MAGNA SKILLS DEVELOPMENT INSTITUTE

Capacity Building • Professional Training • Organisational Development

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Course Profile Document

ICT and Security Management

Advanced AI-Powered Enterprise Application Development, Cloud Infrastructure, Database Administration, DevOps & ITIL 4 Service Management

Prepared as a professional course profile for delegate review, sponsorship approval and organisational training planning.

COURSE CODE	DELIVERY	DURATION	PREPARED FOR
MSDI	**Online / Face-to-Face**	**Flexible**	**Organisation Approval**

Register for this Course

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Course Overview

This advanced, integrated training programme is designed to equip ICT professionals with the technical expertise and strategic capabilities required to design, develop, deploy, secure and manage modern enterprise applications.
Developed by Magna Skills, the programme integrates Artificial Intelligence (AI), enterprise software engineering, cloud computing, database administration, DevOps automation and ITIL 4 service management into a comprehensive learning experience.
Participants will gain practical experience in AI-assisted application development, cloud-native architectures, database optimisation, continuous integration and deployment, infrastructure automation, cybersecurity and IT service delivery.
The programme emphasises hands-on learning, enabling participants to develop and deploy an enterprise application while implementing modern DevOps practices and aligning IT operations with ITIL 4 service management principles.

Course Outcomes

1. By the end of this programme, participants will be able to:
    1.

Design, develop and integrate secure, scalable enterprise applications using modern development frameworks, APIs and AI-powered software engineering tools.

2. Implement cloud infrastructure, manage enterprise databases and automate application deployment using cloud-native technologies and DevOps practices.

3. Apply AI-driven development, database optimisation, continuous integration, continuous delivery and infrastructure automation to improve enterprise IT operations.

4. Implement ITIL 4 service management practices to strengthen IT governance, service delivery, incident management and continuous service improvement.

5. Design and implement an integrated enterprise technology solution combining application development, cloud deployment, database management, DevOps automation and IT service management.

Course Outline / Curriculum

1. Advanced Enterprise Application Architecture and Software Engineering

- Designing scalable, secure and maintainable enterprise applications using modern architectural patterns, microservices, RESTful APIs and integration frameworks.
- Applying advanced software engineering principles, enterprise architecture standards and secure development methodologies.

2. AI-Powered Application Development and Intelligent Automation

- Using generative AI, AI coding assistants and intelligent development tools to accelerate software design, coding, debugging and testing.
- Integrating large language models, AI APIs, intelligent agents and automated workflows into enterprise applications.

3. Advanced Enterprise Database Administration and Management

- Designing and administering enterprise relational and NoSQL databases, including PostgreSQL, MySQL, Microsoft SQL Server and cloud-managed database services.
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Implementing advanced SQL optimisation, indexing, database security, backup and recovery, high availability and performance monitoring.

4. Cloud Computing, Infrastructure Architecture and Enterprise Deployment

- Designing and deploying scalable enterprise applications using Microsoft Azure, Amazon Web Services and Google Cloud Platform.
- Implementing cloud networking, virtualisation, containerisation, cloud security, identity management and cost optimisation.

5. DevOps Engineering and Continuous Integration/Continuous Deployment

- Implementing DevOps workflows using Git, GitHub Actions, GitLab CI/CD, Jenkins, Docker and Kubernetes.
- Developing automated build, testing, deployment and release pipelines to improve software delivery and operational reliability.

6. Infrastructure as Code and Cloud Automation

- Automating cloud infrastructure provisioning and configuration management using Terraform, Ansible and cloud-native automation tools.
- Implementing infrastructure version control, environment standardisation, configuration management and automated infrastructure monitoring.

7. Enterprise Application Security, AI Governance and DevSecOps

- Integrating application security, identity and access management, vulnerability assessment and secure coding practices into enterprise development.
- Applying DevSecOps principles, AI governance, data protection, secrets management and automated security testing across the application lifecycle.

8. Cloud-Native Application Monitoring and Database Performance Optimisation

- Implementing enterprise observability using centralised logging, application performance monitoring, distributed tracing and automated alerting.
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Optimising application performance, database queries, cloud resource utilisation, fault tolerance and disaster recovery.

