



University of Pretoria Yearbook 2018

Radiation physics 211 (RFI 211)

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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, RAW 180, RAN 100, FSG 161, FSG 162, RAW 182 and MTL 180 |
| Contact time | 4 lectures per week |
| Language of tuition | Module is presented in Afrikaans |
| Department | Physics |
| Period of presentation | Semester 2 |

Module content

Radio-active decay: half-life, alfa decay, beta decay, gamma decay. Production of isotopes cyclotron, nuclear reactor, Van de Graaff accelerator. Absorption: nucleons, alfa particles, beta particles. Dosimetry: exposure, absorbed dose, equivalent dose, effective dose, dose limits. Radiation detectors: Geiger counter, scintillation counter, thermoluminescent detector, semi-conductor detectors. Radiopharmaceuticals. Biological effects: genetic and somatic effects.

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