

Postgraduate Studies in Energy Efficiency and Demand-side Management

The University of Pretoria has been awarded to host the South African National Hub for the Postgraduate Programme in Energy Efficiency and Demand-side Management by the South African National Energy Research Institute (SANERI), a subsidiary of CEF (Pty) Ltd and a joint initiative of the Department of Science and Technology and the Department of Minerals and Energy. The official launch of the Programme took place on 10 June 2008 at the University of Pretoria. The postgraduate research programmes aim to attract a large number of qualifying undergraduates from across the country, as well as an increasingly strong contingent of international students. The range of research specialisations and the breadth of knowledge within the Hub contribute to making it a truly unique learning environment in energy efficiency and demand-side management (DSM).

The University of Pretoria has established postgraduate degree programmes specialised in energy efficiency and DSM. Analytic techniques from engineering and optimisation are the main tools in the quantitative study of energy efficiency related topics such as power system scheduling, power system efficiency with alternative energy resources and co-generation, motor and transportation efficiency, fuel efficiency, and energy

efficient architecture and housing. The study extends also to DSM schemes, smart load control and computer networks, and efficient lighting. These research topics are clustered among different research groups across faculties within the University of Pretoria: power and energy systems, industrial electronics, electric drive and transportation, control and computer network systems, process integration in chemical engineering, fluid dynamics and heat transfer and architecture and housing, in the Department of Electrical, Electronic and Computer Engineering, Department of Chemical Engineering, Department of Mechanical and Aeronautical Engineering, Department of Civil and Biosystems Engineering and Department of Architecture.

Opportunities for postgraduate studies and bursaries exist in all aspects of energy efficiency and DSM for prospective candidates with a background in electrical engineering, electronic engineering, mechanical engineering, chemical engineering, civil engineering, computer, mathematics, and architecture.

The admission requirements remain the same as the individual degree programme and can be found on the web pages of the individual departments. Excellent skills in English, written and spoken, are required, as is an ability to communicate research results. The Hub is also planning to run a number of short courses to develop and

enhance knowledge in energy efficiency and DSM in support of accelerated and shared economic growth in South Africa while earning CPD points. The detailed information will be published on both websites of the CE@UP – <http://www.ceatup.com> and the Hub – <http://eehub.up.ac.za>.

Bursaries can also be awarded to candidates studying at other tertiary institutions. The Hub is striving for a more even gender balance and women are specially invited to apply for these positions. Information about the formal application procedures can be found on the website of the Hub; however, applicants are welcome to contact research groups for relevant research topics and other academic information.

The administration of the Hub is managed at the Centre of New Energy Systems at the Department of Electrical, Electronic and Computer Engineering. The director of the Centre and the Hub is Prof Xiaohua Xia.

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