

High Voltage Switching Systems Operations Course



College of Electrical Training (CET)

9 Cressall Rd, Balcatta WA 6021
PO Box 811, Balcatta WA 6914
Ph (08) 9240 7700 Fax (08) 9240 4349

5 Avior Avenue, Jandakot WA 6164
PO Box 3857, Success WA 6469
Ph (08) 9417 8166 Fax (08) 9417 8766

www.cet.asn.au

Connect Your Mind

Course Overview

The course provides the student with the knowledge required for entry to the High Voltage Switching industry. The course is designed for persons who require an understanding of or who are required to operate high voltage equipment.

Course Requirements

It is mandatory that course participants should hold either an 'A' Grade Electrical Licence, Marine Engineers Certificate or have a Certificate III in Electrotechnology.

Course Aims

The course aims to:

- provide an understanding of hazards associated with switching high voltage equipment
- highlight the dangers to personnel and the damage that could occur to equipment should incorrect procedures be followed
- provide participants with knowledge of fault levels and how these can be effected by operating various high voltage equipment
- be able to write switching programs to ensure that high voltage equipment can be safely isolated and earthed for access to work on that equipment

Course Content

Nationally Recognised under training package UET 06

Units of Competency:

- UETDRISO4A - Perform high voltage field switching operation to a given schedule
- UETDRISO5A - Perform substation switching operation to a given schedule
- UETDRISO8A - Develop HV switching schedule
- UETDRISO8A - Coordinate permit procedures
- UETDRIS10A - Coordinate and direct switching operations
- UETDRIS11A - Coordinate and direct switching schedules
- UETDRSBO2A - Carry out substation inspection

Students are trained in various aspects of High Voltage Systems Operations including:

Basic Electrical Theory

- Voltage & Current
- Resistance & Reactance
- Transmission Systems
- Circuit Impedance
- Transmission Systems
- Energy
- Connection Methods
- Star & Delta Connections
- Distribution Transformers &
- Distribution Systems

Power Systems

- System Arrangement & System Reliability
- Power Systems - Operating Parameters
- HV Distribution Reticulation Systems
- Single Wire Earth Return Systems (S.W.E.R)

Substations

- Working Conditions & Arrangements
- Current & Voltage Transformers

Rating & Fault Current

- Equipment Ratings
- Fault Currents

Permits and Safety

- Practical Application of "Electrical Safety Instructions"
- Electrical Access Permit (EAP)
- Vicinity Authority (VA)
- Sanction To Test (STT)
- Handover Certificate

Distribution Equipment

- Poles, Conductors, Insulators & Insulator Types
- Types & Sizes of Underground & Overhead Service Cables
- Underground (Insulated) Cabling Systems
- Switches & Pole Mounted Switchgear
- Distribution Transformers
- Parallel Operation of Distribution Transformers
- Let Through Current of Transformers
- Ferro Resonance

Reclosers & Sectionalisers

- Operation - Closing & Tripping
- Sequence Timing & Resetting
- Power System Protection

Power System Protection

- Protective Relaying Protection Zones
- Distribution System Protection
- Overcurrent Relays
- Protection of a Typical Distribution Feeder
- Zone Substation Protection & Protection Schemes

Power Transformers

- Thermal Protection
- On Load Tap Changers
- Transformer Gas Protection

Ring Main Switchgear

- Ring Main Equipment

Switching Programs

- Effects on the System
- Terminology
- Preparation for Writing a Switching Program

Course Duration

4 Days - full time

Certification and Assessment

Upon successful completion of the course, students will be issued with a Statement of Attainment from Power Supply Services & Training indicating partial completion of the Certificate III Electricity Supply Industry—Transmission and Distribution.

Course Fees

Subsidised course fees may be available to persons currently working in the building and construction industry or unemployed persons who have worked in that trade in the previous 6 months. **The fee subsidy does not apply to persons working in the security and mining industries and Government employees.** Please refer to the course registration form for current subsidised and non-subsidised course fees. To be eligible for subsidised course fees students must sign the 'Fee Subsidy Declaration' on the course registration form and Work History Form.

Skills Recognition

Our skills recognition process benefits students, who have achieved prior training skills or knowledge and applies to Skills Recognition, Recognition of Prior Learning (RPL), Credit Transfer, Advanced Study or Exemption. If you believe you are entitled to any of the abovementioned we encourage you to fill out the Application Form for Skills Recognition, which is available from our administration team. Your application will be assessed on an individual basis.

How to Enrol

Simply complete the course registration form and return to the CET together with your payment.

Cancellation Policy

| | |
|---|-----------------|
| 8 working days or more prior to course commencement | 100% fee refund |
| 2 to 7 working days prior to course commencement | 90% fee refund |
| 1 working day or less prior to course commencement | Nil fee refund |

Should you have any queries please do not hesitate to contact:

Balcatta Campus

Phone: (08) 9240 7700 Email: admin4@cet.asn.au

Registration Form - High Voltage Switching Systems Operations Course

How did you find out about the CET? _____

Surname _____

First Name _____

Date of Birth ____/____/____

Private Address _____

Suburb _____ Postcode _____

Telephone _____

Mobile _____

E-mail _____

Facsimile _____

Company _____

Company Address _____

Company Ph No. _____

Course Date _____

Please note apprentices are not eligible for this course.

Evidence of any of the below must be presented in order to confirm your enrolment on this course

Unrestricted Electrical Licence

(Licence Number: _____)

Marine Engineers Certificate III

Certificate III in Electrotechnology or equivalent

Course Fees (as of courses in 2011) - Fees are subject to change

Please find enclosed my cheque / money order / credit card authority / company purchase order payable to the CET for (please tick):

NonSubsidised Fee

\$ 2250.00

Subsidised Fee

\$ 675.00

Paid by (if other than student, please provide name and address details)

Persons paying the subsidised fee must complete the following:

Fee Subsidy Declaration - High Voltage Switching Systems Operations Course

I _____ (full name)

(please tick)

- Am currently working in the building & construction industry
- Am currently unemployed and have worked in the building & construction industry in the past 6 months

Please note: If the CTF declines this subsidy application you will be required to pay the full (non subsidised) fee immediately.

Name of Employer

(required to claim the fee subsidy)

(Signature)

(Date)

NOTE: The CTF subsidy reduces the student fee by up to 80%.



The Supplementary Skills Program is subsidised by the Construction Training Fund Board and we would like to acknowledge the Board's continued support of skills development in the building and construction industry.

Registration on this course is subject to receiving payment of course fees. Persons paying the subsidised fee must complete the form overleaf as well as the CTF Work History Form available from CET .

Please forward this form with your payment to:
See address details on front page

