1. OVERVIEW

For a person to become accredited as ‘authorised’ to do HV/MV switching, they need to do the HV / MV switching theoretical course which will be made up of modules and homework done in 3 days—this will constitute 40 hours out of the 80 hours.

1. The first section 40 hours is of learning in class environment and doing a theoretical examination and receiving a certificate after being found competent with an 80% pass mark for all exams.

2. Students then go back to work and start populating a portfolio of evidence (PoE). With this document they will have to prove what experience with HV/MV they have had (RPL). They will need to get the RPL verified by their respective engineers, supervisors or instructors. This must be done in as short a time as possible, once the theory is completed—usually within 2-3 months.

3. The second 40 hours will be made up of doing practicals with a person who will verify this through use of the portfolio of evidence (PoE).

4. Recognition for prior learning is applied to persons who have previously done operating. (Portfolio of evidence)

When they have the required experience for their job description, and using the PoE, they may request an accredited assessor to do a practical test with them after which they may be declared competent or not yet competent. If declared competent they will then get their certificate of authorisation.

2. THEORITICAL CONTENT

**DAY 1**

**Module 1: Background to the Regulations**
- Key outputs
- Isolated circuits/apparatus
- Key competencies
- Regulatory understanding
- Pre-requisites
- A basic background to the Regulations
- An understanding of the functions of the various officials and employees on the distribution system;

- an understanding of abnormal conditions which could arise & the actions to be taken

Module Overview:
- The background to the Occupational Health and Safety Act and Your Company Operating Regulation for High Voltage Systems and how they relate to each other
- The general duties of employers and employees
- The content and use of your Regulations Book
- How the regulations fit into the various steps when work has to be carried out on apparatus
- Responsibilities and duties of authorised persons for access and supervision
- Abnormal conditions
- Who may have unrestricted access to live chambers and prohibited areas?
- The conditions under which unauthorised persons may enter or work in live chambers and prohibited areas
- Supervision of work in these areas
- Barricading

Introduction
Access to Live Chambers, Prohibited and Restricted Areas
Locking of Doors and Gates
Supervision

**Module 2: Access and Supervision**

Key Focus:
- Isolated circuits/apparatus
- Inspected circuits/apparatus

Key competencies:
- Basic regulatory understanding

Pre-Requisites
- ORHVS Module 2

This module will supply you with:
- The understanding of control exercised over access to prohibited areas and live chambers
- An understanding of the requirements for supervision in the abovementioned areas
- The locking of doors and gates giving access to live chambers and prohibited areas

**Module 3: Issue and Use Of Keys**

- Key outputs
  - Isolated circuits/apparatus
  - Inspected circuits/apparatus

- Key Competencies
  - Basic regulatory understanding
  - Pre-requisites

- ORHVS Module 1
- ORHVS Module 2

Module Objective
This module will supply you, the student, with an understanding of how control is achieved over access to live chambers/prohibited and restricted areas through:
- The issue, safekeeping and use of keys
- Responsibility of persons who are authorised to possess keys

In this module you will learn:
- Where keys should be kept
- Emergency access to keys
- Who may be issued with keys
- Responsibilities of persons who have been issued with keys

**DAY 2**

08:00 WRITTEN EXAMS
09:15 COURSE CONTINUES
Module 4: Reasons for Isolating and Earthing
• Key outputs
  - Isolated circuits/apparatus
  - Inspected circuits/apparatus
• Key competencies
  - Regulatory understanding
MODULE OBJECTIVE
• An understanding of why apparatus must be isolated and earthed before you may work on it
• An understanding of the minimum requirements for earthing different types of apparatus
• An understanding of when additional earths must be applied
• The ability to tell the difference between the various earths and when they are used.

