MAGNA SKILLS DEVELOPMENT INSTITUTE

Capacity Building • Professional Training • Organisational Development

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Course Profile Document

Environmental, Urban and Regional Planning

Urban Energy and Water supply Management

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

COURSE CODE	DELIVERY	DURATION	PREPARED FOR
MSD2636	**Online / Face-to-Face**	**Flexible**	**Organisation Approval**

Register for this Course **View Online Course Page**

Course Overview

Recent floods and droughts across the world highlight the need for our natural water resources to be better managed. In addition, the provision of secure clean water supplies and the treatment and disposal of wastewater and other contaminants require innovative and sustainable solutions to ensure that their environmental and socio-economic impacts are minimised. The programme provides a multi-disciplinary understanding of these water resources and environmental issues through the development of knowledge and skills necessary for the planning and management of these resources to meet the needs of society and the environment within the context of climate change

Course Outcomes

Urban Energy and Water supply Management

Course Outline / Curriculum

Methods for Environmental Data Analysis

- Designing experimental and observational studies
- Research methods
- Graphical presentation of environmental data
- Model evaluation
- Application of methods to analyse environmental data

Environmental Planning

- A process for preparing area management plans
- Planning preliminaries
- Collecting and analysiing data
- Identifying issues and options
- Establishing goals and objectives
- Writing plans
- Evaluating options and selecting actions
- Multicriteria analysis

River and Floodplain Ecology

- The hydrological cycle and properties of water
- Physical, chemical and ecological processes in freshwater environments
- Freshwater habitats and biota
- Freshwater ecosystem models and concepts
- Sampling and assessment of freshwater ecosystems
- Human impacts and threatening processes
- Aquatic food webs and trophic linkages
- Energy sources and primary production in freshwater ecosystems

Natural Resource Management

- Introduction to natural resource management
- The nature of environmental systems
- Natural resource policy
- Types of policy instruments and processes
- Critical thinking and the choice of policy instruments

Environmental Risk Assessment and Management

- Hazards and risks: basic concepts
- Foundations of risk assessment and management.

Regulatory frameworks for risk assessment and management: overview of international and national laws and regulations, corporate governance and the environment.

- Identifying, quantifying and assessment of environmental hazards: toxicity, ecotoxicity, radiation, effects, exposure, pathways, persistence, biodegradation, exposure and risk screening, consequence analysis.
- Evaluating and characterization of environmental risk: principles, processes, perceptions, tools, techniques matrices, process-based models, cost-benefit analyses.
- Devising management plans: responsibilities, communications, documentation, awareness, training, reporting, monitoring, refining.
- Management decision-making: processes, tools, mitigation strategies.

Integrated Environmental Management Systems and Auditing

- Environmental Management Systems and Standards
- Planning an EMS: review, vision, mission, values, policies, objectives, targets, plans, and documentation the principles needed to plan and implement an Integrated Environmental Management System
- Implementation and Operation of an EMS: responsibilities, communications, documentation, awareness, training, reporting, and emergency procedures/response
- Evaluating and Improving Performance of an EMS: monitoring, measurements, management review, continual improvement, corrective actions and auditing knowledge to operate and evaluate an Integrated Environmental Management System
- Types of Environmental Audits
- Audit process: initial review, planning, checklists, activities
- Identifying, quantifying and assessment of the environmental aspects for the audit
- Legislation and regulations

Target Audience

The programme is designed mainly for graduates in civil engineering, earth sciences or other related disciplines that are typically looking to broaden their knowledge base, extend their technical expertise or gain further learning to meet the needs of the professional institutions. Applicants from other backgrounds planning to develop a career in water resources will also be considered

Key Course Benefits

Work-Ready Skills

Delegates leave with practical tools, templatesand methods they canapply immediately atwork.

Better Institutional Results

The programme supports stronger planning, reporting, compliance, accountability andservice delivery.

Sponsor-Friendly

This document isdesigned to helpsupervisors, HR units andsponsors approve delegate participation quickly.

ProfessionalRecognition

Delegates receivetraining documentationand a certificate ofcompletion aftersuccessful 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	Urban Energy and Water supply 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 _____