Technology Training that Works

IDC TECHNOLOGIES

CIRCUIT BREAKERS AND SWITCHGEAR

SELF-PACED "Study Practical, Online Courses at your own pace"

PAY NOW – START NOW!

STUDY AT YOUR OWN PACE • HIGHLY AFFORDABLE • TECHNICAL, PRACTICAL FOCUS • LECTURED RECORDINGS

PRACTICAL SELF-PACED ONLINE COURSE

YOU WILL LEARN HOW TO:

- Describe the fundamentals of operating switchgear and circuit breakers
- Select appropriate type and rating of circuit breakers and switchgear
- Describe the operation of switchgear components (CTs, VTs, relays and cable terminations)
- Outline practical maintenance strategies for switchgear

WHO SHOULD ATTEND:

- Consulting engineers
- Electrical engineers
- Electrical inspectors
- Electrical contractors
- Electrical and instrumentation technicians
- Electricians
- Instrumentation and control engineers
- Maintenance engineers
- Power system protection and control engineers
- Project engineers
- Safety professionals
- Utility Engineers

CONTACT US for course fees

INCLUDES 3 FREE REFERENCE MANUALS

YOU WILL RECEIVE 3 OF OUR UP-TO-DATE TECHNICAL eBOOKS TO ADD TO YOUR LIBRARY

Over 1400 pages of tables, charts, figures and handy hints

- Safe Operation and Maintenance of Circuit Breakers and Switchgear
- Practical Medium and High Voltage Testing of Electrical Equipment for Engineers and Technicians
- Earthing of Utility and Industrial Distribution Systems

Please Note: eBooks are available in hard copy at 50% of the recommended retail price. Contact us for pricing details.

A practical online course presented by:

Deepak Pais

B.E (Electrcial & Electronics)

Institute of Measurement and Control Companion Company

EIT ENGINEERING INSTITUTE OF TECHNOLOGY

A practical online course presented by:

Deepak Pais

B.E (Electrcial & Electronics)

Deepak is currently an Engineer in a regional electricity distribution utility. He started his career within the zinc mining and smelting industry as Project Engineer in substation and distribution for a Greenfield Project. He then joined a marine and logistics firm in the Bahamas as Maintenance and Commissioning Engineer. Following this, he worked with Japanese and German automobile firms as the Maintenance Engineer for distribution and utility related systems.

Deepak has hands-on experience in distribution, utility and substation related systems. He has a particular interest in the consistent interpretation and implementation of Greenfield and Brownfield Standards with an emphasis on safety, reliability, economy and whole of life cost analysis.

8 HOURS OF LECTURED RECORDINGS PLUS PRACTICALS

THE COURSE

Switchgear (and circuit breakers) are critical components in electrical distribution systems and their operation significantly affects the overall performance of the system. This course will discuss the application, installation, maintenance and testing issues relating to medium and high voltage switchgear circuit breakers.

Low voltage switchgear will also be covered and you will receive a thorough grounding in switchgear theory and standards. You will gain a solid understanding of the issues associated with the proper application, installation and maintenance of these critical items of equipment with an overriding emphasis on safety. The emphasis is on medium voltage (referred today as high voltage) switchgear which represents most of the switchgear installed on electrical distribution systems. The focus is on air blast, oil, SF6 and vacuum circuit breakers. Case studies covering the main manufacturers' equipment will illustrate the important practical principles. Other power system protection components will be discussed as well to ensure that switchgear is understood in the correct context.

The course will develop and enhance an understanding of what is involved in the maintenance of these essential components of the power systems, through the tips and tricks learnt and developed by some of the world's pre-eminent electrical engineers.

Pre-requisites: No formal electrical education is required as everything is examined from a fundamentals and practical point of view. As such, this is an intermediate course focused on the fundamentals to ensure you quickly understand the key concepts.

