

AI Learning Pathways: Complete 12-Week Programs for IT Operations Roles

Your Comprehensive Guide to AI Transformation Through Role-Specific Learning

Executive Summary

This companion document provides structured, role-specific 12-week AI learning programs for IT Operations professionals. Each pathway includes:

- Specific LinkedIn Learning courses with direct links
- Estimated time commitments (3-5 hours weekly)
- Progressive skill building from foundations to advanced applications
- Cross-functional ethics and governance training

Key Statistics:

- **1,000,000+** professionals have completed "What Is Generative AI?" (42 minutes)
 - **468,836** learners have taken "Introduction to Prompt Engineering for Generative AI"
 - Programs range from **29 minutes** (quick skills) to **30+ hours** (certifications)
 - All paths designed for **part-time completion** alongside regular work
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Foundation Courses (All Roles)

Every IT professional should complete these foundational courses before proceeding to role-specific training:

Core AI Literacy (Week 1-3)

- [What Is Generative AI?](#) - 42m
- [Introduction to Artificial Intelligence](#) - 2h 26m
- [Introduction to Prompt Engineering for Generative AI](#) - 1h 15m
- [Career Essentials in Generative AI by Microsoft and LinkedIn](#) - 6h

Ethics & Governance (Required for All)

- [Responsible AI Foundations](#) - Learning Path, 6h
- [Ethics in the Age of Generative AI](#) - 39m
- [AI Accountability: Build Responsible and Transparent Systems](#) - 1h 20m
- [Introduction to AI Governance](#) - 59m

Role-Specific Learning Paths

1. IT Operations Manager

Transform from reactive management to strategic AI leadership

Time Commitment: 4-5 hours/week for 12 weeks

Total Investment: 39 hours

Weeks 1-3: Foundation & Core AI Knowledge (12 hours)

- [Applied AI for IT Operations \(AIOps\)](#) - 2h 15m
- [Introduction to Artificial Intelligence](#) - 2h 26m
- [What Is Generative AI?](#) - 42m
- [Introduction to Prompt Engineering for Generative AI](#) - 1h 15m
- [Career Essentials in Generative AI by Microsoft and LinkedIn](#) - 6h

Weeks 4-6: Strategic AI Management (9 hours)

- [AI for Managers by Microsoft and LinkedIn](#) - 4h
- [Artificial Intelligence and Business Strategy](#) - 1h 30m
- [Digital Transformation for Tech Leaders](#) - 6h (selected modules)
- [Change Management Foundations](#) - 1h 20m

Weeks 7-9: Operational Excellence & Automation (9 hours)

- [Operational Excellence Foundations](#) - 1h 30m
- [Intelligent Automation Foundations](#) - 2h
- [DevOps Foundations](#) - 2h 30m
- [ITIL 4 Foundation: Service Management](#) - 1h 15m
- [Business Process Improvement](#) - 1h 45m

Weeks 10-12: Leadership & Ethics (9 hours)

- [Leading Change](#) - 1h 15m
- [Executive Leadership](#) - 1h 10m
- [Managing AI Projects](#) - 1h 30m
- [Responsible AI Foundations](#) - 6h
- [Ethics in the Age of Generative AI](#) - 39m

2. Systems Administrator

Evolve from manual operations to intelligent automation architecture

Time Commitment: 3-4 hours/week for 12 weeks

Total Investment: 38 hours

Weeks 1-3: AI Foundations & Core Knowledge (10 hours)

- [Applied AI for IT Operations \(AIOps\)](#) - 2h 15m
- [Introduction to Artificial Intelligence](#) - 2h 26m
- [Career Essentials in System Administration by Microsoft and LinkedIn](#) - 5h

Weeks 4-6: PowerShell & Scripting Mastery (9 hours)

- [PowerShell 7 Essential Training](#) - 3h 58m
- [Learning PowerShell](#) - 1h 23m
- [PowerShell: Scripting for Advanced Automation](#) - 1h 20m
- [PowerShell: Automating IT Administration](#) - 3h 22m

Weeks 7-9: Infrastructure Automation & Orchestration (8 hours)

- [Learning Ansible](#) - 1h 26m
- [Ansible Essential Training](#) - 1h 49m
- [Learning Terraform](#) - 2h 30m
- [DevOps Foundations: Infrastructure as Code](#) - 2h 12m

Weeks 10-12: Cloud Platforms & Intelligent Automation (11 hours)

