

Access to H.E. National Programme Unit



Unit Title:	Gravitational and Electric Fields		
Graded Unit Code	GA33PHY20	Ungraded Unit Code	UA33PHY20
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 concept of a field	1.1 Use the field model to explain interactions between objects which are not in contact, e.g. charged particles, point masses
	1.2 Represent fields using lines of force
2. Understand gravitational fields	2.1 State Newton's law of gravitation and use it to calculate the force between pairs of point masses
	2.2 Define gravitational field strength and gravitational potential
	2.3 Solve problems involving gravitational field strength and gravitational potential.
	2.4 Define Kepler's third law of planetary motion and derive the link to Newton's Law of Gravitation

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	2.5	Solve simple problems involving satellites in circular orbits
3. Understand electric fields	3.1	State Coulomb's Law
	3.2	Define electric field strength and electric potential and give their relationship in a uniform field
	3.3	Solve simple problems involving electric field strength and Coulomb's law
4. Understand the similarities and differences between gravitational and electric fields	4.1	State the similarities and differences between gravitational and electric fields