

University of Pretoria Yearbook 2017

Power electronics 320 (EDF 320)

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| 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 | Separate classes for Afrikaans and English |
| 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.

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