University of Pretoria Yearbook 2016

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	3 lectures per week, 1 tutorial per week, 1 practical per week
Language of tuition	Both Afr and Eng
Academic organisation	Electrical, Electronic and Com
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.