- This popular and well-established course was first presented in 1997 and has been repeated several times. The course material presupposes very little high voltage background.

- The course contents include a detailed treatment of practical aspects relating to power line corona. The course runs over five days and includes daily practical sessions. A typical day would consist of lectures during the morning session, hands-on practical sessions in the high voltage laboratory during the afternoon and frequent discussion sessions. Practical problems arising from the field are discussed and the relevant phenomena are demonstrated in the laboratory.

COURSE OBJECTIVES

- To equip attendees with the ability to apply theoretical principles to practical problems in the high voltage laboratory and case studies from the field.
- To interact with practising engineers and technicians from the field.
- To provide hands-on experience in the laboratory and to reinforce safety principles.

WHO SHOULD ATTEND?

- Engineers, technicians and tradesmen from electrical utilities and other organisations, dealing with high voltage systems.
- Recently graduated engineers and technicians, seeking experience in the high voltage field.
- Electronic engineers and technicians, wishing to learn more about the behaviour of insulating materials and electromagnetic interference.

COURSE CONTENT

Day One:
- Introduction: High voltage equipment, electrostatic, conduction and thermal fields.
- Gas discharges: ionisation and breakdown on uniform and non-uniform gaps.

Day Two:
- Corona, flashover, arcs, partial discharges, electrostatic and electromagnetic induction and safety aspects.
- Electronegative gases, SF6.
- Insulating liquids and solids, Non-destructive test methods: partial discharge and dielectric loss measurement

Day Three:
- Corona phenomena in power systems.

Day Four:
- Insulator pollution.

Day Five:
- System over-voltages: power frequency, switching lightning
- AC and DC Tests, Impulse Tests
- Insulation co-ordination: flashover characteristics, over-voltage protection, specifications.
- Conclusion.
ENROLMENT FORM

Title: ............ Initials: ........ Name: .............................................. Surname: ..............................................
Company: ...........................................................................................................................................................
Postal Address: ...................................................................................................................................................
Email: .............................................................................................................................................................
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Special food requirements: Vegetarian No red meat No pork Any other.................................................................
I will attend the cocktail function (Tuesday evening) Yes No

Register me for this course. I have read and agree to the conditions of entry on this brochure.

Signature: ............................................................................................................................................... Date: ........................................................................

COURSE PRESENTERS
• Koos Holtzhausen has been involved in teaching high voltage engineering for many ears and his field of special interest is insulator pollution. He authored a number of papers on the subject and co-operates with Eskom at Koeberg Pollution Test Station. He received his PhD degree in 1997 for his work on insulator pollution flashover models.
• Wallace Vosloo is currently serving as chief consultant on high voltage insulators with Technology Services International (TSI), a division of Eskom Enterprises, and has authored a number of papers in this field. In 1997 he won the SAIEE President’s award for his research in the field of high voltage insulators. He recently received his PhD degree for his work in the field of polymeric insulators.
• Tony Britten is a specialist in the Technology Group of Eskom, and has worked on corona-related topics for many years. He was responsible for the corona design of Eskom’s 765 kV system, and has also written a number of papers on corona.
• Riaan Roets was Senior Consultant (Corona) in the Technology Group and was the manager of Eskom’s Corona Cage. He has done research into power line corona for the last five years, and numerous corona related design studies for the compact 400 kV line programme during this time. He has also had experience with the detection and elimination of television interference from distribution lines, and is the author of the NEC Guideline on this topic.

ENQUIRIES
Technical: Dr Koos Holtzhausen
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Fax: (021) 808 4981
Email: holtzhau@sun.ac.za

Administrative: Hannelie van Wyk
Tel: (021) 808 4979
Fax: (021) 808 4979
Email: hvanwyk@sun.ac.za

CONDITIONS OF ENROLMENT
• Payment has to be received before the start of the course. No participant will be accepted without full payment received.
• Cheques to be made out to the University of Stellenbosch. Please attach a copy of the invoice to cheques.
• If a bank deposit is made, please state the debtor’s code as reference on the deposit slip
• Cancellation of registration made 14 days before the course will be subject to a 20% handling fee.
• No refunds will be made after that date. Substitutions will be accepted.
• No attendance will be permitted without payment, unless otherwise arranged with the Course Co-ordinator.
• In the case of unforeseen circumstances, we reserve the right to cancel the course.
• The course fee includes notes, tea/coffee, lunches, cocktail function and course attendance certificate. Travel and accommodation arrangements have to be made by the attendees themselves. Contact Hannelie van Wyk at the above numbers if assistance with accommodation is required.
• The number of applicants is limited and acceptance will be on a first come, first served basis.
• Eskom employees, please register directly with the University. In addition, please register on EDCO (Eskom requirement).