retraining Schedules
  - Retirement and Decommissioning Procedures
  - Post-deployment Evaluation and Success Metrics
  - Version Management and Rollback Procedures
- Analyze Emerging AI Trends, Technology Drivers, Future Opportunities and Challenges
  - Emerging Trends in AI
  - Technological Advancements Driving AI
  - The Road Ahead: Opportunities and Challenges
- Module 2 - Organizational Readiness and AI Maturity Assessment

- Assess Organizational AI Readiness Across Strategic, Workforce, Data, and Technology Dimensions
  - Four Dimensions of AI Readiness
  - Strategic Readiness and Leadership Commitment
  - Workforce Readiness and Skill Distribution
  - Data Quality
  - Data Quality Metrics and KPIs
  - Data Readiness and Governance Maturity
  - Data Governance Framework
  - Data Privacy and Compliance for AI
  - Data Architecture for AI Workloads
  - Data Lifecycle Management for AI
  - Data Stewardship Roles and Responsibilities
  - Master Data Management for AI
  - Technology Readiness and Infrastructure
  - Cloud Infrastructure for AI Workloads
  - MLOps Capabilities Assessment
  - AI Security Considerations
  - Integration and API Readiness
  - GPU and Compute Requirements
  - Network and Latency Considerations
  - AI Model Monitoring and Observability
  - AI Disaster Recovery and Business Continuity
- Apply AI Maturity Models to Benchmark Organizational Capabilities and Identify Progression Pathways
  - Five Stages of AI Maturity
  - Stages 1-2: Initial and Emerging
  - Stages 3-4: Defined and Managed
  - Stage 5: Optimized - AI Leadership
  - Centralized vs Decentralized AI Operating Models
  - Industry and Peer Benchmarking
- Conduct AI Readiness Assessments Using Surveys, Interviews, Heat Maps, and Gap Analysis Techniques
  - Assessment Techniques Overview
  - Surveys and Stakeholder Interviews
  - Capability Heat Maps
  - Gap Analysis Framework

- Identify and Categorize AI Adoption Risks Across Cultural, Process, Technology, and Regulatory Dimensions
  - Four Categories of Adoption Risk
  - Cultural and Behavioral Resistance Risks
  - Process and Operating Model Risks
  - Technology and Regulatory Risks
  - Risk Assessment Framework
- Module 3 - AI Use Case Identification and Value Prioritization
  - Identify Business Problems Suited for AI by Recognizing Key Task Characteristics
    - What Makes a Problem AI-Suitable?
    - Repetitive and Rules-Based Activities
    - Data-Driven Activities
    - High-Volume Processes
    - High-Variability Processes
    - Human Judgment vs. AI Decision Boundaries
    - AI Suitability Decision Framework
  - Apply Structured Discovery Methods to Identify and Evaluate AI Opportunities
    - Use Case Discovery Methods
    - Functional Ideation Sessions
    - Cross-Functional Ideation Sessions
    - Process Mapping for AI Discovery
    - Pain-Point Analysis
    - Value Chain Opportunity Identification
  - Evaluate AI Use Cases Using Data, Feasibility, Complexity, and Risk Criteria
    - Use Case Qualification Framework
    - Data Availability Assessment
    - Data Quality Requirements
    - Feasibility Assessment
    - Implementation Complexity
    - Risk, Ethics and Compliance
    - Use Case Qualification Scorecard
  - Prioritize AI Use Cases Using Value Metrics, ROI Analysis, and Strategic Fit
    - Value and ROI Framework
    - Cost Savings Analysis
    - Revenue Impact Assessment
    - Risk Reduction Value
    - Time-to-Value and Scalability

