Access to H.E.
National Programme Unit

Unit Title:	Coordinate Geometry		
Graded Unit Code:	GA33MTH13	Ungraded Unit Code:	UA33MTH13
Pathway(s):	Computing Science and Engineering Construction and the Built Environment		
Module(s):	Maths for Computing Mathematics		
Level:	3	Credit Value:	3
Valid from:	1st August 2014	Valid to:	31st July 2024

The following QAA grade descriptors must be applied if you are delivering the graded version of this unit:

1	Understanding of the subject
3	Application of skills
7	Quality

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	**The learner can:**
1. Solve problems involving points represented by their Cartesian coordinates in two dimensions	1.1 Find the distance between two points from their Cartesian coordinates
	1.2 Determine the Cartesian coordinates of the mid-point on a straight line connecting two points
	1.3 Find the gradient of a straight line connecting two points
2. Solve problems for straight lines represented using Cartesian coordinates	2.1 Convert Cartesian equations to polar form and vice versa
	2.2 Represent straight lines using the forms $y - y_1 = m(x - x_1)$, $ax + by + c = 0$ and $y = mx + c$

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	**The learner can:**
	2.3 Find the distance from a point to a straight line, given the coordinates of the point and the equation of the line
	2.4 Deduce from their equations whether two straight lines are parallel to each other and state the conditions for this
	2.5 Deduce from their equations whether two straight lines are perpendicular to each other and state the conditions for this
	2.6 Sketch lines from their Cartesian equations
3 Understand the representation of circles using Cartesian coordinates	3.1 Derive the equation of a circle from the Cartesian coordinates of its centre and its radius
	3.2 Given the equation of a circle, find its centre and radius by completing the square
	3.3 Find the equation of a tangent at a given point on a circle