- [Azure Administration Essential Training](#) - 3h 21m
 - [AWS Essential Training for Developers](#) - 4h 8m
 - [Intelligent Automation Foundations](#) - 2h
 - [Introduction to IT Automation](#) - 1h 30m
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3. Network Administrator

Transform traditional networking into AI-powered optimization

Time Commitment: 3 hours/week for 12 weeks

Total Investment: 29 hours

Weeks 1-3: AI Foundations for Networking (8 hours)

- [Applied AI for IT Operations \(AIOps\)](#) - 2h 15m
- [Introduction to Artificial Intelligence](#) - 2h 26m
- [Career Essentials in Generative AI by Microsoft and LinkedIn](#) - 3h (selected modules)

Weeks 4-6: Modern Networking Fundamentals (6 hours)

- [Networking Foundations: Networking Basics](#) - 1h 48m
- [Introduction to SD-WAN](#) - 1h 2m
- [Learning DNS](#) - 50m
- [Wireshark Essential Training](#) - 2h 21m

Weeks 7-9: Network Automation & Configuration (7 hours)

- [Learning Ansible](#) - 1h 26m (network modules focus)
- [Network Automation Using Python and Netmiko](#) - 2h 15m
- [Learning Network Troubleshooting](#) - 2h 1m
- [Python for Network Engineers](#) - 1h 30m

Weeks 10-12: Cloud Security & Governance (8 hours)

- [Cloud Security and Audit Fundamentals](#) - 2h 27m
 - [Networking and Administration Fundamentals](#) - 4h (selected modules)
 - [Introduction to AI Governance](#) - 59m
 - [Responsible AI Foundations](#) - 1h (selected modules)
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4. Database Administrator

Become the guardian and architect of AI's data fuel

Time Commitment: 4 hours/week for 12 weeks

Total Investment: 32 hours

Weeks 1-3: AI & Machine Learning Foundations (9 hours)

- [Artificial Intelligence Foundations: Machine Learning](#) - 1h 50m
- [Machine Learning with Python: Foundations](#) - 1h 54m
- [Introduction to Generative AI with GPT](#) - 1h 5m
- [Machine Learning Foundations: Linear Algebra](#) - 1h 20m
- [Machine Learning Foundations: Statistics](#) - 1h 20m

Weeks 4-6: AI-Native Data Platforms (8 hours)

- [Introduction to AI-Native Vector Databases](#) - 2h 47m
- [NoSQL Essential Training](#) - 43m
- [End-to-End Data Engineering Project](#) - 1h 15m
- [Learning Amazon Bedrock](#) - 1h 53m

- [Azure Spark Databricks Essential Training](#) - 2h 52m

Weeks 7-9: Data Governance & Quality (7 hours)

- [Introduction to AI Governance](#) - 59m
- [Learning Data Governance](#) - 1h 30m
- [Data Strategy](#) - 45m
- [Data Steward Foundations](#) - 1h 55m
- [Privacy, Governance, and Compliance: Data Classification and Inventory](#) - 1h 45m

Weeks 10-12: Advanced AI Applications & Trends (8 hours)

- [How to Research and Write Using Generative AI Tools](#) - 1h 30m
 - [AI Trends](#) - 1h 24m
 - [Foundations of the Fourth Industrial Revolution \(Industry 4.0\)](#) - 2h 5m
 - [Learning GDPR](#) - 1h 12m
 - [Mastering Data Governance and Ethics](#) - 2h (selected modules)
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5. DevOps Engineer

Bridge development and AI operations into MLOps excellence

Time Commitment: 4-5 hours/week for 12 weeks

Total Investment: 37 hours

Weeks 1-3: AI & ML Foundations (9 hours)

- [Artificial Intelligence Foundations: Machine Learning](#) - 1h 50m
- [GPT-4 Foundations: Building AI-Powered Apps](#) - 1h 2m
- [Introduction to Generative AI with GPT](#) - 1h 5m
- [Prompt Engineering: How to Talk to the AIs](#) - 29m
- [Pair Programming with AI](#) - 1h 28m
- [Building a Project with the ChatGPT API](#) - 1h 56m

Weeks 4-6: MLOps Essentials (7 hours)

- [MLOps Essentials: Model Development and Integration](#) - 1h 30m
- [MLOps Essentials: Model Deployment and Monitoring](#) - 1h 23m
- [MLOps Essentials: Monitoring Model Drift and Bias](#) - 1h 15m
- [Learning Vertex AI: MLOps with Google Cloud](#) - 2h
- [Exploring AIOps](#) - 18m

Weeks 7-9: Infrastructure & Orchestration (10 hours)

