



CENTRE FOR RENEWABLE &
SUSTAINABLE ENERGY STUDIES

Smart Grid Communications

Date: 10 – 14 May 2021

Venue: Electrical Engineering, Faculty of Engineering, Stellenbosch University, Stellenbosch

Registration: [Link to be confirmed](#)

Course fees: R11 800

Presenter:



Dr Riaan Wolhuter, Extraordinary Researcher in the DSP-Telecommunications Group, with main responsibilities in terms of Telecommunications related postgraduate activities, such as student supervision, research and project development and lecturing in Advanced Telecommunications.

Synopsis

The course provides an introduction to communications theory followed by insight in the different communications technologies, both wireless and cable based, with their application areas and to highlight specific application and requirements for Smart Grid Technology. Basics of information transfer, characteristics, performance and requirements as particularly relevant for the Smart Grid, are covered.

A student who has successfully completed this module has an understanding of / the ability to analyse:

- What is information?
- Transmission media characteristics and selection
- Waves, spectrum and units
- Information transfer: Modulation and demodulation fundamentals
- Noise and SNR Antenna basics
- Digital transmission and media
- Data networking principles and performance
- Industrial interfaces and protocols
- Performance criteria for distributed SG communications
- Data transfer integrity for the SG
- Wide area network types and principles
- Telemetry for the Smart Grid
- Rural network options

Who should attend

Engineers, technologists and technicians involved in the marketing, design & implementation of grid-tied PV systems.

Certification and Accreditation

The module has been registered with the Engineering Council of South Africa for 4 Continuous Professional Development points. A Certificate of Attendance will be awarded to all participants who attend the full course.

Venue and Time

This course will be presented at the Department of Electric and Electronic Engineering, Faculty of Engineering, Stellenbosch University and will run Mo-Fri from 08:00 to 18:00 10 – 14 May 2021. Directions can be obtained from: crses@sun.ac.za or <http://crses.sun.ac.za/contact-us>

Travel and Accommodation

Accommodation and travel are for your own account. The Stellenbosch Information Bureau can be contacted at tel. 021-883 3584 for delegates who want to make their own accommodation arrangements.

A list of available accommodation can also be obtained from crses@sun.ac.za.

Registration

The course is designed for a restricted number of attendees so as to personalize and maximize the learning experience. Bookings will be taken on a first come first served basis.

Course Fees

- o Cancellations made up to and including 27 April 2021 will be subject to a 15% handling fee. No refunds will be made after this date; however, substitutions will be accepted.
- o **Payment is mandatory for attendance.**
- o In the case of unforeseen circumstances, Stellenbosch University reserves the right to cancel the course or change the lecturer, in which case all fees will be reimbursed in full, on request.
- o The course fee includes all study material, tea/coffee, and lunch.

Faculty of Engineering
Private Bag x1; Matieland, 7602
South Africa
Tel: +27 (0) 21 808 4069
Fax / Faks: +27 (0) 21 883 8513
crses@sun.ac.za
<http://www.crses.sun.ac.za>