



# 2019 Continuing Professional Development Courses

**THE AUSTRALIAN POWER QUALITY & RELIABILITY CENTRE IS OFFERING THE FOLLOWING CONTINUING PROFESSIONAL DEVELOPMENT COURSES IN 2019:**

- **PSCAD TECHNICAL WORKSHOP**
  - BRISBANE 11-13 FEBRUARY 2019
  - SYDNEY 14-15 FEBRUARY 2019
  - MELBOURNE 18-19 FEBRUARY 2019
  - PERTH 21-22 FEBRUARY 2019
- **ENERGY STORAGE**  
4-5 APRIL 2019 (SYDNEY)
- **RENEWABLE & DISTRIBUTED GENERATION**  
8-9 APRIL 2019 (SYDNEY)
- **QUALITY OF ELECTRICAL SUPPLY**  
4-5 JULY 2019
- **APPLIED POWER QUALITY: HARMONICS, UNBALANCE, VOLTAGE SAGS & POWER QUALITY MONITORING**  
26-27 SEPTEMBER 2019

## **TRAINING INVESTMENT**

The course investment provides for an inclusive industry related training package with course notes, lunches and morning and afternoon tea. Course fee per person is AUD\$1,600 including GST. Participants may count course hours towards their CPD requirements.

## **CUSTOMISED IN-HOUSE COURSES AVAILABLE**

We can come to you to provide customised courses on a range of topics at your location.

## **ENQUIRIES**

For more information, contact Ms Raina Lewis, University of Wollongong.  
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**UNIVERSITY  
OF WOLLONGONG  
AUSTRALIA**



## **ENERGY STORAGE 4-5 APRIL 2019 (SYDNEY)**

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### **COURSE BENEFITS**

Following the course participants will have gained knowledge and skills in the following areas:

- Understanding of the different types of energy storage and their application
- Knowledge of applicable energy storage standards
- The advantages and disadvantages of different energy storage technologies
- How energy storage is integrated into power systems

### **WHO SHOULD ATTEND?**

Managers, utility specialists and technical staff who wish to advise customers on renewable energy integration, or who provide services to large clients, or those who wish to understand aspects of network design, construction and maintenance techniques for maximising renewable energy penetration. Graduates, end-users or personnel working in all areas of power system design who want to understand how the system interacts with distorted generation systems, will also benefit from attending this course.

## **RENEWABLE & DISTRIBUTED GENERATION 8-9 APRIL 2019**

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### **COURSE BENEFITS**

By attending the course, you will gain knowledge and skills to assist you to:

- Appreciate different renewable and distributed generation resources, their operation, and functional aspects
- Gain an understanding of the impact of different renewable and distributed generation resources on electricity networks
- Gain knowledge of guidelines and standards for integration of these new energy resources into electricity grids
- Become aware of the design of interfaces for different types of renewable energy resources
- Gain a practical understanding of various power quality problems associated with renewable and distributed generation
- Gain knowledge of how to accommodate these devices economically without violating network constraints

### **WHO SHOULD ATTEND?**

Managers, utility specialists and technical staff who wish to advise customers on renewable energy integration, or who provide services to large clients, or those who wish to understand aspects of network design, construction and maintenance techniques for maximising renewable energy penetration.

## **QUALITY OF ELECTRICAL SUPPLY 4-5 JULY 2019**

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### **COURSE BENEFITS**

Following the course you will have gained knowledge and skills to assist you in the following:

- A systematic understanding of the various power quality disturbances and the types of load affected.
- Knowledge of the standards for particular types of disturbances and actions if limits are exceeded.
- Distinguishing the different types of available power quality monitoring equipment and their particular applications.
- Knowledge of how utilities and customers can improve their power quality.

### **WHO SHOULD ATTEND?**

This introductory course is suitable for all individuals working in the electrical power engineering industry. This includes managers, utility specialists and technical staff who wish to advise customers on power quality concerns, or who service large customers or who wish to understand aspects of network design, construction and maintenance techniques for maximising quality of supply.

## **APPLIED POWER QUALITY: HARMONICS, UNBALANCE, VOLTAGE SAGS & POWER QUALITY MONITORING 26-27 SEPTEMBER 2019**

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### **COURSE BENEFITS**

Following the course, participants will be able to:

- Calculate harmonic distortion levels, apply standards for harmonics and assess the effectiveness of mitigation methods.
- Calculate unbalance factors, understand the effects of unbalance on loads and appreciate unbalance standards
- Determine sag characteristics at a site and assess for sag mitigation strategies
- Understand how power electronic devices can be used to mitigate harmonics, unbalance and sags
- Better understand power quality monitoring methodologies

### **WHO SHOULD ATTEND?**

This advanced course is designed for utility specialists, consultants, engineers and senior technical staff who wish to advise customers on power quality concerns, or who service large customers or who wish to understand aspects of network design, construction and maintenance techniques for maximising quality of supply.