

Hydrogen in the Energy System



CENTRE FOR RENEWABLE &
SUSTAINABLE ENERGY STUDIES



Stellenbosch
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DATE	24 - 28 Feb 2025
VENUE	Engineering Faculty, Stellenbosch University
ACCREDITATION	Certificate of attendance (4 CPD points) REGISTRATION CLOSED Certificate of competence (4 CPD points) REGISTRATION CLOSED
DEADLINE	Certificate course registration closes 14 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.



COORDINATOR AND PRESENTER

Prof Craig McGregor is an Associate Professor at Stellenbosch University in the Department of Mechanical and Mechatronic Engineering. He is a published author and spent 20 years in the energy industry before joining the university. He has received several awards, including the Bill Neal-May Gold Medal from the SA Institute of Chemical Engineering for outstanding achievement in process technology.



PRESENTER

Dr Justice Chihota holds a Ph.D. in electrical engineering from the University of Cape Town and is currently a post-doctoral fellow at Stellenbosch University. His research interests include distribution network planning using probabilistic techniques, load modelling and customer characterization, and distributed energy resource integration. Dr Chihota serves on the SANS 507 working group and is a member of the SAIEE Load Research Chapter.

OTHER PRESENTERS

Dr Steve Clark (Stellenbosch University)



Synopsis

This course aims to provide a systemic view of the global and South African energy system, focussing specifically on the current and potential future role of hydrogen within this system. The course will cover the following topics:

Demands on energy systems

- Demands by the people
- Demands by industry
- Demands by the government

Global and South African energy system

- Current market situation (Global and South Africa)
- Obvious trends
- Existing scenarios

Evolution of energy Systems

- Driving factors for evolution of energy systems
- Current (green) hydrogen market situation
- Potential pathways for (green) hydrogen development

Hydrogen Supply Chains

- Basics of energy supply / provision chains
- “Traditional” provision of electrical energy
- Renewable provision of electrical energy
- Storage of renewable energy

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 or equivalent

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 **R14 200 for a certificate of attendance**, and **R19 100 for a certificate of competence**. Please refer to the University's latest study cost information for academic fees.
- Limited fully subsidised spaces are available for employees of local, provincial and national government, Eskom, and SMMEs / NGOs who can motivate that the courses will be relevant to their current or future activities. Women are strongly encouraged to apply. Please enquire [here](#).
- Travel and accommodation support are available for up to four attendees per course. Please enquire [here](#).
- 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.

Short courses:

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keziah@sun.ac.za
www.crses.sun.ac.za

Academic:

Please contact the relevant academic department, quoting course code 14686 774/874