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# University of Pretoria Yearbook 2021

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## Power system components 320 (EKK 320)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	<a href="#">Faculty of Engineering, Built Environment and Information Technology</a>
<b>Module credits</b>	16.00
<b>NQF Level</b>	07
<b>Programmes</b>	<a href="#">BEng Electrical Engineering</a> <a href="#">BEng Electrical Engineering ENGAGE</a>
<b>Prerequisites</b>	EIR 211, 221 GS
<b>Contact time</b>	1 practical per week, 1 tutorial per week, 3 lectures per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Electrical, Electronic and Computer Engineering
<b>Period of presentation</b>	Semester 2

### Module content

Single and three-phase basic concepts, Transformers: the ideal transformer, equivalent circuit, single and three-phase transformers, auto-transformers, tap changing transformers. Synchronous machines: equivalent circuit, real and reactive power control, two-axis machine model. Transmission lines, Underground Cables, Capacitors, Reactors, Single and three-phase induction motors, Load modelling.

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