



University of Pretoria Yearbook 2017

Thermoflow 410 (MTV 410)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module content	Navier-Stokes and continuity equations. Euler equations, momentum equations. Conduction in two dimensions. Similarity and dimensional analysis. Convective heat transfer: forced convection (external and internal), natural convection. Boiling and condensation. Thermal radiation. Heat exchangers: classification, Parallel flow and counterflow heat exchangers; double-pass, multi-pass and cross-flow heat exchangers; LMTD method, Effectiveness-NTU method, selection of heat exchangers. Experimental techniques in heat transfer.
Module credits	16.00
Programmes	BEng Mechanical Engineering BEng Mechanical Engineering ENGAGE
Prerequisites	No prerequisites.
Contact time	1 practical per week, 3 lectures per week
Language of tuition	Module is presented in English
Academic organisation	Mechanical and Aeronautical En
Period of presentation	Semester 1

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