



THE SOUTH AFRICAN INSTITUTE OF ELECTRICAL
ENGINEERS



in partnership with the Engineering Professions
Association of Namibia

FUNDAMENTALS OF MEDIUM VOLTAGE PROTECTION

SAIEE-1320-V : 3 CPD credits : Category 1

OVERVIEW

This in-depth 3 day course covers the basic elements for designing and applying power system protection principles for medium voltage distribution systems :

The course participants will, at the end of this course, be able to:

Analyse any electrical power system for balanced three-phase and single-phase to-ground fault conditions

Design and apply unit and non-unit protection schemes to any component of a distribution voltage power system such as overhead power lines, motors, power transformers and substation busbars

Apply and carry out discrimination and co-ordinating principles in the calculation of fully graded protection relay settings for any protection scheme on MV distribution systems

Understand, design and apply effective and non-effective earthing to electrical power systems, and

Apply any of these design and application principles to an inter-connected power system

COURSE OUTLINE :

The need for power system protection

Fault types

Power system grounding

Fault calculations

Circuit breakers

Instruments transformers and the application

Types of relays and relay technologies

Fuses and their use

Grading of overcurrent and earth fault protection schemes

Protection schemes for feeders, transformers, motors, generators and bushbars, and

Commissioning and maintenance of protection schemes

TARGET AUDIENCE

Graduated Engineers and Technologists

COST: EPA Member N\$7,800.00

EPA Member N\$9,000.00

COURSE DATES : 3,4 &5 April 2018

VENUE: Safari Court Hotels, Windhoek, Namibia

REGISTRATION DUE DATE: 13 March 2018

Registration : 3 April 08:00 – 08:30

Workshop : 3-5 April 08:00 - 17:00

PRESENTER :

PROF JAN A DE KOCK

Pr Eng. Ph.D MEng BEng FSAIEE

Jan de Kock received his BEng and MEng and PhD in electrical engineering from Stellenbosch University. He is a registered Pr Eng with ECSA. Jan is a fellow of the SAIEE and serves on its Council. He is actively involved in the SAIEE rotating machines working group and was a member of the IEEE rotating machines committee.

In 2001 he was appointed Professor in Electrical Engineering at North-West University. He is currently the Director of the School of Electrical Engineering & has previously acted as Dean for 14 months. He has taught power electronic, electrical machines & final year projects to undergraduate students, & advanced protection & power system dynamics courses to postgraduate students.

Dr de Kock's professional training & experience encompasses the spectrum of electrical power system technologies. He has been a project manager and/or technical contribution to a variety of analytical consulting, teaching, hardware and software projects. His expertise in analysis of power systems includes steady state, dynamic & transient simulations & quality of supply investigations. He has developed or applied hardware and software models for a variety of power system equipment.

Dr de Kock has been involved in the design, commissioning, & performance assessment of more than 30 generators & synchronous machines ranging from 1 MW to 60 MW, large MV switchgear projects & protection systems.

In 2013 he was awarded the SAIEE Presidential Award for his contribution to electrical engineering in South Africa

REGISTRATION : CONTACT DETAILS

Registration Due date: **13 March 2018**

Registration forms: Emailed to Mrs Rica Blaauw

epa@africaonline.com.na

Full payment is required no later than **13 March 2018**