- Strategic Alignment Scoring
- Value vs. Feasibility Prioritization Matrix
- Module 4 - AI Strategy and Roadmap Development
  - Develop AI Strategy Aligning Vision, Guardrails, and Portfolio Investment Decisions
    - Two Approaches to AI Strategy
    - Business-Driven AI Strategy
    - Technology-Driven AI Strategy
    - AI Vision Statements
    - Strategic Guardrails for AI
    - Portfolio Approach to AI Initiatives
    - Balancing the AI Portfolio
  - Build AI Roadmaps Sequencing Initiatives by Dependencies, Value, and Readiness
    - AI Adoption Roadmap Components
    - Short-Term Pilots and POCs
    - Long-Term Transformation Initiatives
    - Dependency Mapping Framework
    - Dependency Analysis Process
    - Sequencing and Phasing AI Initiatives
    - Roadmap Governance and Review
  - Design AI Operating Models with Clear Roles, Accountability, and Decision Rights
    - AI Operating Models Overview
    - Center of Excellence (CoE) Model
    - Federated Model
    - Hybrid Model
    - Choosing the Right Model
    - Key AI Roles
    - Decision Rights and RACI
    - Accountability Framework
- Module 5 - Change Management and AI Enablement
  - Understand AI Workforce Impact and Build Trust Through Transparent Change Leadership
    - Understanding AI-Induced Change
    - Workforce Role Evolution
    - Job Redesign Approaches
    - Skill Shifts and Reskilling Requirements
    - Building a Reskilling Program
    - Psychological Impacts of AI

- Building Trust in AI
- Apply ADKAR and Kotter Frameworks to Lead Successful AI Adoption Initiatives
  - Why Change Management for AI
  - The ADKAR Model
  - Applying ADKAR to AI Programs
  - Kotter's 8-Step Change Model
  - Applying Kotter to AI Programs
  - Sponsorship and Leadership
  - Communication Strategy
  - Managing Resistance
  - Transitioning Users to Approved AI Tools
  - Addressing Fear of Displacement
- Design Role-based AI Training Programs that Build Practical Workforce Capabilities
  - AI Literacy Framework
  - Foundational AI Awareness Training
  - Role-Based AI Enablement
  - Prompt Engineering for Business Users
  - Prompt Troubleshooting Techniques
  - Executive AI Fluency
  - Manager AI Enablement
  - Building an AI Learning Culture
  - Enablement Program Metrics
- Implement Champions, Communities, and Incentives that Sustain AI Adoption Momentum
  - Why Reinforcement Matters
  - AI Champions Program
  - Super-User Networks
  - Communities of Practice
  - Running Effective CoPs
  - Incentives and Recognition
  - Gamification and Challenges
  - Measuring Reinforcement Effectiveness
- Module 6 - AI Platforms, Tools, and Ecosystem
  - Navigate Enterprise AI Landscape Including Generative Platforms, Copilots, and Custom Solution Evaluation
    - The AI Tool Landscape
    - Generative AI Platforms

- Understanding AI Copilots
- Major Enterprise Copilots
- AI Embedded in Enterprise SaaS
- AI-Embedded SaaS by Category
- Custom AI Solutions
- Configurable AI Solutions
- Custom vs. Configurable Decision Framework
- Build vs. Buy Considerations
- Emerging AI Tool Trends
- Apply Structured Frameworks to Evaluate AI Tools for Fit, Security, and Vendor Maturity
  - AI Tool Evaluation Framework
  - Functional Fit Assessment
  - Usability Assessment
  - Security Considerations
  - Privacy and Data Handling
  - Access Controls and Governance
  - Vendor Maturity Assessment
  - Roadmap and Support Evaluation
  - Evaluation Scorecard
  - Evaluation Process
- Integrate AI Tools with Enterprise IT Systems Using Data Pipelines and Access Controls
  - AI Integration Landscape
  - Integration Patterns
  - Data Pipelines for AI
  - RAG Architecture Pattern
  - Interoperability Challenges
  - Identity and Access Management
  - Usage Controls and Policies
  - Deployment Models
  - Implementation Checklist
- Module 7 - Governance, Ethics, and Safe AI Adoption
  - Establish AI Governance with Defined Roles, Policy Enforcement, and Escalation Handling Processes
    - Why AI Governance Matters
    - AI Governance Framework
    - Governance Roles Across Adoption Lifecycle

