

## University of Pretoria Yearbook 2021

## Chemical engineering 123 (CIR 123)

**Qualification** Undergraduate

Faculty Faculty of Engineering, Built Environment and Information Technology

Module credits 8.00

NQF Level 05

**Programmes** BEng Chemical Engineering

BEng Chemical Engineering ENGAGE

**Prerequisites** CIR 113 GS, CHM 171 GS

**Contact time** 2 lectures per week, 2 tutorials per week

**Language of tuition** Module is presented in English

**Department** Chemical Engineering

Period of presentation Semester 2

## Module content

Chemical reaction and stoichiometry, excess reactant, conversion, yield, selectivity. Material balances with recycle streams, bypass streams and purge streams. Gases, vapours and liquids: ideal gas law, SG and density of gases, Nm<sup>3</sup>. Material balances where gases are involved. Fuels and combustion: coal analysis, combustion calculations.

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