



CENTRE FOR RENEWABLE &  
SUSTAINABLE ENERGY STUDIES

# Bioenergy

**DATE** 6 – 10 June 2022

**VENUE** K406, Knowledge Centre, Engineering Faculty, Stellenbosch University

**ACCREDITATION** Certificate of attendance (4 CPD points) [REGISTER HERE](#)  
Certificate of completion (4 CPD points) [REGISTER HERE](#)  
15 academic credits at NQF 8 or 9 level [READ MORE](#)

**DEADLINE** 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.



## 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

**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.





## 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 (if all lectures have been attended) or competence (if all lectures have been attended and various assessments have been successfully passed).
- 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.
- A blended classroom/online model will be followed, with students being offered the options to attend in person (covid dependent), online only, or a mixture of these.

## Who should attend

Engineers, technologists and technicians active in the energy sector. Government and local authority officials. Architects, 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:
- **R12 000 for a certificate of attendance**, and
- **R14 000 for a certificate of competence**. Please refer to the University's latest study cost information for academic fees.
- 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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