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# University of Pretoria Yearbook 2018

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## Radiation physics 110 (RFI 110)

<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>	No prerequisites.
<b>Contact time</b>	2 lectures per week
<b>Language of tuition</b>	Separate classes for Afrikaans and English
<b>Department</b>	Physics
<b>Period of presentation</b>	Year

### Module content

Units: converting, dimensional analysis. Mechanics: momentum, force, energy, circular motion, moment of inertia, angular momentum, simple harmonic motion.  
Electrostatics: Coulomb's law, electric field, potential. Direct currents: resistors, Ohm's law. Capacitors: capacitance, series, parallel energy. Magnetism: force on a moving charge, electric motor. Electromagnetic induction: Faraday's law, Lenz's Law, generators. Alternating currents: average and rms value, three phase, rectification, transformers. Electrical safety. Atomic structure: ionization, excitation.  
X-rays: production, absorption.

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