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# University of Pretoria Yearbook 2018

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## Physics 154 (PHY 154)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	<a href="#">Faculty of Natural and Agricultural Sciences</a>
<b>Module credits</b>	8.00
<b>Programmes</b>	<a href="#">BSc Extended programme - Biological and Agricultural Sciences</a>
<b>Service modules</b>	Faculty of Education
<b>Prerequisites</b>	PHY 143
<b>Contact time</b>	1 practical per week, 4 lectures per week, Foundation Course
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Physics
<b>Period of presentation</b>	Semester 1

### Module content

The main topic in this module is Electricity, Sound, Optics, and Modern Physics.

Static Electricity: Electric charge and force, electric field, the electric energy, electric potential, conservation of electrical energy.

Flow of charge: Capacitors, application of charge flow to nerves.

Sound: Vibrations, waves in unconfined and confined media, applications to human hearing.

Optics: Reflection, refraction, applications to optometry and ophthalmology.

Atomic physics: Atomic models, x-rays.

Nuclear physics: The stable atomic nucleus, radioactivity, nuclear spin and applications to medical diagnostics.

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