University of Pretoria Yearbook 2016

Microwaves and antennas 320 (EMZ 320)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
Programmes	BEng Electronic Engineering
	BEng Electronic Engineering Engage
Prerequisites	EMZ 310 GS, ENE 310 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

Smith Chart; Waveguides, stripline, microstripline; Network analysis, S-parameters, signal flow diagrams, matching networks; Power divider; Filter implementation, Richard's transformation, Kuroda'a identities; Antenna fundamentals, port and radiation characteristics, Friis transmission equation, halfwave dipole, aperture antennas, linear arrays, microstrip patch antenna and arrays; Antenna applications, satellite, base stations, adaptive beams; Radar range equation.

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