Module 5: Operating Principles
Module Focus: SANS 724: 2012 ARC FLASH PROTECTION
• Key outputs
  - Isolated circuits/apparatus
• Key competencies
  - Regulatory understanding
Module Objective
• The correct order of operating: S.I.T.E
  - Switching
  - ISOLATING - Linking
  - Testing, and Earthing
• Requirements for:
  - isolating from supply; and
  - applying earths to apparatus
• The handing over procedure
• Returning apparatus to service
Section 1 - Operating Steps
• Introduction
• Control Officer
• Operating
• Switching
• ISOLATING – Linking
• Testing
• Earthing
Section 2 –
• Isolating from supply
• Safety testing
• Application of earths
• Handing over
• Return to service

Module 6: Use of The Operating Instruction Form
Module Focus
• Key outputs
  - Isolated circuits/apparatus
• Key competencies
  - Regulatory understanding
Module Objective
This module will provide you with an understanding of the use of the Operating Instruction Form with regards to:
• Receiving instructions
• Carrying out instructions
• Transmitted and pre-authorised instructions; and
• Cancellation of instructions
ANNEXURE 1:
• Permission to operate and work
• Permission to sectionalise

The purpose of The Work Permit System

Module 7: Work Permit System
Module focus
• Key outputs
  - Isolated circuits/apparatus
  - Inspected circuits/apparatus
  - Serviced circuits/apparatus
• Key competencies
  - Basic regulatory understanding
Module Objective
• The purpose of the work permit system
• When a work permit is required
• The issue & the use of the work permit system including where customers are involved,
• Clearance of work permits prior to returning apparatus to service

Module 8: Abnormal Conditions and Exceptions to the General Rule
Module focus
• Key outputs
  - Isolated circuits/apparatus
  - Inspected circuits/apparatus
  - Serviced circuits/apparatus
• Key competencies
  - Basic regulatory understanding
Module Objective
This module will provide you with an understanding of:
• The action to be taken in abnormal conditions
• The requirements for working in close proximity to live conductors
• The operating procedure to be followed on lines being supplied form a single source of supply and,
• The requirements for replacing blow drop out fuses

Module 9: Commissioning and Testing
Module focus
• Key outputs
  - Assembled apparatus
  - Testing apparatus
• Key competencies
  - Regulatory understanding
Module Objective
This module will provide you with an understanding of the regulations governing the commissioning and testing of apparatus before it is placed in service. Testing of apparatus under normal and ‘abnormal’ conditions will be looked at.

Module 10: Risk Assessment & Safety Analysis
Module Focus
• Key outputs
  - JSA
  - RISK MATRIX
• Key competencies
  - Regulatory understanding of analysis and risk
Explain in your own words what you understand by
RISK ASSESSMENT.
I.e. What documents would you require to fill out.
Is it required by Law to do a RISK assessment before you do a job
How do you Analyse the Job
What is job safety analysis
Who is involved in Risk and Job Assessments

THE SOUTH AFRICAN INSTITUTE OF ELECTRICAL ENGINEERS

TARGET AUDIENCE
Electrical Engineering disciplines, specialising in HV Regulations for Authorised or Responsible Persons by doing theoretical, practical assessments and moderations as per EWSETA & SAIEE requirements

COST: Non-Member R10,850, SAIEE Member R8,500 (incl. teas, lunches and course material)
*Note: If proof of payment is received before commencement of the course, the following rates will apply:
Non-member R9,750 ; SAIEE member R7,600.

COURSE DATE:
13-15 June 2017:
Corporate Conference Centre, JHB
Registration: 08:00 – 08:30
Workshop: 08:30 - 16:30 (est.)

PRESENTER – DEWALD GREYLING
Dewald worked in Eskom for 18 years, also in developing the ORHVS. He has successfully trained and accredited many artisans and management staff to become an integral part of a current and future safe working force in the High and Medium Voltage community of Africa and beyond. Dewald qualified with distinctions in his electrical diploma in 1978. Studied Electrical Engineering and completed his Wiremans, and studied Management at UNISA. Dewald is a Registered Assessor and Moderator
His motto is SEE ONE...DO ONE...TEACH ONE
This he uses in his training regime in which he has been very successful for the last 30 years

REGISTRATION : CONTACT DETAILS

ROBERTO BENITES
064 685 4597
011 487 9042
roberto@saiee.org.za