



University of
Strathclyde
Glasgow

The Department of

Design, Manufacture and
Engineering Management

[www.strath.ac.uk/engineering/
designmanufactureengineeringmanagement](http://www.strath.ac.uk/engineering/designmanufactureengineeringmanagement)

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Introduction

The Department of Design, Manufacture and Engineering Management (DMEM) is an internationally leading department delivering multi-disciplinary learning which is both innovative and industry focused within the Faculty of Engineering; one of the best equipped engineering faculties in the UK and the largest in Scotland. The department's unique focus is on "Delivering Total Engineering" through:

- **Research excellence**
- **Industrial partnerships**
- **Creative engineering education**

We have a portfolio of courses across our design, manufacture and engineering management themes at both undergraduate and postgraduate level, along with a number of research opportunities. We are the only department in the UK combining end-to end multidisciplinary expertise which ensures our students are equipped with the necessary skills and knowledge to embark on a successful career. For those already working professionally, we have a range of continuing professional development courses in order for you to maintain and develop your skills to keep up to date with a fast-moving industry.

Our department is well equipped with state-of-the-art tools to help design, prototype, manufacture and perform research on a broad range of items. Our skills and equipment are utilised on a number of student, commercial and research projects. We have various workshops to assist us in this work, which include Rapid Prototyping, Virtual Prototyping, Reverse Engineering and Mechatronics labs.

We have one of the UK's only digital design suites to combine virtual and physical design and prototyping.

The department itself was refurbished in 2014 and offers modern teaching, studying and research facilities featuring a broad range of IT facilities, group study areas and studio space. Our staff have a wealth of national and international practical and teaching experience and are recognised as thought leaders in their fields.

Design, Manufacture and Engineering Management students enjoy broad based education with the opportunity to collaborate with colleagues from different departments across the Faculty of Engineering and the University, as well as with our industry partners and international partners.

We are the only department in the UK combining end-to end multidisciplinary expertise

University of Strathclyde



The University of Strathclyde is the third largest university in Scotland with more than 22,000 students from over 100 nations, attracted by our international academic reputation, vibrant teaching and learning environment, and strong engagement with business and industry. Strathclyde offers a flexible, innovative, learning environment where you can enjoy a first class student experience. We combine established academic tradition with innovative teaching methodologies and pioneering research, to deliver a modern, exciting and globally relevant curriculum.

In the recent Research Excellence Framework, a government-led benchmarking exercise measuring the quality of research in higher education institutions, we were identified as one of the top 20 research-intensive universities in the UK.

The Strathclyde campus is in a great location in the heart of Glasgow and is five minutes from train, subway, and bus stations and a quick 20 minutes' shuttle to Glasgow Airport.

Our student experience is at the heart of everything we do. The University is continuing to make strategic investment that aims to underpin our goal of providing high-quality, research-led education and an excellent student experience.

We aim to provide our students with excellence and innovative teaching, learning technologies and facilities. Our high quality teaching and learning environment helps students to achieve their goals. Innovative learning methods and state-of-the-art facilities are designed to give students the best possible university learning experience.

Accommodation

For many students, starting university will be the first experience of living away from home and at Strathclyde we are keen to ensure you feel settled, comfortable and safe in your accommodation. Halls of residence are where you will get to know lots of people from the moment you move in, many of whom will become lifelong friends. Strathclyde has almost 2000 rooms offering a variety of reasonable priced self-catered flats in the city centre Campus Village and nearby Merchant City. All residences offer an independent lifestyle where you retain your privacy but still have the company of others if you wish. Nearly all of the residences in the Campus Village are divided into flats of various sizes; where students have their own single rooms and share bathroom and kitchen/living/dining areas with flat mates. All rooms have network points offering free internet access and Wi-Fi is also available. The Campus Village is predominantly undergraduate. To make your time here as easy and straightforward as possible, we have dedicated Residence Services team to help you all year round. To find out if you are eligible and for more information visit www.strath.ac.uk/accomodation



The Students' Union

Whether you are looking for a great night out or want to become involved in clubs, sports and volunteering opportunities, the Union is the place for you. Strathclyde's 10 floor Student Union building is the largest in Scotland and has a variety of bars, restaurants and a café, and is the base for the Students' Association. Getting involved in activities in the Union is a great way to meet people and make new friends. If you are interested in sport, there are almost 50 teams and sports clubs you can join. There are also over 100 non-sporting clubs and societies at Strathclyde, catering for all tastes. For more information visit www.strathstudents.com

Strathclyde offers a flexible, innovative, learning environment where you can enjoy a first class student experience



Student Support

Starting at university, meeting new people, living on campus, managing your own budget and discovering a new way of learning is exciting – but it can be daunting and you may need a helping hand to get used to it all. It's good to know that we'll be here to support you throughout your time as a student. We offer a range of services, advice and assistance to help make the most of your time at Strathclyde.

