

Postgraduate Certificate in Fluid Power Systems (Part Time)

- On successful completion, this course leads to the award of a PGCert qualification.
- Total time commitment: approx 150 hours attendance and 200 hours private study
- Mostly assessed through coursework: mainly practical exercises and related technical reports.
- Course may be extended by taking extra lecture units and project work, leading to the award of a Postgraduate Diploma or MSc in Fluid Power Systems.
- Entry requirements: HNC/HND/degree or other qualifications plus industrial experience.
- Course fee: £2120 (UK/EU students)

Oct			Nov			Dec			Jan			Feb			Apr		
FP1*			FP2			MS			Ex			I	I			FP3	

* Attend or via Distance Learning CD

ME50145	<p>FP1: Introduction to Hydraulic Circuits and Components Content: An introduction to the main hydraulic components, their performance characteristics and the standard symbols used on circuit diagrams. Also provides an understanding of basic circuit design and operation. Assessment: 100% coursework</p>	4-day block, Oct 09 or distance learning (CD)
ME50147	<p>FP2: Component Selection for Hydraulic Systems Content: How to select hydraulic components for particular applications, including actuators, valves, pumps, motors, filters, and accumulators. This includes understanding the performance of components and interpreting specifications. Assessment: 100% exam</p>	4-day block, Oct 09 2hr exam, Jan 10
ME50150	<p>MS: Control of Mechatronic Systems (Fluid-Power) Content: Basic control theory, and how to derive mathematical models of hydraulic components and systems; using these models to understand real electrohydraulic motion control systems. Practical problems and their solution are also included. Assessment: 30% coursework, 70% exam</p>	4-day block, Dec 09 2hr exam, Jan 10
ME50194*	<p>I: Practical Instrumentation Techniques Content: Transducers for measuring strain, force, torque, pressure, position, speed and acceleration. Signal processing: op-amps, filters, noise, signal conditioning, A to D conversion, data acquisition. Practical applications. Assessment: 100% coursework</p>	One 2-day and one 3-day block, Feb 10
ME50148*	<p>FP3: Hydraulic System Design and Analysis Content: The design of hydraulic circuits to meet application requirements, focusing on reliability, contamination control, condition monitoring, failure modes and fault finding, noise, power efficiency and computer simulation techniques. Assessment: 100% coursework</p>	4-day block, Apr 10

* These are optional units. Alternatives are:

Semester 1: (Oct-Dec)

- ME50151 Control Systems (weekly)
- ME50190 Systems Modelling (weekly)
- ME50201 Electrical Drives (block)
- ME50221 Intro to Mechatronics (weekly)

Semester 2: (Feb-May)

- ME50173 Research & Design Methods (block)
- XX50182 Engineering and Project Management (block)