- [DevOps Foundations: Infrastructure as Code](#) - 2h 12m
- [Learning Kubernetes](#) - 2h 30m
- [Kubernetes: Provisioning for Infrastructure as Code](#) - 1h 45m
- [Docker Essential Training](#) - 2h
- [DevOps Foundations: Monitoring and Observability](#) - 2h 1m

Weeks 10-12: CI/CD & GitHub Integration (11 hours)

- [GitHub Actions for CI/CD](#) - 2h 2m
 - [GitHub for Data Scientists](#) - 1h 15m
 - [Introduction to GitOps](#) - 1h 30m
 - [DevOps Foundations: Lean and Agile](#) - 1h 17m
 - [Continuous Integration and Continuous Delivery with GitLab](#) - 1h 45m
 - [Responsible AI Foundations](#) - 3h (selected modules)
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6. Security Operations Analyst

Transform reactive security into AI-powered threat prevention

Time Commitment: 4 hours/week for 12 weeks

Total Investment: 35 hours

Weeks 1-3: AI Foundations for Security (9 hours)

- [Artificial Intelligence for Cybersecurity](#) - 1h 43m
- [Introduction to Artificial Intelligence](#) - 2h 26m
- [What Is Generative AI?](#) - 42m
- [Applied AI for IT Operations \(AIOps\)](#) - 2h 15m
- [Cybersecurity Foundations](#) - 1h 52m

Weeks 4-6: AI Security Risks & Mitigation (8 hours)

- [Security Risks in AI and Machine Learning](#) - 1h 11m
- [Securing AI Applications](#) - 1h 30m
- [Introduction to AI Governance](#) - 59m
- [Ethical Hacking: Introduction to Penetration Testing](#) - 2h 15m
- [Information Security Foundations](#) - 1h 45m

Weeks 7-9: Cloud Security & Monitoring (9 hours)

- [Cloud Security and Audit Fundamentals](#) - 2h 27m
- [Learning Cloud Security](#) - 1h 30m
- [AWS Security Essentials](#) - 2h
- [Azure Security Technologies](#) - 2h 15m
- [Security Orchestration Automation and Response \(SOAR\)](#) - 1h 45m

Weeks 10-12: Compliance & Governance (9 hours)

- [Leveraging AI for Governance, Risk, and Compliance](#) - 1h 30m
 - [Risk Management Foundations](#) - 1h 30m
 - [Responsible AI Foundations](#) - 6h
 - [AI Accountability: Build Responsible and Transparent Systems](#) - 1h 20m
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7. Site Reliability Engineer (SRE)

Master AI-powered reliability and resilience engineering

Time Commitment: 4 hours/week for 12 weeks

Total Investment: 36 hours

Weeks 1-3: SRE & AI Foundations (9 hours)

- [DevOps Foundations: Site Reliability Engineering](#) - 1h 30m
- [Applied AI for IT Operations \(AIOps\)](#) - 2h 15m
- [Introduction to Artificial Intelligence](#) - 2h 26m
- [What Is Generative AI?](#) - 42m
- [AI Engineering Essentials: Navigating the Tech Revolution](#) - 1h 27m

Weeks 4-6: MLOps & AI Operations (8 hours)

- [MLOps Essentials: Model Development and Integration](#) - 1h 30m
- [MLOps Essentials: Model Deployment and Monitoring](#) - 1h 23m
- [MLOps Essentials: Monitoring Model Drift and Bias](#) - 1h 15m
- [Learning Vertex AI: MLOps with Google Cloud](#) - 2h
- [AI Show: MLOps \(v2\) - Unifying MLOps at Microsoft](#) - 1h 30m

Weeks 7-9: Monitoring & Observability for AI (10 hours)

- [DevOps Foundations: Monitoring and Observability](#) - 2h 1m
- [DevOps Foundations: Chaos Engineering](#) - 1h 45m
- [Kubernetes: Monitoring with Prometheus](#) - 2h

- [Learning Elastic Stack](#) - 2h 30m
- [Grafana Essential Training](#) - 1h 45m

Weeks 10-12: Strategy & Governance (9 hours)

- [Artificial Intelligence and Business Strategy](#) - 1h 30m
 - [Digital Strategy](#) - 1h 15m
 - [Introduction to AI Governance](#) - 59m
 - [Ethics in the Age of Generative AI](#) - 39m
 - [Responsible AI Foundations](#) - 3h (selected modules)
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8. IT Site Operations Manager

