

Unit 29: Control Systems and Automation

Learning hours: 60

NQF level 4: BTEC Higher Nationals – H2

Description of unit

This unit is intended to give learners an insight into the principles of control engineering and how these principles can be used to model engineering systems and processes. A great deal of this unit involves mathematical analysis and theory, but practical situations will be examined using computer simulation tools.

Summary of learning outcomes

To achieve this unit a learner must:

- 1 Use **analytical techniques to form models** of engineering systems and processes
- 2 Use **Laplace transforms** to determine system parameters
- 3 Use **Bode standard second order equations** to determine system parameters
- 4 Examine **process controllers** using control philosophies.