University of Pretoria Yearbook 2017

Thermodynamics 223 (CTD 223)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
Programmes	BEng Chemical Engineering
	BEng Chemical Engineering ENGAGE
Prerequisites	CIR 211, MPR 212/213, (WTW 258)
Contact time	4 lectures per week, 3 tutorials per week
Language of tuition	Module is presented in English
Academic organisation	Chemical Engineering
Period of presentation	Semester 2

Module content

Simple applications of the first and second laws of thermodynamics. The concepts of work, heat, enthalpy and entropy. The calculation of internal energy, enthalpy and entropy using the equations of state. Simple heat engine cycles. Refrigeration and gas liquefaction. Process efficiency by means of energy. Introduction to non-ideality in VLE and mixing behaviour.