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# University of Pretoria Yearbook 2019

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## Radiation physics 210 (RFI 210)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	<a href="#">Faculty of Natural and Agricultural Sciences</a>
<b>Module credits</b>	10.00
<b>Programmes</b>	<a href="#">B Rad Diagnostics</a>
<b>Service modules</b>	Faculty of Health Sciences
<b>Prerequisites</b>	RFI 110, MTL 180, RAN 100, FSG 161, FSG 162, RAW 182 and RAW 180
<b>Contact time</b>	3 lectures per week
<b>Language of tuition</b>	Module is presented in Afrikaans
<b>Department</b>	Physics
<b>Period of presentation</b>	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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