- The **Advice Centre** offers advice, guidance and information on all issues associated with student life to home and international students, especially those that concern welfare, academic, immigration and personal issues.
- Our **Student Financial Support Team** offers information and advice for students and applicant on current student funding arrangements and eligibility criteria. They also offer advice to any students who encounter financial difficulties during their period of study.
- The **Chaplaincy Team** works within the University community to provide opportunities for all students and staff, from all faiths and none, to socialise, access support and engage in spiritual reflection or personal prayer.
- The **Disability Service** offers information, advice and assistance for applicants and students with disabilities. Staff at the Disability Service welcome the opportunity to discuss with disabled applicants how to get the most out of their experience at Strathclyde.

- The **Student Counselling Service** is a free and confidential service which aims to assist students in dealing with personal or emotional difficulty affecting their studies. The service offers short-term, individual counselling sessions and can help with a wide range of problems.
- The **Student Health Service** is a confidential service offered to all students. It aims to promote positive health and well-being by providing advice and information on looking after your health, support with health related issues and assistance in accessing appropriate NHS services and professionals.
- The **Careers Service** can help with all aspects of your career choice and job search, whether you are looking for a part-time job, internship, work placement or want to start planning for your future career. Help and advice is available from first year, throughout your time at Strathclyde and also beyond graduation.

Centre for Sport and Recreation

In addition to the teams and clubs run the Sport Union, our Centre for Sports and recreation provides facilities including a cardiovascular suite with over 70 exercise machines, a swimming pool, weight training area and a wide range of fitness classes. Find out more at www.strath.ac.uk/sport



Scotland and Glasgow

Scotland is located in the northern half of Great Britain and has a population of over five million people. The capital city is Edinburgh, although Glasgow is the largest city.

Scotland is a fantastic mix of stunning landscapes, wildlife and wonderful local produce, combined with a thriving arts and culture scene, and topped off with a colourful history of epic battles and historic castles. Visitors from around the world come to Scotland every year to experience the unique culture, the outstanding scenery and to meet the friendly locals. The country is renowned for its breathtaking landscape, with magnificent mountain ranges and the highest mountain in Britain, Ben Nevis. There are in fact 283 'Munros', Scottish mountains over 3000 feet, which are popular with hill walkers.

There are a number of cities that really showcase the history of the country, including the capital city Edinburgh, which is regarded as one of the most beautiful cities in Europe. It is home to a number of world famous events, such as the Edinburgh International Festival – the world's largest arts festival, the famous Hogmanay street party and Edinburgh Military Tattoo. The city is also the home of Edinburgh Castle, and a number of museums and galleries.

There are historical and cultural elements that can be rightly claimed to be unique to Scotland. One of the most common icons associated with Scotland is whisky. Acknowledged as Scotland's

Glasgow was recently named as one of the top places to see in the world by the New York Times

national drink, the whisky industry has grown to be one of the country's biggest exports. Other icons that are associated with Scotland are the musical instrument, the Bagpipes, and the tartan Kilt, a garment traditionally worn by men of the country.

Scotland is, of course, not all about history though, it is also home to a number of popular music festivals including T in the Park and Wickerman Festival which attracts bands, artists and music lovers from all over the world. One thing is certain, Scotland can cater for everyone and visitors will be spoiled for choice of what to do.





Glasgow was recently voted friendliest city in the world by travel magazine Rough Guides

Glasgow

The University of Strathclyde sits in the heart of Glasgow – one of the UK's largest and most vibrant cities. The city is renowned for its culture, style and the friendliness of the local people. It offers a blend of internationally-acclaimed museums and galleries, stunning architecture, vibrant nightlife, fantastic shopping and a diverse array of restaurants and bars.

