

**PRACTICAL EARTH GRID ANALYSIS & GROUND MAT SOFTWARE TRAINING COURSE (1-DAY)**

**COURSE DESCRIPTION**

This is a hands on 1 day Earth Grid Analysis training course (1 x 8-hour day), which is aimed mainly at training newer users in basic Earth Grid Analysis, and also more advanced topics.

This course also provides an opportunity for existing, new and prospective users of **Ground Mat** software to train in its background theory and use.

This course is intended for electrical power engineers responsible for the design and analysis of three phase electrical distribution systems.

Previous electrical distribution system analysis experience is required.

The minimum course size is 10.  
The maximum course size is 15.

**OBJECTIVES**

- Earthing system concepts and terminologies
  - Mechanism of electric shock and human shock model
  - Earthing system and Earth grid resistance
  - Tolerable touch and step potentials
- Earth grid analysis
  - Actual touch and step voltages
  - Mesh and step voltages (IEEE 80)
  - Earth voltage profile (Ground Mat Tutorial)
- Earthing system tests
  - Soil resistivity tests
  - Earth grid resistance tests
- Case Studies
  - 7 Prepared Case Studies using Ground Mat software



**WE PROVIDE**

- **Venue**
- **Presenter**
- **Morning and afternoon refreshments**
- **Lunch**
- **Training manual**
- **1 GMAT training hardware key**

**PREREQUISITES**

Basic computer skills.  
Basic three phase AC network theory

**YOU NEED TO BRING**

- **1 notebook PC with user administration level rights**

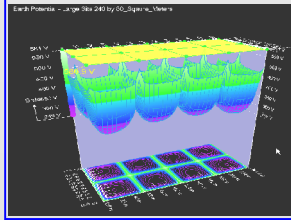
Windows 95, 98, NT, 2000, Millennium or XP  
500 MHz or better computer  
500MB of free hard space  
512 MB RAM , CD-ROM Drive , USB port

**COSTS (per delegate excluding GST)**

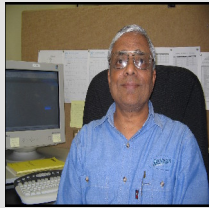
Newcastle : \$1,200	Sydney : \$1,200	Brisbane : \$1,200	Melbourne : \$1,200
Adelaide : \$1,200	Perth : \$1,350	Other : Consult us	In house : Consult us

# LK Technical Pty Ltd

Timetable		Timetable	
8.30 to 9.00	Arrival / Introduction	1.30 to 3.00	Earthgrid Analysis - Case Studies using Ground Mat
9.00 to 10.30	Earth Grid Analysis (Lecture) <ul style="list-style-type: none"> <li>• Electric Shock - Human Model</li> <li>• Step and Touch Potentials</li> <li>• IEEE Standard 80 / ESAA EG1</li> <li>• Earth Resistivity Tests</li> <li>• Earth Grid Resistance Tests</li> </ul>		<ul style="list-style-type: none"> <li>• Simple Substation Earthing</li> <li>• Two-Layer Earth Model</li> <li>• 132kV / 66kV Switchyard Design</li> <li>• Earth Model Creation from Test Data</li> </ul>
10.30 to 10.45	Coffee Break	3.00 to 3.15	Coffee Break
10.45 to 12.30	Groundmat Software (Tutorial) <ul style="list-style-type: none"> <li>• Overview of Ground Mat Features</li> <li>• IEEE Std 80 - Example 1</li> <li>• IEEE Std 80 - Example 2</li> </ul>	3.15 to 4.30	Earthgrid Analysis - Case Studies using Ground Mat (continued)
12.30 to 1.30	Lunch Break		



## MEET THE INSTRUCTOR



Sesha has over 17 years of experience in teaching power systems at Central Queensland University and over 12 years of industry experience at Tata Electric Co, Mumbai and Queensland Electricity Generating Board, Brisbane.

Sesha is currently working as a Power Systems Specialist with Welcon Technologies.

His industry experience includes design & development of power system software, conducting power system studies and setting up power system analysis groups for electric utilities in Iran and Liberia.

Sesha has received excellent feedback for his teaching style and the ability to explain complex topics in a simple and easy to understand manner. Sesha has recent experience of completing Arc Flash Hazard assessments for a number of Australian clients.

## REGISTRATION

To register for the Practical Earth Grid Training course, complete the registration form below and submit with payment details as follows :

- Fax to : 02 4955 5402, or Email to [lynn.kendrick@lktech.com.au](mailto:lynn.kendrick@lktech.com.au)
- Mail to : LK Technical Pty Ltd, 6 Birchgrove Drive, Wallsend, NSW 2287, or Telephone 02-4955 5481

Method of Payment :  
 Master Card     Visa

Card Number : \_\_\_\_\_

Expiry Date : \_\_\_\_\_

Name on Card : \_\_\_\_\_

Authorised Signature : \_\_\_\_\_

Cheque (Make Cheques payable to : LK Technical Pty Ltd)

EFT

Account Name : LK Technical Pty Ltd, Bank : St George

Account No. 137355021

BSB : 112 879

In reference give Co Name/or Surname

Preferred Venue : Newcastle/Sydney/Brisbane/Melbourne/Adelaide/Perth (Circle)

Other (please specify) \_\_\_\_\_

Name : \_\_\_\_\_

Job Title : \_\_\_\_\_

Company Name : \_\_\_\_\_

Company Address : \_\_\_\_\_

Telephone No : \_\_\_\_\_ Fax No: \_\_\_\_\_

Email Address : \_\_\_\_\_