cooperative governance
Department:
Cooperative Governance
REPUBLIC OF SOUTH AFRICA

MUNICIPAL INFRASTRUCTURE SUPPORT AGENT (MISA)

MISA
MUNICIPAL INFRASTRUCTURE SUPPORT AGENT
Today, Creating a Better Tomorrow

CPD 2 credits (ECSA)

Getting Acquainted with Water Reticulation Design

The Municipal Infrastructure Support Agent (MISA) in partnership with SAICE Professional Development & Projects (SAICE-PDP) invites you to attend this 2-day course which aims to explain the fundamentals of water reticulation design.

Attend this course and learn about:

- The components of a complete water supply system
- Legislation governing the provision of water supply in South Africa
- Water treatment overview
- Planning of water reticulation systems
- Water storage, water demand and hydraulic design
- Water reticulation pipe network analysis
- Methods of water distribution and selection of appropriate method for a community
- Water conservation and demand management
- Water reticulation design specifications and construction considerations

Benefits include:

- Participation in an interactive workshop
- Worked examples and exercises to equip attendees to handle projects effectively in the workplace
- A comprehensive course document that will serve as a reference manual
- 2 CPD credits (ECSA)

Presenter:

Siphathisiwe Masimirembwa Pr Tech Eng

COURSE SCHEDULE

Venue:

Dates:

Time:

REGISTRATION

To register, visit www.saicepdp.org

For more details contact Nompumelelo Nyaba:
Email nompumelelo@saicepdp.org
Tel: 011 476 4100

WHO SHOULD ATTEND

The course helps municipal attendees to apply their theoretical training in practice.

It is therefore recommended for:

- Staff involved in water reticulation design
- Staff employed in local government and involved in water reticulation design, or about to become involved in the field
- Candidate engineers, technologists and technicians
- Experienced personnel looking for a refresher in water reticulation design aspects

COURSE OUTLINE

DAY 1

- Introduction to water supply system
- Current legislation and by laws relevant to water supply
- Objectives of a water supply
- Components of a water distribution network
- Planning of water supply and distribution systems
  - Outlining the planning process and stakeholder engagement
  - Levels of service and methods of water supply
  - Investigation inputs for water supply projects
  - Overview of water treatment processes
- Water treatment overview
  - Typical water treatment processes
- Water storage
  - Balancing storage, reserve storage & fire water storage
  - Ground reservoirs and elevated reservoirs
  - Positioning of reservoirs
- Methods of water supply, selection of appropriate method and types of distribution networks
- Design of water reticulation systems
  - Water demand and peak factors
  - Fire-fighting water demand
  - Hydraulic integrity
  - Hydraulic analysis, including headloss calculations
  - Head balance method (Hardy cross)
  - Quantity balance method
  - Modelling software

DAY 2

- Design of water reticulation systems (continued)
- Water conservation and demand management
  - Introduction to water conservation and demand management
  - Water network schematics
  - Sectorising into district metered areas
  - Methods of water loss reduction
- Water reticulation specifications and construction considerations
  - Position of water pipelines
  - Pipe materials, class and sizes
  - Pipe laying
  - Hydrants, valves and chambers
  - Construction, filling, testing and sterilization
  - Design documentation
- Thrust block design and detailing

WHAT TO BRING TO THE COURSE

- Scientific calculator
- Pencil and eraser
- Scale ruler

For **online** courses, it is recommended to have the following installed on your computer:

- MS Excel
- The Zoom app

ABOUT YOUR FACILITATOR

Siphathisiwe Masimirembwa started her career in Zimbabwe where she worked for consulting engineers and a water authority before moving to South Africa, where she has gained experience in both consulting and the public sector.

Her range of experience has equipped her with knowledge in planning, design and construction of roads and water services as well as private housing developments.

Her passion for uplifting candidates has led her to mentoring engineering candidates in municipalities and encouraging capacity building.

She is a member of SAICE.

saice professional development & projects
A Non-Profit Company (NPC)

SAICE-PDP's Municipal Academy was established to support practitioners employed in local government with applying theoretical knowledge and relevant legislation in practice.

municipal academy
the road to service delivery

MISA
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MISA's mandate is to provide technical support and advice to municipalities, whilst strengthening their capacity, for effective infrastructure planning, delivery, operations and maintenance.