



University of Pretoria Yearbook 2020

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 GS

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

Language of tuition Separate classes for Afrikaans and English

Department Electrical, Electronic and Computer Engineering

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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