

Grade 9 unit 1 & Grade 11 unit 2: Vectors

<i>Contents</i>	<i>UEE 2008-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
<i>Vector and scalar</i>	<i>1</i>	<i>1</i>	
<i>Types of vectors</i>	<i>4</i>		<i>1</i>
<i>Unit vectors</i>	<i>1</i>		
<i>Components of vectors</i>	<i>1</i>	<i>2</i>	
<i>Operations on vectors</i>	<i>1</i>		
<i>Graphical method of vector addition, subtraction and scalar product</i>	<i>2</i>		
<i>Resultant and magnitude of vectors</i>	<i>7</i>	<i>2</i>	
<i>Scalar product of vectors</i>	<i>2</i>		
<i>Cross product of vectors</i>	<i>1</i>		

Grade 9 unit 2 & Grade 11 unit 3: Motion in one dimensions

<i>Contents</i>	<i>UEE 2008-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
<i>Uniformly accelerated motion in 1d</i>	10	3	3
average and instantaneous velocity	1		
Graphical representation of uniformly accelerated motion	5	1	1
Vertical motion	2	3	2
Uniform circular motion	4		
Relative velocity	2	2	

Grade 9 unit 3 and 4 & Grade 11 unit 4: Dynamics

<i>Contents</i>	<i>UEE 2008-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
Definition of Dynamics	2		
Newton's laws of motion	3	3	1
Resultant force		2	
Frictional force, applied force, normal force, Weight and apparent weight	8	4	2
Condition of Equilibrium	4	3	1
Work (done by applied, frictional, gravitational force)	2	2	1
Work energy theorem	4		1
Conservative and non-conservative force	3		
Power	4	1	
Conservation of mechanical energy	7	4	1
Impulse and linear momentum	5	1	1
Collisions (elastic and inelastic)	8	2	
Center of mass	3	1	

Grade 9 unit 5: Simple machine

<i>Contents</i>	<i>UEE 2014-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
Inclined plane	3		
Pulley		2	
wedge		1	
screw			
Lever			1
Wheel and axle			
Mechanical advantage/Efficiency		2	

Grade 9 unit 6 & Grade 12 unit 3: Fluid statics and Fluid mechanics

<i>Contents</i>	<i>UEE 2008-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
Pressure	2	1	1
Measuring pressure			1
Density	3	1	2
Pascal's principle	3		1
Apparent weight		1	1
Atm, gauge and absolute pressure			1
Archimedes's principle	3		
Fluid flow	7		1

**Grad 9 unit 7 & Grade 11 unit 5: Temperature and heat
&
Heat conduction and calorimetry**

<i>Contents</i>	<i>UEE 2008-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
Temperature and heat	3		1
First law of thermodynamics	3		
Thermal equilibrium	2		
Heat transfer mechanisms			
Linear, area and volume expansion of solids		3	2
Application of thermal expansion	1		
Expansion of liquids	1		
Heat quantity, specific heat capacity and heat capacity	3	5	1

Grade 9 unit 8: Wave motion and sound

<i>Contents</i>	<i>UEE 2014-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
Wave propagation		3	1
Mechanical waves	1		
Electromagnetic waves		1	
Wave equation	1		
Reflection		1	
Refraction			
Diffraction		1	
Interference	2	1	
Sound waves		3	1

Grade 10 unit 1 & Grade 12 unit 2: Motion in 2D

<i>Contents</i>	<i>UEE 2008-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
Projectile motion	3	1	2
Centripetal force	1		1
Rotational kinematics	3	4	2
Rotational dynamics	9	2	4
newton's law of universal gravitation	2	1	
Kepler's law of planetary motion	3	1	1

Grade 10 unit 2 and 3 & Grade 11 Unit 6: Electrostatics and Electric current

<i>Contents</i>	<i>UEE 2008-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
Electric charge and charging process	5	2	
Electric potential and electric potential energy	5	3	
Electric field	1	4	1
Electrostatic force	2	3	
Ohm's law and resistance	2	1	2
Electric circuit	6	2	2
Capacitor and capacitance	6	2	2
Electric current	2		
Electric dipole	1		
Electrical energy	1		
E.M.F and internal resistance of a cell	2	2	
Power	2	1	
Measuring instruments	5		
Application of electrostatics	1	3	

Grade 10 unit 4 & Grade 12 unit 4: Electromagnetism

<i>Contents</i>	<i>UEE 2008-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
Magnetism	4	1	
Concepts of magnetic field	6	5	1
Magnetic force	5	2	
Magnetic flux & magnetic field strength	4	3	1
Electromagnetic induction	8	1	1
ac generator	1		
Inductors	4		
Transformers	3	1	2

Grade 10 unit 5 & Grade 12 unit 5: Introduction/ basics of electronics

<i>Contents</i>	<i>UEE 2014-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
Vacuum tube devices		2	
Conductors, semiconductors, insulators	1		1
Doping		1	
Diode	1		
Rectification		2	
Semiconductor devices		1	
Transistors		2	1
Logic gates		1	2
Integrated circuits			

***Grade 10 unit 6: Electromagnetic waves and
geometrical optics***

<i>Contents</i>	<i>UEE 2014-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
Electromagnetic waves		3	1
Reflection of light		2	
mirrors(concave and convex)	2		1
Refraction of light		2	
Refractive index and snell's law	1	1	
Lenses(concave and convex)	1		
Human eye and defects			
Diffraction of light			

Grade 11 unit 1: Physics and human society

<i>Contents</i>	<i>UEE 2008-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
Importance of physics to society	-	-	
Physics communities and their roles	-	-	-
Making of physics knowledge	-	-	-
Physics careers	-	-	-
Current status of physics	-	-	-

Grade 11 unit 7: Nuclear physics

<i>Contents</i>	<i>UEE 2008-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
Nucleus	1	-	
Strong and weak nuclear force		-	-
Nuclear binding energy	1	-	-
Nuclear stability		-	-
Radioactivity	1	-	-
Radiation detectors		-	-
The half life	2	-	-
Uses of nuclear radiation		-	-
Fission reaction	1	-	-
Fusion reaction		-	-

Grade 12 unit 1: Physics and other sciences

<i>Contents</i>	<i>UEE 2008-15</i>	<i>Matric 2008-2010</i>	<i>UEE 2016</i>
Physics and chemistry	-	-	
Physics and biology	-	-	1
Physics and astronomy	-	-	
Physics and engineering	-	-	
medical physics	-	-	1
Physics and defense technology	-	-	