BENEFITS OF E-LEARNING

- Complete lessons in an online environiment
- Upgrade your skills and refresh your knowledge without having to take valuable time away from work
- Receive information and materials in small, easy to digest sections
- Learn while your travel- all you need is an Internet connection
- Receive a certificate of completion for CPD purposes

IDC TECHNOLOGIES

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SOUTH AFRICA • UNITED KINGDOM • UNITED STATES • VIETNAM

4 ELECTRICAL TOPICS
18 SUBJECTS • 3 QUIZZES

COURSE OUTLINE

TOPIC 1: INTRODUCTION AND APPLICATIONS OF SWITCHGEAR

1.1 Single Line Diagrams
1.2 Circuit breakers and switchgear
1.3 Forms of high voltage (HV) switchgear

TOPIC 2: CIRCUIT BREAKER DESIGN

2.1 Basic circuit breaker design
2.2 Auto re-closing
2.3 Different types of circuit breakers: Oil
2.4 Different types of circuit breakers: Air Blast
2.5 Different types of circuit breakers: SF6
2.6 Different types of circuit breakers: Vacuum Interrupter
2.7 Operating Mechanisms

Practical: Virtual Lab Example – Arc over levels

Quiz 1

TOPIC 3: SWITCHGEAR SPECIFICATIONS

3.1 Standards and factors affecting circuit breaker selection
3.2 Special service conditions & Ratings
3.3 Stored energy operation & Locking and interlocking devices
3.4 Degrees of protection
3.5 Gas leakage rates

Quiz 2

TOPIC 4: OPERATIONAL SAFETY

4.1 Testing for internal fault & Basics of Protection
4.2 Safety in the Context of HV Switchgear
4.3 Switching for safety, policies, and PPE

Practical: Virtual Lab Example – Circuit Breaker Bus Fault scenario

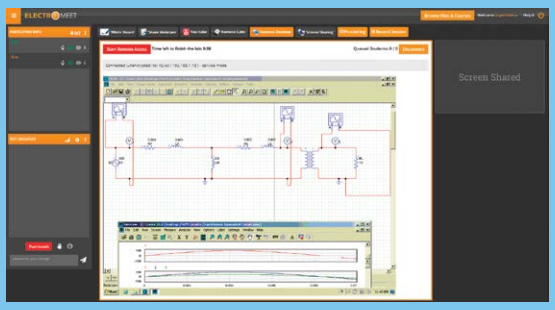
Quiz 3

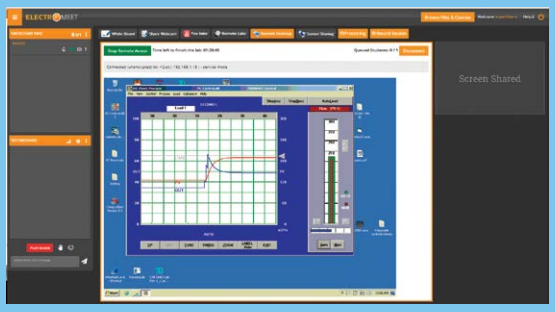
HARDWARE & SOFTWARE REQUIRMENTS

All you need to participate is an adequate Internet connection, PC and speakers. You will receive Electromeet access details once payment is finalised.

UPON SUCCESSFUL COMPLETION OF THE COURSE YOU WILL ATTAIN A CERTIFICATE OF COMPLETION

FULLY ONLINE WITH UNLIMITED REMOTE ACCESS





*Virtual Lab Examples - using Electromeet***

REGISTER IN THREE EASY STEPS

1 Go to www.idc-online.com/A_CCB_AU and complete the details.

Select "ADD TO CART" and follow the directions to pay the affordable one-off fee.

2 Once you receive your *confirmation email, follow the link and LOGIN to **Electromeet

3 Open the Online Course Package and START YOUR COURSE

* Confirmation emails containing login details may take up to 24 hours

** Electromeet is a cloud-based program with no downloads. Online courses are hosted and completed by users through Electromeet.