



University of Pretoria Yearbook 2022

Chemical engineering 211 (CIR 211)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	12.00
NQF Level	06
Programmes	BEng (Chemical Engineering) BEng (Chemical Engineering) ENGAGE
Prerequisites	CIR 123
Contact time	3 lectures per week, 3 tutorials per week
Language of tuition	Module is presented in English
Department	Chemical Engineering
Period of presentation	Semester 1

Module content

Vapour pressure, phase changes, equilibrium. Vapour/gas equilibrium; Henry's law. Enthalpy and enthalpy balances. Heat of reaction. Data and data sources, steam tables. Enthalpy and combustion; flame temperature. Heats of solution and mixing. Miscible and immiscible liquid mixtures; dew point, bubble point. Simultaneous mass and enthalpy balances. PVT properties of real gases, PVT-diagrams of pure compounds. Vapour liquid equilibrium for ideal mixtures (Raoult's law).

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