

## 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:** The Normal Distribution

**Graded Unit Reference Number:** GA33MTH17

**Ungraded Unit Reference Number:** UA33MTH17

**Module:** Maths

**Level:** Three (3)

**Credit Value:** Three (3)

**Minimum Guided Learning Hours:** 30

Learning Outcome (The Learner will):	Assessment Criterion (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 $\mu$ and $\sigma^2$ , respectively
	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