

Access to H.E. National Programme Unit



Unit Title	Properties of Matter		
Graded Unit Code	GA33PHY19	Ungraded Unit Code	UA33PHY19
Pathway(s)	Science and Engineering Construction and the Built Environment		
Module(s)	Physics		
Level	3	Credit Value	3
Valid from	31 st July 2021	Valid to	31 st July 2026

The following QAA grade descriptors must be applied if you are delivering the graded version of this unit:

1	Understanding of the subject
2	Application of knowledge
3	Application of skill
7	Quality

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	The learner can:
1. Understand the bulk properties of matter	1.1 Explain the properties of solids, liquids and gases
	1.2 Define density and solve problems involving density
2. Understand the effects of forces on solid materials	2.1 Investigate Hooke's Law
	2.2 Define proportional limit, elastic limit, and yield point
	2.3 Explain the difference between ductile and brittle behavior
	2.4 Explain the difference between elastic and plastic behavior

Access to H.E. National Programme Unit



3. Understand the molecular kinetic theory model	2.5	Define tensile stress, tensile strain and Young's modulus and solve problems involving these concepts
	2.6	Define elastic shear modulus and solve problems involving elastic shear modulus.
	3.1	Using a simple molecular model, explain the relationship between p , V and T
	3.2	Use the relationship between p , V and T to solve problems
	3.3	State the assumptions of the kinetic theory of gas
	3.4	Solve problems using the ideal gas equations.
	3.5	Derive the relationship between molar kinetic energy, temperature, Boltzmann constant and the molar gas constant.
	3.6	Solve problems using the relationship between molar kinetic energy, temperature, Boltzmann constant and the molar gas constant.