Coordinate AI deployments across distributed locations

Time Commitment: 4 hours/week for 12 weeks

Total Investment: 36 hours

Weeks 1-3: AI Foundations & Site Management (10 hours)

- [Applied AI for IT Operations \(AIOps\)](#) - 2h 15m
- [Introduction to Artificial Intelligence](#) - 2h 26m
- [IT Service Management Foundations: Problem Management](#) - 1h 30m
- [Managing Virtual Teams](#) - 1h 20m
- [Remote Work Foundations](#) - 1h 15m

Weeks 4-6: Multi-Site Infrastructure & Cloud (9 hours)

- [Cloud Computing Architecture](#) - 2h
- [Introduction to SD-WAN](#) - 1h 2m
- [Edge Computing: An Introduction](#) - 1h 30m
- [Introduction to 5G](#) - 50m
- [Digital Transformation for Tech Leaders](#) - 3h (selected modules)

Weeks 7-9: Standardization & Automation (8 hours)

- [DevOps Foundations](#) - 2h 30m
- [Configuration Management for IT Professionals](#) - 1h 45m
- [Learning Ansible](#) - 1h 26m
- [ITIL 4 Foundation: Getting Started](#) - 2h

Weeks 10-12: Governance & Change Management (9 hours)

- [Change Management for Projects](#) - 1h 30m
 - [Leading Change](#) - 1h 15m
 - [Project Management Foundations](#) - 2h 30m
 - [Introduction to AI Governance](#) - 59m
 - [Responsible AI Foundations](#) - 2h (selected modules)
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9. Risk and Compliance Manager

Build comprehensive AI governance frameworks

Time Commitment: 4 hours/week for 12 weeks

Total Investment: 35 hours

Weeks 1-3: AI Foundations & Ethics (10 hours)

- [Introduction to AI Governance](#) - 59m
- [Ethics in the Age of Generative AI](#) - 39m
- [Responsible AI Foundations](#) - 6h
- [AI Accountability: Build Responsible and Transparent Systems](#) - 1h 20m
- [Introduction to Artificial Intelligence](#) - 2h 26m

Weeks 4-6: AI Security & Risk Assessment (8 hours)

- [Security Risks in AI and Machine Learning](#) - 1h 11m
- [Securing AI Applications](#) - 1h 30m
- [Risk Management Foundations](#) - 1h 30m
- [Leveraging AI for Governance, Risk, and Compliance](#) - 1h 30m
- [Applied AI for IT Operations \(AIOps\)](#) - 2h 15m

Weeks 7-9: Compliance & Regulatory Frameworks (8 hours)

- [Learning GDPR](#) - 1h 12m
- [Privacy, Governance, and Compliance: Data Classification and Inventory](#) - 1h 45m
- [Data Strategy](#) - 45m
- [Learning Data Governance](#) - 1h 30m
- [Data Steward Foundations](#) - 1h 55m

Weeks 10-12: Implementation & Monitoring (9 hours)

- [Building a Data-Driven Culture](#) - 1h 30m
- [Business Analytics Foundations](#) - 1h 45m

- [Key Performance Indicators](#) - 1h 15m
 - [Digital Transformation for Tech Leaders](#) - 3h (selected modules)
 - [Change Management Foundations](#) - 1h 20m
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10. IT Operational Excellence Manager

Reimagine continuous improvement in an AI-augmented world

Time Commitment: 4 hours/week for 12 weeks

Total Investment: 36 hours

Weeks 1-3: AI & Operational Excellence Foundations (10 hours)

- [Applied AI for IT Operations \(AIOps\)](#) - 2h 15m
- [Operational Excellence Foundations](#) - 1h 30m
- [Lean Six Sigma Foundations](#) - 2h
- [Business Process Improvement](#) - 1h 45m
- [Introduction to Artificial Intelligence](#) - 2h 26m

Weeks 4-6: Process Automation & Optimization (9 hours)

- [Intelligent Automation Foundations](#) - 2h
- [Robotic Process Automation \(RPA\) Fundamentals](#) - 1h 30m
- [Process Mining Fundamentals](#) - 1h 45m
- [DevOps Foundations](#) - 2h 30m
- [ITIL 4 Foundation: Service Management](#) - 1h 15m

Weeks 7-9: Data-Driven Decision Making (8 hours)

- [Data-Driven Decision-Making](#) - 1h 30m
- [Business Analytics Foundations](#) - 1h 45m
- [Key Performance Indicators](#) - 1h 15m
- [Learning Power BI](#) - 2h 30m
- [Communicating with Data](#) - 1h 15m

Weeks 10-12: Leadership & Change Management (9 hours)

