

## Urban Energy and Water supply Management Course Details

Department: Environmental, Urban & Regional Planning

Presented by Magna Skills Development Institute

[Registration Link](#)

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## Course Summary

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 Objectives

Urban Energy and Water supply Management

## Course Outline

### 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



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## Company Overview

**Who We Are:** Magna Skills is a premier training and capacity-building organization specializing in professional development for government institutions, NGOs, and the private sector.

**Our Mission:** To provide world-class training solutions that equip professionals with the expertise needed to excel in their careers and contribute meaningfully to their organizations.

**Our Vision:** To be the leading provider of professional training and development across Africa, fostering excellence, innovation, and capacity-building in public and private sectors.

## Core Values

- **Excellence** – Delivering high-quality training tailored to meet the evolving needs of professionals.
- **Integrity** – Upholding the highest ethical standards in all our engagements.
- **Innovation** – Embracing new technologies and methodologies to enhance learning experiences.
- **Customer-Centric Approach** – Ensuring client satisfaction by providing relevant, practical, and impactful training.
- **Collaboration** – Partnering with industry experts and institutions to provide the best learning opportunities.

## Our Training Methodology

We use a blended learning approach that includes instructor-led training, case studies, workshops, and post-training support.

## Why Choose Magna Skills?

- Experienced Trainers
- Customized Training Solutions
- Interactive Learning
- Global Recognition
- Proven Track Record

Request for Training Form

Complete the form and share with Magna Skills Support Team on email info@magnaskills.com or Send Whatsapp on: +27630079022

Approval & Authorization	
Applicant Details	Course Details
First Name:	Course Name:
Last Name:	Training Venue:
Mobile:	Month:
Email:	Training Method: Online[ ____ ] Face to Face [ ____ ]
Company Name:	Duration:
Country:	Number of Staff Members:

By signing this agreement, both parties confirm their commitment to the terms outlined in this proposal.