



**THE UNITED REPUBLIC OF TANZANIA  
INSTITUTE OF ACCOUNTANCY ARUSHA**



**SHORT COURSE ON TRANSFORMER AND HIGH VOLTAGE  
SUB-STATION SYSTEMS**

**1. INTRODUCTION**

Working with high voltage systems is naturally hazardous, and the best defense against incidents is a thorough understanding of safe working practice. Due to the advancement of technology we have designed a courses which is applicable to a wide range of all types of high voltage systems, and is designed to meet recommended standards of technical skills required to all personnel heading technical departments and or technicians working with high voltage systems in their working places.

**2. COURSE OVERVIEW**

The course is designed to give participants a detailed understanding of high voltage safety, reflecting both industry best practice and current legislation whilst satisfying National Policy on High Voltage Systems. This course will also cover the maintenance and technological testing requirements for common substation devices, including power transformers, oil, air and vacuum circuit breakers, switchgear, ground grid systems, batteries, chargers and insulating liquids. This course focuses on what to do, when to do it and how to interpret the results from testing and maintenance.

**3. LEARNING OBJECTIVES**

- (a) The typical structures of a sub-station;
- (b) The most important components of a sub-station;
- (c) Typical sub-station protection parameters;
- (d) Sub-station grounding system requirements;
- (e) Sub-station safety and safety operation; and

(f) Best sub-station maintenance practices.

#### **4. COURSE MODULES**

In this course the following modules will be covered:

- (a) Safety with high voltage;
- (b) System components;
- (c) Risk & injury;
- (d) Safe systems of work;
- (e) Hazardous areas;
- (f) Introduction to transformer;
- (g) Functions of transformers;
- (h) Transformer construction (theory);
- (i) Tank, core, coils, types and ratings;
- (j) Bushings, tap changers;
- (k) Factory testing; and
- (l) Dry, oil and liquid filled types

#### **5. COURSE DELIVERY METHODOLOGY**

Although the course takes place in a class room but the training method is dynamic with a focus on skills practice. The course will be conducted through lectures, discussions and case studies analysis. Participants will be offered an opportunity to refocus, refresh and rededicate. Participants will visit TANALEC, one of the leading transformer factory to explore more about transformer manufacturing.

#### **6. FEES AND MODE OF PAYMENT**

The fee for the course is **TZS 2,000,000/=** (two million only). Payment may be in cash, cheques or bankers draft or TISS directly to the Institute of Accountancy Arusha Bank Account **No. 014103007130 NBC**, Arusha Branch.

## **7. DATES & VENUE**

This course will be conducted for two weeks (ten working days) from **January 8 - 19, 2018** at the Institute of Accountancy Arusha – Njiro Hill.

## **8. CONTACT PERSONS**

For more details, kindly contact the following people:

### **Course Director**

Mr. Stanley George Chibelenje:

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We thank you for your cooperation and support, kindly confirm your attendance one week before the commencement of the course for our preparations.