



University of Pretoria Yearbook 2018

Radiation physics 210 (RFI 210)

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| Qualification | Undergraduate |
| Faculty | Faculty of Natural and Agricultural Sciences |
| Module credits | 10.00 |
| Programmes | B Rad 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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