



University of Pretoria Yearbook 2019

Linear systems 220 (ELI 220)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module content	Frequency domain analysis of linear time-invariant systems. Laplace, Fourier and Z-transforms applied to periodic, aperiodic and sampled signals; exponential and trigonometric Fourier series. Nyquist sampling theorem, transfer functions, poles and zeros, bandwidth and rise time, frequency response, impulse response, Bode diagrams, natural frequency, natural and forced response. Instability and oscillations. Computer simulation.
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	EIR 211/221 GS
Contact time	3 lectures per week, 1 practical per week, 1 tutorial per week
Language of tuition	Separate classes for Afrikaans and English
Department	Electrical, Electronic and Computer Engineering
Period of presentation	Semester 2

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