

## 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:** Dynamics and Statics

**Graded Unit Reference Number:** GA33PHY11

**Ungraded Unit Reference Number:** UA33PHY11

**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 nature of vector quantities	1.1 Distinguish between scalar and vector quantities
	1.2 Find the resultant of two coplanar vectors by diagram and calculation
	1.3 Resolve vectors into components in two dimensions
	1.4 Solve problems for systems involving three coplanar forces to determine whether the forces are in equilibrium
2. Understand motion involving uniform acceleration	2.1 Use the equations of motion to solve problems involving uniform acceleration
	2.2 Solve problems for projectiles by considering vertical motion and horizontal motion independently
3. Understand and apply the principle of moments	3.1 Define the terms 'moment', 'centre of mass' and 'couple'
	3.2 State the principle of moments and use it to solve problems for simple balanced systems
	3.3 Use experimental methods to find the centre of mass of regular laminas

4. Use momentum considerations to solve problems	4.1 Define linear momentum
	4.2 State the law of conservation of linear momentum and solve problems involving conservation of linear momentum
5. Understand Newton's Laws of motion	5.1 State Newton's laws of motion
	5.2 Apply Newton's laws of motion to solve problems
6. Understand the relationship between impulse and momentum	6.1 Define impulse
	6.2 Solve problems involving impulse and momentum