



cooperative
governance

Department:
Cooperative Governance
REPUBLIC OF SOUTH AFRICA

MUNICIPAL INFRASTRUCTURE SUPPORT AGENT (MISA)



CPD tbc

Electrical Power Systems Protection

The Municipal Infrastructure Support Agent (MISA) in partnership with SAICE Professional Development & Projects (SAICE-PDP) invites you to attend this 2-day course which provides an **in-depth understanding of power systems, and how to protect key electrical equipment within the South African power system.**



Attend this course and learn about:

- The SA Power system
- Intelligent electronic devices
- MV and LV switchgear assemblies
- Protection calculations
- Overhead line protection
- Transformer protection
- Equipment and motor protection
- Substation automation
- Protection Coordination and Selectivity
- IEC 61850 Standard
- Testing and commissioning of protection systems

Benefits of attending this course include:

- Participation in an interactive workshop
- Learn from a recognised expert with cross industry experience
- Comprehensive course presentation material

Presenter:

Nompumelelo Bofu Pr Eng, Pr CPM

COURSE SCHEDULE

Venue: Online via Zoom

Dates: 16 – 17 May 2022

Time: 08:30 for 09:00 to 16:30

REGISTRATION

To register, visit www.saicepdp.org

For more details contact Zan Mlambo:

Email zan@saicepdp.org / Tel: 011 476 4100

WHO SHOULD ATTEND?

This course is recommended for:

- Protection Application Design Engineers
- Protection Maintenance Engineers
- Testing and commissioning Engineers
- Maintenance Engineers
- SCADA Engineers
- Planning and design Engineers
- Project Managers

COURSE CONTENT

THE COURSE COVERS THE FOLLOWING:

- Power system overview for SAPP
- Power system equipment overview (Power/Distribution transformers, overhead lines, electric motors, generators, cables etc.)
- Protection system fundamentals and protection scheme components
- Introduction to protection application design
- LV and MV line protection scheme overview
- HV line protection scheme overview
- EHV line protection scheme overview
- Introduction to Distance protection and discussion of the different Distance protection schemes
- Protection scheme redundancy concepts
- Transformer protection
- Introduction to LV and MV switchgear and international standards for LV/MV switchgear
- Introduction to Internal Arc Confinement requirements
- LV and MV motor protection
- Cable protection
- Introduction to the IEC 61850 standard and substation automation
- Communication protocols
- Intelligent Electronic Devices (IEDs) and compliance to the IEC 61850 standard
- Introduction to the per unit system
- Introduction to protection coordination and calculation of protection settings
- Protection settings database maintenance
- Auxiliary power supplies for protection schemes
- Project implementation: Role-players and process
- Course conclusion and general discussions

