



Thermal Energy Systems

5-10 June 2017

Department of Mechanical and Mechatronic Engineering, Stellenbosch University

Synopsis

The course consists of a study of the conventional energy systems that contribute to the total energy mix throughout the world today. The course will give an insight into the current world energy supply and the demand for conventional energy including consumption figures for various end-users. The supply and demand for conventional energy in South Africa will also be covered. The contribution made by each of the systems across the various continents and for the major industrialized countries will be discussed. For each of the major systems, the methods of energy generation and production as well as the supply networks will be covered. The main themes for the course will include:

- Introduction to Conventional Energy Systems;
- Thermodynamic Cycles;
- Coal;
- Electricity;
- Nuclear;
- Gas Turbines;
- Oil and Natural Gas;
- Transport;
- Energy Efficiency and the Future.

No academic credits can be obtained by attending this course.

Who should attend

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

Please note that in order to fully benefit from this course some mathematical ability will be advantageous in order to significantly appreciate several of the relevant concepts.

Certification and Accreditation

The module has been registered with the Engineering Council of South Africa for Continuous Professional Development points. A Certificate of Attendance with an indication of the CPD points and level will be awarded to all participants who attend the full course from Monday morning to Saturday lunchtime.

Venue and Time

This course will be presented at the Department of Mechanical and Mechatronic Engineering, Stellenbosch University and will run Mo - Fri, 5-9 June 2017 from 08:00 to 17:00 and on Saturday 10 June 2016 from 09:00 – 13:00. Directions can be obtained from: <http://mecheng.sun.ac.za/index.php/en/contact-us>.

Travel and Accommodation

All travel arrangements are for your own account. The Stellenbosch Information Bureau can be contacted at tel. 021-883 3584 for available accommodation near the university. A list of available guesthouses can also be obtained from crses@sun.ac.za

Registration

The course is designed for a restricted number of attendees so as to personalise and maximize the learning experience. Bookings will be taken on a first come first served basis.

Registration must be done online at

<http://apps.sun.ac.za/SCD/ApplicationForm.aspx?scourseid=3453>

No registration is final until you have received a confirmation by email from Stellenbosch University.

Registration closes on Friday, 19 May 2017.

Course Fees

- Course fee for the five and a half-day course: R9500
- **Cancellation of enrolment made up to and including Friday, 19 May 2017 will be subject to a 15% handling**

fee. No refunds will be made after this date; however, substitutions will be accepted.

- Attendance without payment will not be permitted.
- In the case of unforeseen circumstances Stellenbosch University reserves the right to cancel the course or change the lecturer with at least two weeks' notice, in which case all fees will be reimbursed in full on request.
- The course fee includes all study material, tea/coffee and lunches.

Presenters:



Mr. Richard Haines is a senior lecturer in the Department of Mechanical and Mechatronic Engineering, Stellenbosch University. He has a BScEng (Mech) degree and a MScEng degree from the University of Kwazulu - Natal. He has spent over twenty years in industry specialising in product development and testing. His research and teaching interests include investigating and testing alternative fuels suitable for internal combustion engines.



Dr. Jaap Hoffmann is a senior lecturer in Mechanical and Mechatronic Engineering, Stellenbosch University. He obtained his BEng, MEng and PhD in Mechanical Engineering from Stellenbosch University. He has spent twenty years in the power generation industry, doing computational fluid dynamics (CFD) for the last fourteen years. His interests are dispersed two-phase flows and solar thermal energy.



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