

## Eduqas Physics – Component 1

## Module 5: Circular Motion

This topic covers the idea that centripetal force is the resultant force that acts on a body moving at constant speed in a circle, and that it acts towards the centre of the circle. Defining terms for circular motion are introduced and the equations relating to circular motion are derived.

You should be able to demonstrate and show your understanding of:	Progress and understanding:			
	1	2	3	4
The terms period of rotation, frequency				
The definition of the unit radian as a measure of angle				
The use of the radian as a measure of angle				
The definition of angular velocity, $\omega$ , for an object performing circular				
motion and performing simple harmonic motion				
The idea that the centripetal force is the resultant force acting on a				
body moving at constant speed in a circle				
The centripetal force and acceleration are directed towards the centre				
of the circular motion				
The use of the following equations relating to circular motion				
$v = \omega r$				
$a = \omega^2 r$				
$a = v^2 / r$				
$F = m v^2 / r$				
$F = m \omega^2 r$				