

Mechanical – BEng Hons Mechanical Engineering

FdEng Integrated Engineering – Mechanical (3 years)

This course has been designed in consultation with a number of employers. They have expressed a need for engineering technicians with specialist knowledge, but with an appreciation of the engineering challenges across the various engineering disciplines.

The course is designed for people currently working in engineering and provides you with the flexibility to work in various roles across your organisation.

We focus on work-based learning, so you apply your academic studies to your workplace. This ensures that the learning is relevant to both you and your employer.

You study the underlying principles of engineering before specialising in mechanical engineering. Business operations and employability are covered throughout the course providing you with the skills and knowledge to build a successful engineering career.

Other skills you develop to improve your career potential include

- business management
- project management
- teamwork
- communication

You also complete projects which involve the analysing, designing, prototyping and testing of control and instrumentation systems and components.

After successfully completing this foundation degree, you will study for two more years of part-time to gain a BEng honours degree.

BEng Hons Mechanical Engineering Top-up (2 years)

This top-up award is suitable if you have a foundation degree or HND in relevant subject and are aiming to develop your qualification to degree level. There is a demand for engineers with a sound knowledge of engineering applications, the ability to apply engineering techniques and to develop, test and maintain them.

The course will further your knowledge of core engineering principles, skills and techniques, enabling you to analyse and solve engineering problems and to design creative and innovative solutions and devices using modern technology.

In the second/final year of study you are encouraged to specialise in your area of interest and/or continue working with industry when you undertake individual project work. Examples of previous projects include

- producing a jig to enable for easier fitment of a Crossrail DMS vehicle auto coupler
- CFD optimisation of an automotive intake air system
- pipework thermal stress analysis method comparison - Computational vs Manual

As well as specialist knowledge, you gain the professional and personal skills needed for a successful career in industry and commercial engineering enterprises. You develop your project management skills and your ability to plan, organise and manage resources.

Alongside their teaching, our lecturers conduct research and consultancy for industry as part of our Materials and Engineering Research Institute. This keeps your lectures and seminars up to date, giving you the latest knowledge in your subject.

You are taught by people who have valuable experience of the engineering industry – and in many cases continue to work in it. A number of companies, including Bombardier Transportation, Glenair, Siemens, JCB and British Steel, send their employees on this course as part of their development, giving you the chance to make industry contacts from the start of your course.

During this course, you use industry-standard tools and equipment needed to ensure that your training is industry relevant. You have access to a wide range of equipment and software, including computer-aided design (CAD) software packages, such as; SolidWorks and analysis software such as Fluent, Abacus and Matlab.

Other specialist facilities include

- wind tunnel
- flight simulator
- rapid prototyping equipment
- a robotics and automation laboratory
- an automotive workshop for engine testing
- a structural integrity laboratory
- a materials testing laboratory
- manufacturing workshops