



# University of Pretoria Yearbook 2022

## Physics 144 (PHY 144)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	<a href="#">Faculty of Natural and Agricultural Sciences</a>
<b>Module credits</b>	8.00
<b>NQF Level</b>	05
<b>Programmes</b>	<a href="#">BSc extended programme - Biological and Agricultural Sciences</a> <a href="#">BSc extended programme - Mathematical Sciences</a>
<b>Service modules</b>	Faculty of Education
<b>Prerequisites</b>	PHY 133
<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 2

### Module content

The main topics covered in this module are Mechanics and Thermodynamics. Kinematics: Basic types of motion, one-dimensional motion, two- and three dimensional motion, linear momentum and its conservation, multi-object systems and the centre of mass.

Forces: Types of forces, Newton's Laws of Mechanics and applications, friction.

Energy: Work, heat, conservation of mechanical energy.

Thermodynamics: First law of thermodynamics, empirical gas laws, mechanical model of the ideal gas, energy of the ideal gas, basic thermodynamic processes.

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