9. ITIL 4 Service Management and Enterprise IT Operations

- Applying ITIL 4 principles, the Service Value System, service value chain and continual improvement to enterprise IT service delivery.
- Implementing incident management, problem management, change enablement, service request management, service configuration management and service-level management.

10. Integrated Enterprise Application Development and IT Service Management Project

- Designing, developing and deploying an AI-enabled enterprise application with a secure database, cloud infrastructure and automated DevOps pipeline.
- Establishing ITIL 4-aligned operational procedures, service monitoring, incident response, change controls and continual improvement plans.

Training Methodology

The programme combines instructor-led technical sessions, practical laboratory exercises, real-world enterprise case studies, AI-assisted development demonstrations, cloud deployment simulations and collaborative projects.

Participants will work on a practical enterprise application development project, integrating the technologies and service management practices covered throughout the programme.

Target Participants

Software Developers, Systems Analysts, Database Administrators, Cloud Engineers, DevOps Engineers, Systems Administrators, ICT Managers, IT Service Managers, Solutions Architects, Technical Team Leaders and other ICT professionals responsible for enterprise technology development and operations.

Expected Training Outcomes

Participants will develop an integrated enterprise application prototype, establish an automated deployment pipeline, implement database management and cloud monitoring procedures, and prepare an ITIL 4-aligned service management implementation plan.

Target Audience

This short course is aimed at internal auditors, with or without formal qualifications or experience in auditing, who work in an internal audit environment

Key Course Benefits

Work-Ready Skills

Delegates leave with practical tools, templates and methods they can apply immediately at work.

Better Institutional Results

The programme supports stronger planning, reporting, compliance, accountability and service delivery.

Sponsor-Friendly

This document is designed to help supervisors, HR units and sponsors approve delegate participation quickly.

Professional Recognition

Delegates receive training documentation and a certificate of completion after successful participation.

Our Training Centres & Delivery Options

Magna Skills offers flexible delivery through face-to-face training centres across Africa and beyond, plus Online / E-Learning for delegates who prefer remote participation.

Southern Africa

Practical training destinations with strong travel access and delegate support.

- Pretoria, South Africa
- Vic Falls, Zimbabwe
- Livingstone, Zambia

East Africa

Popular regional centres for government, NGO and donor-funded project teams.

- Kigali, Rwanda
- Kampala, Uganda
- Nairob
- Zanzibar, Tanzania

West Africa & Islands

Strategic locations for regional networking and executive capacity building.

- Accra, Ghana
- Port Louis, Mauritius

International Executive Venue

Premium destination training for senior teams and international delegates.

- Dubai, United Arab Emirates

Online / E-Learning

Attend from anywhere through live online, blended or self-paced learning options.

- Online, E-Learning
- Remote Teams
- Flexib

Organisation-Based Training

Magna Skills can also arrange dedicated in-house training for ministries, NGOs and companies.

- Onsite
- Custom Dates
- Group Training

Ready to Nominate Delegates?

Use the links below to register, review the live course page or contact Magna Skills for organisation-based training support.

Register / Apply Online | **View Full Course Page**

About Magna Skills

Magna Skills Development Institute provides practical capacity building programmes for government departments, NGOs, public institutions, donor-funded projects and private sector professionals across Africa. Our training approach combines expert facilitation, real workplace case studies, practical tools, post-training support and professional documentation that helps organisations strengthen staff performance and service delivery.

Government Training | NGO Capacity Building | Corporate Workshops | Online Learning | Face-to-Face Training | Certifica

Approval & Authorisation Form

This section may be completed by the organisation, department, HR office, finance office or sponsor approving delegate participation. It can be attached to an internal memo, procurement request or training approval submission.

Organisation / Department	
Delegate Name(s)	
Approved Course	Advanced AI-Powered Enterprise Application Development, Cloud Infrastructure, Database Administration, DevOps & ITIL 4 Service Management
Preferred Delivery Mode	☐ Online ☐ Face-to-Face ☐ Organisation-Based Training
Preferred Training Venue /Date	
Estimated Number of Delegates	
Budget / Vote Number	
Contact Person	
Email / Mobile	

Authorised Name _____ Signature / Stamp _____ Date _____