QUT eX
Professional and executive education

PESTC: Condition Monitoring of High Voltage Plant (EEP203)

Upgrade your capability to assess and monitor the condition of High Voltage plants by examining the latest knowledge on plant ageing, degradation, and electrical insulation materials.

This course teaches participants the fundamentals of electrical insulation concerning High Voltage plants. Including how it affects Power Systems Equipment and insulation structures, inclusive of solid, liquid, and gas insulating materials commonly used in High Voltage plant manufacturing. Participants will receive an overview of High Voltage testing and partial discharge diagnostic techniques. Providing them with knowledge of the current tools available to assess the condition of electrical insulation before and after High Voltage equipment installation.

Duration: 2.5 Days

Certificate of Completion
plus assessment results

Cost: From $1,620

Apply Now

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Blog: blogs.qut.edu.au/qutex

Evolve with QUTeX

With a balance of theoretical and practical examples, this course creates a shared learning environment for engineers to develop High Voltage plant ageing and condition monitoring skills. This course is delivered via intensive face-to-face delivery of core content with PowerPoint slides, notes, and further readings, providing students with a basic explanation of the condition monitoring and assessment requirements of High Voltage equipment. Participants will examine real-world examples, engage in related exercises, and be actively involved in follow-up class discussions. With a review undertaken of the functions and failure mechanisms of switchgear and transformers to identify the parameters of plant condition monitoring.

Core concepts

This course equips participants with information to work with High Voltage Plants, covering key topics such as;

- Ageing, deterioration processes, and their impact on equipment serviceability;
- Detecting, minimising and managing the effects of teasing and ageing processes;
- Realising the full design life potential of High Voltage plants;
- Electrical Insulation in Power Systems Equipment including insulating materials, stresses, ageing and degradation of insulation structures;
- High Voltage testing using Partial Discharge diagnostics as a tool to assess the condition of the insulation structures (applicable to Gas Insulated Switchgear and Power Transformers).
- Reliability Centred Maintenance (RCM) and Condition Monitoring of Power plants;
- The operation and elements of Switchgear and Power transformers including functions to preserve and failure mechanisms; and
- Overview of High Voltage plant condition monitoring techniques.

Who should participate?

This course is designed to enhance the understanding of engineers working within the power sector, developing their knowledge of current practices used in the condition monitoring of High Voltage power equipment.

Your expert facilitator Dr Jose Lopez-Roldan

Dr Jose Lopez-Roldan has M.Sc. and Ph.D. degrees in electrical engineering from the University of Barcelona. He has previously worked as the Substation Engineering Manager for Pauwels, the Research Manager of G&W Electric, and the Principal Consultant in Gas Insulated Switchgear for Powerlink. Since 2018 he has worked as a high voltage switchgear specialist for Energy Queensland. Jose has co-authored over 50 papers on HV switchgear, substations, and electrical insulation.

Cost

Early Bird registration	$1,620 (inc. GST)
Standard registration	$1,800 (inc. GST)
QUT Alumni / Staff registration	$1,350 (inc. GST)
Group registration (5 or more)	$1,620 per person (inc. GST)