



University of Pretoria Yearbook 2017

Electrical machines 311 (ELX 311)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module content	Magnetic circuits: flux, flux density, reluctance, hysteresis, MMF. Magnetic Energy, Conversion: Process, field energy, mechanical force in electromagnetic systems. Transformers: Types of transformers, per unit system, voltage regulation and efficiency, three phase circuit analysis. Principles of machines: Torque, speed, efficiency and heat loss, circuit models. Machines: Power transformers, DC motors, induction motors.
Module credits	16.00
Programmes	BEng Electrical Engineering BEng Electrical Engineering ENGAGE
Prerequisites	EIR 211/221
Contact time	3 lectures per week, 1 tutorial per week, 1 practical per week
Language of tuition	Separate classes for Afrikaans and English
Academic organisation	Electrical, Electronic and Com
Period of presentation	Semester 1

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