



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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