- Key Governance Roles
- AI Steering Committee
- Policy Enforcement at Usage Level
- Adoption-Centric Vendor Due Diligence for AI Usage Authorization
- Identifying and Governing Unauthorized AI Usage
- Usage Policies in Practice
- Legal and Regulatory Clearance for AI Usage Authorization
- SaaS AI Licensing and Consumption Risk Assessment
- Escalation Pathways
- Exception Handling Process
- Governance Maturity Stages
- Implement AI Usage Incident Handling and Corrective Actions
  - AI Incident Management and Response
  - Common AI Adoption Incidents
  - AI Incident Response Workflow
  - Escalation Pathways
  - User-Level Corrective Actions
  - Post-Incident Governance Updates
- Implement Ethical AI with Bias Awareness, Human Oversight, and Acceptable use Guidelines
  - Why Ethics Matter in AI Adoption
  - Bias Awareness for Business Users
  - Common Types of AI Bias
  - Human Oversight Principles
  - Decision Accountability
  - Misuse Prevention
  - Acceptable Use Guidelines
  - Building an Ethical AI Culture
- Navigate AI Risk and Compliance with Regulatory Awareness, Auditability, and Traceability Requirements
  - Risk Landscape for AI Adoption
  - Adoption-Stage vs. Development-Stage Risks
  - Common AI Adoption Risks
  - Risk Exposure from Shadow AI
  - Regulatory Landscape
  - Global AI Regulatory Landscape
  - EU AI Act: Risk-Based Framework

- US AI Regulatory Framework
- Sector-Specific AI Regulations
- Data Privacy Laws and AI
- GDPR: AI-Relevant Requirements
- US Privacy Laws Affecting AI
- Data Security Standards and Frameworks
- ISO/IEC 42001:2023
- ISO 42001 Structure and Clauses
- ISO 42001 Implementation and Certification
- Government Data Governance for AI
- Publicly Procured Data and AI Use
- FedRAMP and FISMA for AI Systems
- NIST SP 800-218A: Secure GenAI Development
- SP 800-218A: Key GenAI Security Practices
- DoDI 8510.01: Risk Management Framework
- RMF 7-Step Process
- RMF for AI/ML Systems
- Major Laws, Frameworks and Standards Reference
- Internal Policy Requirements
- Change Readiness Validation
- Traceability Expectations
- AI Compliance Checklist
- ML Blind Spots and Edge Cases
- Impacts of Blind Spots and Edge Cases
- Mitigating Blind Spots and Edge Cases
- Apply DoD Ethical AI Principles and Responsible AI Practices in Mission Critical Defense Contexts
  - The Five DoD AI Ethical Principles
  - Responsible and Equitable
  - Traceable and Reliable
  - Governable - Human Control
  - Responsible AI (RAI) Framework
  - Analyzing Mission Priorities for AI
  - RAI Implementation Checklist
  - Staying Current on RAI Advancements
- Module 8 - AI Pilot Execution and Scaled Deployment

- Design AI Pilots with Clear Scope, Success Metrics, and Governance Risk Controls
  - Why Pilots Matter
  - Defining Pilot Scope
  - Setting Pilot Boundaries
  - Success Metrics for Pilots
  - Exit Criteria
  - Pilot-to-Authorization Decision Gates
  - Adoption Readiness Sign-Off Checklist
  - Governance Controls During Pilots
  - Risk Controls During Pilots
  - Pilot Planning Checklist
- Execute AI Deployments through Phased Rollouts, Communication Plans, and Readiness Checkpoints
  - From Pilot to Production
  - Phased Rollout Strategies
  - Rollout Sequencing Options
  - Communication Planning
  - Training Alignment
  - Change Readiness Validation
  - Support Model for Rollout
  - Rollout Planning Checklist
- Scale AI Adoption by Capturing Lessons and Mitigating Enterprise-wide Expansion Risks
  - Capturing Lessons Learned
  - Applying Pilot Insights
  - Scaling Across Teams
  - Scaling Across Regions
  - Adoption Risks at Scale
  - Risk Mitigation Strategies
  - Continuous Optimization
  - Scaling Success Indicators
- Module 9 - Measuring AI Adoption Impact and Value
  - Measure AI Adoption Effectiveness Through Engagement Metrics, Skill Progression, and Behavioral Signals
    - Why Measure Adoption?
    - Adoption Metrics Framework
    - Adoption Rate Calculations
    - Engagement Depth Funnel

