Hello, my name is David Hymers and I am here to present an introduction to the Principles of Engineering System unit. This is a core unit, which is worth two credits. The unit has eight learning outcomes,

Material from this unit will be used in the Graded Unit 1 exam, which is going to give the grade for the HNC Engineering Systems course. I will mention this for all the core units.

The unit involves studying industrial engineering systems to investigate components used, processes and energy transfer.

From the systems, block diagrams for mechanical, electrical and electro-mech systems will be produced.

This leads on to describing engineering quantities for mechanical and electrical.

An audit on an engineering system will need to be carried out.

The materials used in components found in systems will be investigated to see what properties make them suitable for the application and any alternative material that can be used in place.

All the parts mentioned are open book, report style assessments

Then there are three short Closed Book assessments

Energy calculations for mechanical and electrical.

Comparison of mechanical mass, spring and damper systems with electrical resistor, capacitor and inductor systems. Showing if components store or dissipate energy and the method.

Also analysing engineering system responses, taking comparable measurements from the graphs such as rise time, percentage overshoot, settling time, steady state error and frequency.

All of what has been said will be in a study guide for this unit with more detail.

Thank you for listening.