

# Renewable Energy Systems



CENTRE FOR RENEWABLE &  
SUSTAINABLE ENERGY STUDIES



Stellenbosch  
UNIVERSITY  
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UNIVERSITEIT

## DATE

26 February - 01 March 2024

## VENUE

Engineering Faculty, Stellenbosch University

## ACCREDITATION

Certificate of attendance (4 CPD points)

[REGISTER HERE](#)

Certificate of competence (4 CPD points)

NOT OFFERED

15 academic credits at NQF 8 level

[READ MORE](#)

## DEADLINE

Certificate course registration closes 7 calendar days before the course starts. The number of attendees is limited. Bookings will be taken on a first come, first served basis. For academic module registration deadlines, please contact the relevant academic programme coordinator.



## PRESENTER AND COORDINATOR

**Carl Tshamala** joined the Department of Mechanical and Mechatronic Engineering in 2014, having previously held positions at CPUT, Mutanda Mines and Bazano Group (DRC). He holds a Master of Science in Mechanical Engineering from Stellenbosch University and is currently busy with his PhD on industrial hybrid dry/wet cooling systems. His research interests cuts across a range of applications in the field of applied thermodynamics, fluids mechanics and heat transfer with strong inclination towards energy systems and power systems performances.





## Synopsis

This course addresses at an introductory level the scientific, engineering and resource aspects of various types of renewable energy systems, and the integration of such systems to provide effective and sustainable production and delivery of energy.

Course participants will be exposed to an introductory level of technical insight into the various renewable energy production, storage and transmission systems, and will apply the knowledge in a project-based learning experience. The main themes will include:

- basic concepts of mechanics, energy, heat transfer, thermodynamics and electricity related to renewable energy technologies.
- introduction to renewable energy technologies: solar thermal energy, solar pv, geothermal energy, bioenergy, wind energy, and hydropower
- renewable energy storage and transmission
- case studies of renewable energy systems

## Qualification and accreditation

The module is accredited for a variety of outcomes, depending on what the attendee registers for. Module contact time (40 hours) are shared by all attendees, but additional assessments, assignments, and projects will be specific to the outcome that the attendee registered for.

- The module is accredited for ECSA Continuous Professional Development (CPD) credits, and attendees can obtain a certificate of attendance (if all lectures have been attended) or competence (if all lectures have been attended and various assessments have been successfully passed).
- Unless otherwise stated, the module is also accredited for 15 academic credits at both NQF8 level (Post-graduate diploma) and NQF9 level (Masters), as part of various [academic programmes](#). This requires a total time investment of 150 hours.

## Delivery Model

- The module will be delivered over five days. Pre- and post-module assignments and projects are applicable depending on the outcome the attendee registered for.
- **Certificate of competence and academic attendees are required to attend the full module in person.** Certificate of attendance attendees have the option of attending the module in person, online only, or a mixture of these.

## Who should attend

Engineers, technologists and technicians active in the energy sector. Government and local authority officials. Managers, planners and developers. Investors. Academic students.

## Travel and Accommodation

All travel and accommodation arrangements are the attendee's own responsibility.

## Prerequisites

**Certificate of attendance:** none

**Certificate of competence / Post-graduate diploma at NQF8:** NQF7 engineering qualification

**Masters at NQF9:** NQF8 engineering qualification

**IT infrastructure:** For online attendees, adequate internet connectivity to connect reliably via Teams for the duration of the module. For Certificate of competence, Diploma and Masters attendees, a computer capable of running Windows 10 with user rights to install new software.

## Module Fees

- The standard fee for the five-day module is **R13 500 for a certificate of attendance**, and **R15 800 for a certificate of competence**. Please refer to the University's latest study cost information for academic fees.
- From time to time funding is sourced to subsidise module fees for specific modules for attendees from specific areas of industry. Please refer to CRSES's short courses website for the latest information.
- Cancellations made up to 21 days before the module starts will be subject to a 15% handling fee. No refunds will be made after this date; however, substitutions will be accepted.
- Payment is mandatory for attendance.
- In the case of unforeseen circumstances, Stellenbosch University reserves the right to cancel the module or change the presenter/s, in which case all fees will be reimbursed in full on request.

## Contact

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