



CENTRE FOR RENEWABLE &
SUSTAINABLE ENERGY STUDIES

Bio Energy

Date: 21 - 26 June 2021

Venue: Sustainability Institute, Lynedoch, Stellenbosch
33°58'56.7"S 18°46'07.4"E

Registration: [Link to be confirmed](#)

Course fees: R11 800

Presenters:



Prof Johann Görgens 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.



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.

Synopsis

The course will consider the practical and commercial application of the various technologies for biomass conversion into bio-energy. The production of first and second generation bio-fuels, electricity and heating as the main forms of renewable energy will be covered, with an emphasis on the critical issues of sustainability, energy efficiency and commercial feasibility. The following aspects of bio-energy production will be included:

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

The selection of the most appropriate technology to combine sustainable biomass supply with energy demands will be a central thread through the course.

Sustainability of the value chain for the various biomass sources and conversion technologies, will be an important component of the course. The entire value chain will be considered comprehensively, partly through group work that is a key learning activity in the course.

Who should attend

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

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 Sustainability Institute, Baden Powell Drive, Lynedoch, and will run Mo-Fri, 21 - 26 July 2021 from 08:00 to 17:00 and on Saturday 26 July 2020 from 09:00 – 13:00. Directions can be obtained from: www.sustainabilityinstitute.net.

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.

Registration close: 8 June 2020

Course Fees

- o Cancellations made up to and including 8 June 2020 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.

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