Changing lives through learning

Access to Higher Education Unit

This unit forms part of an Access to HE Diploma. If delivering the graded version of this unit, please refer to the Provider Handbook for details on grading descriptors and the application of these across units within your programme.

Unit Title: Gravitational and Electric Fields

Graded Unit Reference Number: GA33PHY20

Ungraded Unit Reference Number: UA33PHY20

Module: Physics

Level: Three (3)

Credit Value: Three (3)

Minimum Guided Learning Hours: 30

Learning Outcome (The Learner will):	Assessment Criterion (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
	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