- [Leading Operational Excellence](#) - 1h 30m
- [Change Management for Projects](#) - 1h 30m
- [Digital Transformation for Tech Leaders](#) - 3h (selected modules)
- [Strategic Agility](#) - 1h 15m

- [AI for Managers by Microsoft and LinkedIn](#) - 2h (selected modules)
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Implementation Recommendations

Getting Started

1. **Complete Foundation Courses First** - All roles should start with core AI literacy
2. **Form Learning Cohorts** - Groups of 5-8 professionals from similar roles
3. **Schedule Weekly Learning Time** - Protected 3-5 hour blocks
4. **Create Practice Environments** - Safe spaces to experiment with new skills
5. **Document Progress** - Keep learning journals and share insights

Success Metrics to Track

- **Completion Rates** - Target 80% completion within 14 weeks
- **Application Rate** - Measure tools/techniques applied within 30 days
- **Innovation Metrics** - Track new automations or improvements created
- **Time Savings** - Document hours saved through AI implementation
- **Skill Confidence** - Survey progression from beginner to practitioner

Support Structures

- **Weekly AI Coffee Chats** - Informal knowledge sharing
- **Bi-weekly Demo Days** - Show progress and get feedback
- **Monthly Innovation Challenges** - Gamified learning with prizes
- **Quarterly Transformation Summits** - Celebrate achievements

Common Challenges & Solutions

Challenge: Finding time for learning

Solution: Start with 2 hours/week, gradually increase

Challenge: Information overload

Solution: Focus on one module at a time, apply immediately

Challenge: Lack of practice opportunities

Solution: Create sandbox environments for experimentation

Challenge: Varying skill levels

Solution: Use peer mentoring and paired learning

Industry Context & Trends

Key Statistics

- **87%** of IT leaders report AI skills gaps in their teams
- **42%** average productivity increase after AI training
- **\$15,000-\$40,000** salary premium for AI-skilled IT professionals
- **18 months** average time to AI proficiency with structured learning
- **3x ROI** on AI training investments within first year

Most Popular Courses by Viewership

1. What Is Generative AI? - **1,000,000+ viewers**
2. Introduction to Prompt Engineering - **468,836 viewers**
3. Applied AI for IT Operations - **237,000+ viewers**
4. Career Essentials in Generative AI - **195,000+ viewers**
5. MLOps Essentials Series - **150,000+ viewers combined**

Emerging Trends

- Shift from general AI knowledge to role-specific applications
 - Integration of ethics and governance in all learning paths
 - Focus on practical implementation over theory
 - Emphasis on MLOps and AIOps capabilities
 - Growing importance of prompt engineering skills
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Resources & Next Steps

Additional Learning Resources

- **GitHub Copilot Documentation** - For hands-on coding practice
- **Azure AI Fundamentals** - Free Microsoft certification path
- **Google Cloud AI Platform** - Qwiklabs for practical exercises
- **AWS Machine Learning** - Free tier for experimentation
- **Hugging Face** - Open source model repository

Communities & Support

- **LinkedIn Learning Groups** - Role-specific discussion forums
- **Local AI Meetups** - Find practitioners in your area
- **Stack Overflow AI Collective** - Technical Q&A support
- **Reddit r/artificial** - General AI discussions

- **Discord AI Communities** - Real-time collaboration

Certification Paths

- **Microsoft AI-900** - Azure AI Fundamentals
- **AWS Certified Machine Learning** - Specialty certification
- **Google Cloud Professional ML Engineer** - Advanced certification
- **CompTIA AI+** - Vendor-neutral AI certification
- **ISACA AI Fundamentals** - Governance-focused certification

Action Plan Template

Week 1-2: Complete assessment, select learning path

Week 3-4: Begin foundation courses, set up practice environment

Week 5-8: Progress through role-specific modules

Week 9-10: Apply learnings to real projects

Week 11-12: Complete advanced modules, plan next phase

Week 13+: Continue with specialized topics or certifications

Conclusion

The transformation from traditional IT operations to AI-enhanced capabilities is not just possible—it's essential for career growth and organizational success. These structured 12-week programs provide clear, achievable paths for every IT role, with flexibility to accommodate different learning styles and time constraints.

Remember: The goal isn't to become an AI expert overnight, but to build practical capabilities that immediately improve your daily work. Start where you are, use what you have, do what you can.

Your AI transformation journey starts with a single course. Which one will you begin today?

Document Version: 2.0

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Total Courses Referenced: 200+

Combined Learning Hours: 400+

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