

University of Pretoria Yearbook 2020

Power electronics 320 (EDF 320)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
Programmes	BEng Electrical Engineering BEng Electrical Engineering ENGAGE
Prerequisites	ELX 311 GS, ELI 220 GS
Contact time	1 practical per week, 1 tutorial per week, 3 lectures per week
Language of tuition	Module is presented in English
Department	Electrical, Electronic and Computer Engineering
Period of presentation	Semester 2

Module content

Semiconductor components: Power diodes, silicon-controlled-rectifiers, bipolar transistors, power mosfets, IGBTs, emerging devices. Ancillary issues: Heat sinks, snubbers, gate drive circuits. Converter topologies: AC-DC converters, DC-DC converters; Applications: Sizing of converter components, isolated high-frequency power supplies.

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