

Access to H.E. National Programme Unit



Unit Title:	Circular Motion, Simple Harmonic Motion and Resonance		
Graded Unit Code:	GA33PHY14	Ungraded Unit Code:	UA33PHY14
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 Uniform Circular Motion		1.1	Explain uniform circular motion in terms of acceleration and centripetal force
		1.2	Perform calculations to find angular speed, centripetal acceleration and centripetal force for common examples of uniform circular motion
2. Understand simple harmonic motion and simple harmonic systems		2.1	Explain the conditions for simple harmonic motion
		2.2	Experimentally investigate common examples of simple harmonic motion, e.g. mass spring system, pendulum

Access to H.E. National Programme Unit



	<p>2.3 Solve problems involving simple harmonic systems, including variation in kinetic and potential energy with displacement and with time</p>
	<p>2.4 Represent simple harmonic motion graphically using distance/time, velocity/time and acceleration/time graphs, including the equation for each graph</p>
	<p>2.5 Solve problems involving simple harmonic motion using formulae and graphical representations</p>
3. Understand resonance	<p>3.1 Use example to explain the difference between free vibrations and forced vibrations</p>
	<p>3.2 Define resonance and explain resonance in mechanical systems in terms of natural frequency</p>
	<p>3.3 Explain the significance of resonance using desirable and undesirable examples</p>