Access to H.E.
National Programme Unit

openawards

Unit Title:	The Normal Distribution

Graded Unit Code:	GA33MTH17	Ungraded Unit Code:	UA33MTH17

Pathway(s):	Science and Engineering Construction and the Built Environment

Module(s):	Maths

Level:	3	Credit Value:	3

Valid from:	1st August 2022	Valid to:	31st July 2027

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. Use standard normal tables to calculate probabilities associated with the normal distribution	1.1 Standardise a normal variable and use normal distribution tables to calculate probabilities.
	1.2 Calculate the mean and standard deviation of a normal distribution using the inverse normal function.
2. Understand the concept of confidence intervals for the population mean of a normal distribution.	2.1 Calculate sample statistics $\bar{x}$ and s^2 as estimates of $\square$ and $\square^2$, respectively.

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	**The learner can:**
	2.2 Calculate a confidence interval for the population mean given the population standard deviation and the sample mean.
	2.3 Interpret and comment on confidence intervals.
3. Perform a hypothesis test for the population mean of a normal distribution.	3.1 Conduct one or two-tailed hypothesis tests for a population when the variance is known.
	3.2 Conduct one or two-tailed hypothesis tests for the difference between the means of two normal distributions with known variance.
	3.3 Interpret the results of hypothesis tests in the context of the original problem.
4. Use the normal distribution as an approximation to Binomial and Poisson distributions.	4.1 Identify situations for which the normal distribution can be used as an approximation to the Binomial or Poisson distributions.
	4.2 Use normal distribution as the above approximation to solve problems which are modelled by the Binomial or Poisson distribution.