University of Pretoria Yearbook 2019

Laboratory 321 (CLB 321)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
Programmes	BEng Chemical Engineering
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Prerequisites	CJJ 310/CJJ 210, CHM 226, CPN 321#, CKN 321#, (CMO 310), CIO 320#
Contact time	2 lectures per week, 8 practicals per week
Language of tuition	Separate classes for Afrikaans and English
Department	Chemical Engineering
Period of presentation	Semester 2

Module content

Laboratory safety and general industrial safety practices. Techniques for planning of experiments. Experimental work illustrating: Analysis: Composition of coal and gas, heat of combustion, viscosity. Mass transfer: Gas absorption, batch distillation, azeotropic distillation, fractional distillation and liquid-liquid extraction. Heat transfer: Condenser, shell and tube heat exchanger, heat loss from insulated pipes. Piping system design: Frictional energy loss through pipes and fittings. Measuring equipment: Rate of flow, temperature. Reporting of laboratory results.