- Skill Progression Indicators
- Proficiency Assessment Matrix
- Behavioral Adoption Signals
- Metrics for Shadow AI Reduction
- Leading vs Lagging Indicators
- Building an Adoption Dashboard
- Common Measurement Pitfalls
- Quantify AI Business Value Through Productivity Metrics and Value Realization Tracking
  - AI Cost Inputs in Adoption Measurement
  - AI Balancing Adoption Growth and Cost Efficiency
  - Identifying Overuse and Underuse Through Adoption Metrics
  - Prompt Efficiency as a Cost and Adoption Signal
  - Visualizing AI Cost and Adoption Through Dashboards
  - Cost Ownership and Accountability in AI Adoption
  - The Value Equation
  - Productivity Metrics
  - Efficiency Metrics
  - Quality Metrics
  - Financial vs Non-Financial Benefits
  - Calculating ROI
  - Value Realization Tracking
  - Building Value Stories
- Communicate AI Value Through Executive Dashboards, Stakeholder Reports, and Feedback Loops
  - The Reporting Challenge
  - Stakeholder Communication Matrix
  - Executive Dashboard Design
  - Report Types and Cadence
  - Data Visualization Tips
  - Feedback Collection Methods
  - Continuous Improvement Loop
  - Acting on Feedback
- Module 10 - Sustaining AI Transformation
  - Transition AI Pilots into Sustainable, Embedded Operations that Deliver Long-term Business Value
    - The Embedding Challenge
    - Operational Support Model for Embedded AI Adoption

- Support Metrics for Sustaining Embedded AI
- AI-Enabled Process Redesign
- Process Redesign Framework
- Human-AI Collaboration Models
- The Collaboration Spectrum
- Task Allocation Matrix
- Long-Term Workflow Integration
- Integration Maturity Staircase
- Embedding Success Factors
- Governance for Embedded AI
- Common Embedding Pitfalls
- Establish Processes to Continuously Improve AI Adoption and Adapt to Evolving Technology
  - The AI Landscape is Always Changing
  - Adoption Maturity Model
  - Maturity Assessment Dimensions
  - Responding to New AI Capabilities
  - Capability Evaluation Matrix
  - Managing Model, Tool, and Vendor Changes
  - Change Impact Assessment
  - Vendor Risk Management
  - Vendor Evaluation Scorecard
  - Continuous Improvement Cycle
  - Feedback Collection Mechanisms
  - Sustaining User Trust Through Continuous Adoption
  - Building a Learning Organization
  - Common Adaptation Pitfalls
- Develop Leadership Capabilities and Cultural Practices that Sustain AI Transformation Long-term
  - Building an AI-First Mindset
  - Leadership Behaviors That Drive AI Culture
  - AI Talent Development Framework
  - Development Programs by Tier
  - AI Talent Retention Strategies
  - The AI Value Flywheel
  - AI Governance for Long-Term Success
  - Measuring Long-Term AI Success

- Success Indicators by Timeframe
- Common Culture Pitfalls and Fixes
- Apply Human-centered Design Principles to Create Usable, Transparent, and Trustworthy AI Systems
  - What Is Human-Centered AI Design?
  - Human-Centered Design Principles for AI
  - User Experience Considerations for AI
  - AI Transparency and Explainability
  - Explainability Techniques
  - Building User Trust in AI
  - Human-in-the-Loop Design Patterns
  - Designing for AI Errors
  - Accessibility and Inclusion in AI
  - Ethical AI Design Considerations
  - Human-Centered AI Design Process
  - Common Human-Centered Design Pitfalls

## REQUIREMENTS:

Students should have at least two years of experience in project management or IT leadership and a basic understanding of the software development life cycle. No prior coding or programming skills are required, as the focus is on strategic AI alignment and risk assessment.

## Difficulty level



## CERTIFICATE:

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

### CAIPM v1 exam details:

- Exam Code : 312-41
- Number of Questions : 100
- Duration : 3 hours
- Availability: ECC Exam Portal
- Test Format : Multiple Choice Question (MCQs)

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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.