



University of Pretoria Yearbook 2019

Radiation physics 210 (RFI 210)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	10.00
Programmes	BRad Diagnostics
Service modules	Faculty of Health Sciences
Prerequisites	RFI 110, MTL 180, RAN 100, FSG 161, FSG 162, RAW 182 and RAW 180
Contact time	3 lectures per week
Language of tuition	Module is presented in Afrikaans
Department	Physics
Period of presentation	Semester 1

Module content

X-ray generator: transformer, energy losses, rectifiers, capacitor-discharge systems, kVp and mA control, high voltage cables. Image intensifiers: design, brightness gain, coupling systems. TV camera and monitor: design, video signal, scanning. Image quality. Optics: reflection, refraction, total internal reflection, mirrors, lenses, thin lens formula, lens aberrations, fibre optics, lasers, laser camera. Computers: basic hardware, digital principles and terminology, data storage.

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