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: Magnetic Fields and Electromagnetic Induction

Graded Unit Reference Number: GA33PHY01

Ungraded Unit Reference Number: UA33PHY01

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 behaviour of electrons in magnetic and electric fields	1.1 Explain the behaviour of charged particles moving normally to a uniform magnetic field
	1.2 Explain the behaviour of charged particles moving normally to a uniform electric field
	1.3 Solve simple problems involving electrons moving normally to a uniform magnetic and electric fields
2. Understand magnetic flux density and the effect of a magnetic field on a current carrying conductor	2.1 Define magnetic flux density and its units
	2.2 Explain the force on a current carrying conductor in a magnetic field
	2.3 Solve problems to calculate the force on a current carrying conductor in a magnetic field
	2.4 Outline the operation of AC and DC electric motors
3. Understand electromagnetic induction and its effects	3.1 Explain electromagnetic induction
	3.2 State Lenz's Law and Faraday's Law and use them to solve problems
	3.3 Outline the operation of a simple generator

	3.4	Describe and explain the operation of a transformer
	3.5	Solve simple problems involving input and output voltage of transformers