



Eskom Specialisation Centre in **Energy Efficiency** at the University of Cape Town



EPPEI Eskom Power Plant Engineering Institute



About EPPEI

The Eskom Power Plant Engineering Institute (EPPEI) provides world-class training and research to improve the power plant industry. There are 8 Specialisation Centres at 6 South African partner universities.

EPPEI fosters a dynamic relationship between industry, academia, including universities and universities of technology and the postgraduate student to ensure that there is a balance between applied research that is relevant to industry and research that has academic merit.

EPPEI encourages the involvement of industry partners in research and innovation. Industrial partners interested in getting involved should contact the EPPEI consortium via any of the consortium partner universities or the consortium management team.

www.eppei.co.za



About the Eskom Specialisation Centre in Energy Efficiency

The Eskom Specialization Centre in Energy Efficiency at UCT is equipped to:

- Provide training through postgraduate research and course-based programs.
- Develop steady-state and dynamic process models for power plants.
- Study the impact of intermittent, transient and low load operation and developing mitigation strategies.
- Advancing the development of tools and skills for on-line process condition monitoring.



It is the aim of the Specialisation Centre in Energy Efficiency to develop skills and tools to improve the availability, reliability and environmental impact of Eskom power plants by increasing the efficiency of energy production. This will be achieved by focusing on complete plant process flow modelling and analysis.



Research areas

Through the development of the Eskom Specialisation Centre in Energy Efficiency, the Applied Thermofluid Process Modelling Research Unit (ATProM) was established at UCT in December 2017.



Our main research areas include:

- Development of a power plant engineering simulator
- Transient and low load operation
- Pulverised fuel flow characterization and modelling
- Wet cooling tower performance research
- Air cooled condenser operation (Stellenbosch)
- Thermofluid process condition monitoring

The Research Unit works closely with our partner universities in research and training: Stellenbosch University, Vaal University of Technology and Nelson Mandela University.



NELSON MANDELA
UNIVERSITY

Career opportunities

Master your skills in thermofluid process engineering through research based studies with our two year full time programme for an **MSc in Mechanical Engineering**.

Become an industry specialist in the energy sector. We offer a **PG Dip in Power Plant Engineering** suitable for aspirant engineers aiming to become experts or managers in a technical environment through the following courses:

- Overview of the Powerplant industry
- Power plant system analyses
- Leadership in a technical environment
- Systems engineering in the power plant industry
- Mechanical behaviour of materials
- Power plant boilers: thermofluid processes and controls
- Turbine plant engineering

How to apply

Students interested in the Eskom Specialisation in Energy Efficiency are encouraged to contact us for more specific information. Eskom employees are directed to the EPPEI website www.eppei.co.za

Students can be accepted into the following qualification programs:

- PG Dip (Power Plant Engineering)
- MTech / MEng / DEng
- MSc / PhD

The minimum requirements for admission to the PG Dip in Power Plant Engineering program are:

- An undergraduate degree in science subjects with honors or a BTech.
- Working knowledge of undergraduate Physics and Mathematics.

Minimum requirements for admission to other academic courses will need to be met.

Please contact us using the details below to find out what options are available.

Contact details

Tel: +27 21 650 5720 **Email:** priyesh.gosai@uct.ac.za

Address: Eskom Specialisation Centre in Energy Efficiency
Department of Mechanical Engineering, Maintenance Place Building
Madiba Circle West, Upper Campus, University of Cape Town
Rondebosch, 7701, South Africa

www.atprom.uct.ac.za

