



University of Pretoria Yearbook 2017

Analogue electronics 310 (ENE 310)

Qualification Undergraduate

Faculty Faculty of Engineering, Built Environment and Information Technology

Module credits 16.00

Programmes BEng Computer Engineering

BEng Computer Engineering ENGAGE

BEng Electrical Engineering

BEng Electrical Engineering ENGAGE

BEng Electronic Engineering

BEng Electronic Engineering ENGAGE

Prerequisites ELI 220

Contact time 1 tutorial per week, 1 practical per week, 3 lectures per week

Language of tuition Separate classes for Afrikaans and English

Academic organisation Electrical, Electronic and Com

Period of presentation Semester 1

Module content

Amplifier concepts: gain, input impedance, output impedance, bandwidth, cascaded stages. Amplifier power dissipation and power efficiency. Operational amplifiers: non-ideal, limitations, low power, programmable. Diode operational circuits: Logarithmic amplifiers, peak detector, clamp, absolute value, voltage regulators. Feedback and stability in amplifiers. Operational circuits: Instrumentation amplifiers, multipliers, oscillators, filters, translinear circuits, and sampling electronics.

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