

Bioenergy



CENTRE FOR RENEWABLE &
SUSTAINABLE ENERGY STUDIES



Stellenbosch
UNIVERSITY
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UNIVERSITEIT

DATE

24, 25 & 31 August AND 01 & 02 September 2026

VENUE

Hybrid Online & Engineering Faculty, Stellenbosch

ACCREDITATION

Certificate of attendance (4 CPD points)

[REGISTER HERE](#)

Certificate of competence (4 CPD points)

[REGISTER HERE](#)

15 academic credits at NQF 8 or 9 level

[READ MORE](#)

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.



science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA



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South African National Energy
Development Institute



PRESENTER

Prof William Stafford is a life scientist with twenty-one years of R&D experience in diverse fields of biochemistry, microbial ecology, systems biology, bioenergy, permaculture, holistic resource management, industrial ecology and sustainability science. William is a researcher in the Green Economy Solutions competency area at the Council for Scientific and Industrial Research (CSIR), and an extraordinary associate professor in the Department of Industrial Engineering at Stellenbosch University.



PRESENTER AND COURSE COORDINATOR

Prof Johann Gorgens is a professor at the Department of Process Engineering at Stellenbosch University. He holds a PhD in Biochemical Engineering and has more than 15 years of research experience in biomass processing and bio-energy production, dealing both with technical process development/ optimisation and the commercial viability of various bio-energy options.

ECSA Licensing Body: LB_033/2026
ECSA Service Provider: SP_011/2028



Synopsis

The practical and commercial application of various technologies for biomass conversion into bioenergy. The production of first- and second-generation biofuels as well as other forms of renewable energy, such as electricity, will be covered. Specific topics include:

- Sustainable supply of biomass for bioenergy production
- Electricity production from biomass
- Bio-ethanol production, including substrate preparation, microbial conversion and separations
- Thermo-chemical conversions, including combustion, gasification and pyrolysis, and the use of these for green electricity production
- Biogas production, for example from landfill sites, animal dung and waste-water treatment
- Biodiesel production, including process basics, product purification and waste treatment

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 or competence.
- 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 five-day course requires attendance of all lectures and tutorials, which are spread over a 2 or 3 week schedule ([see dates](#)). Delivery is online by default, with optional in-person sessions at the presenter's discretion. Certificate of Competence and academic credit participants must attend all sessions, submit all work, and achieve $\geq 50\%$. Certificate of Attendance participants must attend all sessions and attempt all tutorials; no minimum mark applies.

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 **R15 000 for a certificate of attendance**, and **R19 000 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.

Short courses:

+27 (0) 21 808 4069

www.crses.sun.ac.za

Academic:

Please contact the relevant academic department, quoting course code 64904 744/844