POWER SYSTEMS EARTHING COURSE

INTRODUCTION

The EEA is pleased to announce Version 2 of the Power System Earthing Course in collaboration with Mitton ElectroNet. To take account of travel and operational restrictions the course now includes the online theoretical learning, followed by a Mitton ElectroNet-led workshop delivered either as:

1. An in-person eight-hour workshop (for those who can accommodate); or
2. Four x two-hour weekly online workshops involving a mix of tuition and facilitated problem-solving breakouts.

The course gives attendees an understanding of:

- the purpose and scope of power earthing systems
- the processes and methods of earth system design
- how to perform an assessment of an earthing systems and provide options for risk mitigation

Through the course, learners should be able to:

- Evaluate an earthing system design against safety standards and statutory requirements
- Apply a whole-of-life philosophy and safety-in-design controls to the design of earthing systems
- Explore and communicate a range of solutions to earthing system problems

WHO SHOULD ATTEND?

- The course content and structure are tailored to attendees who have a basic understanding of electrical theory and wish to extend this knowledge into the field of power system earthing.
- The course is suitable for technical engineers, planning engineers, engineering managers, project managers, electrical tradespeople and contractors in the generation, transmission, and distribution sectors.

COURSE SCHEDULE

The schedule for these workshops is now open, as the theoretical component can be completed at any time, and workshops will be arranged as cohorts to maximise the efficiencies that this approach brings.

It is recommended that participants begin the online course two weeks prior to the beginning of the scheduled workshop(s).

COURSE OVERVIEW

Learning Outcome 1 - Understand the purpose and scope of power system earthing. **Including:**

1.1	Demonstrate the problem that earthing systems are designed to solve
1.2	Demonstrate the impacts of earthing system failure on people and property
1.3	Describe the philosophical objectives of an earthing system
1.4	Describe the theoretical tools of trade for earthing design
1.5	Discuss the impacts of legislation on power system earthing design

Learning Outcome 2 - Understand the processes and methods of earthing system design. Including:

2.1	Describe how earthing system design may be applied across an asset lifecycle
2.2	Describe how safety in design controls may be applied across an asset lifecycle
2.3	Describe the process and decisions required for risk-based earthing system design
2.4	Explore a range of methods used to evaluate the performance of earthing systems
2.5	Explore the functional requirements of earthing systems
2.6	Explore common earthing systems that are applicable to a range of equipment types
2.7	Explore specialised earthing systems, included how and when they are applied
2.8	Explore a range of methods and processes for testing and maintaining earthing systems
2.9	Identify opportunities for earthing system design improvement

Learning Outcome 3

Perform an assessment of an earthing system and provide options for mitigation of risk. **Including:**

3.1	Identify and collect inputs required for the earthing design process
3.2	Select risk tolerance levels which are appropriate for a given scenario
3.3	Select methods for assessment of function and performance which are appropriate for a given scenario
3.4	Perform risk assessment tasks to produce accurate and conclusive results
3.5	Present options for mitigation of risk through earthing system design

PRESENTER

Patrick Coombe from Mitton ElectroNet's Electrical Safety team in Christchurch is the course presenter.

Patrick is a senior engineer, who's core work lies in electrical safety, undertaking projects involving power system earthing, arc flash studies, protection design and lightning protection.

He has a wide range of earthing experience, having carried out numerous designs and investigations - including off-frequency injection testing at many sites across New Zealand and Australia.

Patrick also has significant site-based experience, which is leveraged to provide practical solutions to deliver safe outcomes in his work.

ASSESSMENT

The online course includes '*test your knowledge'* quizzes, but there is no formal assessment for this course. Participants will be issued with a certificate of attendance.

PRICING

Pricing for the Power Systems Earthing course differs depending on EEA membership status. **Prices shown are exclusive of GST.*

Components	Description	Member	Non-Member
Full Course (General)	Full course including a scheduled workshop.	$1,400*	$1,600*
Full Course (In-House)	Full course including a tailored inhouse workshop	Contact EEA	Contact EEA
Theoretical Course Only (Online)	Online course	$500*	$700*

* Price includes a digital copy of the EEA *Guide to Power Systems Earthing Practice (2019)*

REGISTER YOUR INTEREST

Email your expression of interest to admin@eea.co.nz