

Unit 3: Analytical Methods for Engineers

Learning hours: 60

NQF level 4: BTEC Higher National – H1

Description of unit

The primary aim of this unit is to provide the fundamental analytical knowledge and techniques needed to successfully complete the core units of BTEC Higher National Engineering programmes. It is also intended as a base for the further study of analytical methods and mathematics needed for the more advanced option units. This unit has been designed to enable learners to use fundamental algebra, trigonometry, calculus, statistics and probability, for the analysis, modelling and solution of realistic engineering problems at BTEC Higher National level.

Summary of learning outcomes

To achieve this unit a learner must:

- 1 Analyse and model engineering situations and solve problems using **algebraic methods**
- 2 Analyse and model engineering situations and solve problems using **trigonometric methods**
- 3 Analyse and model engineering situations and solve problems using **the calculus**
- 4 Analyse and model engineering situations and solve problems using **statistics and probability**.