

University of Pretoria Yearbook 2016

Process control 410 (CPB 410)

Qualification Undergraduate

Faculty [Faculty of Engineering, Built Environment and Information Technology](#)

Module credits 16.00

Programmes [BEng Chemical Engineering](#)

[BEng Chemical Engineering Engage](#)

[BScHons Applied Science Applied Science: Chemical Technology](#)

[BScHons Applied Science Applied Science: Control](#)

Prerequisites CPN 321 GS

Contact time 3 tutorials per week, 4 lectures per week

Language of tuition Both Afr and Eng

Academic organisation Chemical Engineering

Period of presentation Semester 1

Module content

Dynamic properties of equipment, instruments and processes. Mathematical modelling and computer simulation of processes in the time, Laplace and frequency domains. Linearisation and non-linear processes. Stability of control systems. Controller tuning. Methods for process identification. Digital process control. Z-transforms. Use of computers and microprocessors. Introduction to modern control theory: state-space approach. Applied process control. Choice of control instrumentation. Plantwide control strategy. Development of P and IDs.

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