Glasgow is a dynamic hub for art, music and theatre and has a year-long calendar of music and art festivals. There are over 20 museums and galleries, including the multi-award winning Riverside Museum, which boasts over 3000 objects on display and was named European Museum of the Year 2013. The city is also home to the Scottish opera, the BBC Scottish Symphony Opera and Scottish Ballet.

As the UK's only UNESCO City of Music, Glasgow is a vibrant city with a legendary music scene that stretches across the whole spectrum from contemporary and classical to Celtic and country. Its venues are equally varied with world famous hotspots such as the Barrowlands Ballroom and King Tut's Wah Wah Hut, and the multi-purpose venue The Hydro, which has a capacity of 14000 and is ranked in the top five best global arenas. Glasgow has excellent nightlife that offers venues to suit all ages and tastes with a huge variety of bars, pubs, clubs and nightclubs that could keep you busy every night of the week.

Visitors to Glasgow are often surprised at the amount of green space in the city centre. With 90 parks and gardens to explore there are plenty of opportunities to unwind, giving the perfect balance to the urban pace of life.

Glasgow is a consumer paradise and offers the best retail experience in the UK outside of London, and with over 1500 shops to choose from, all just minutes from the Strathclyde campus, you will be spoiled for choice.

Compact and easy to travel around, the city has excellent transport links to the rest of the UK, Europe and overseas, with London only an hour's flight away. It is just 40 minutes from Loch Lomond and 45 minutes by train to Edinburgh, meaning Glasgow is a prime location, no matter where you want to go.

Glasgow's diversity, friendliness, quality of life and reasonable cost of living make it a perfect location to live, work and study.





The Faculty of Engineering

The Faculty of Engineering is one of the largest, best equipped engineering faculties in the UK, and the largest in Scotland. We are home to over 5500 students from over 100 countries; 4500 undergraduate, 700 postgraduate taught and over 600 postgraduate research, who all study within eight world-class departments.

The Faculty is recognised for producing high-calibre graduates and we are committed to enhancing the students experience through the development of research-informed education and through investment in teaching infrastructure. Significant investments have recently been made in teaching facilities and world class laboratories.

The university's motto of 'useful learning' is typified by our industrially-relevant taught programmes and our award winning research. Our close connections with industry ensure that our degrees remain relevant to employers and that students have the opportunity to work on projects assigned by companies that address real industrial challenges. Equipped with industrially-relevant skills, our graduates are in demand world-wide. Companies specifically target Strathclyde so that many of our students are able to secure a job prior to graduation.

**Seven of the eight
Engineering
departments are ranked
in the top 10 in the UK
on research power**

The faculty also has one of the largest research portfolios in the UK at £85 million and increasing year-on-year. Staff and students carry out research that makes a real impact, delivering solutions to many of today's global challenges.



The Department of

Design, Manufacture and Engineering Management



The Department of Design, Manufacture and Engineering Management (DMEM) offers practical and innovative undergraduate and postgraduate programmes which are designed to develop tomorrow's industry and business leaders.

Meeting the needs of tomorrow's world requires innovation and ingenuity, a sound understanding of technology and business, the skills to organise and direct and the vision and determination to lead. These are among the skills and attributes our students develop.

Studying with us, you'll also develop excellent interpersonal, presentation, management, leadership and entrepreneurial skills, through group activities, industrial exposure and integrating studies.

We offer four year BEng and BSc Honours degrees and five year MEng degrees, taught MSc programmes, as well as PhD and EngD research degrees:

Undergraduate

Product Design and Innovation BSc

Product design and innovation is concerned with the design and development of new and innovative products.

Graduates will have core knowledge of the design process, ensuring that well-designed products are suited to particular companies and markets.

You'll develop a wide range of analytical and practical skills to overcome the problems encountered when turning a good idea into a best-selling product. Fundamental engineering skills enable you to understand how products work.

You'll also develop skills in ergonomics, aesthetics and graphic communication alongside those in marketing and enterprise management.

Product Design Engineering BEng/MEng

Product design engineers take basic ideas and turn them into fully-functioning products.

This course is designed to help you develop the creative engineering skills necessary to develop products, which not only do what they're intended for, but also look good and offer value for money.

You'll develop skills in ergonomics, aesthetics and graphic communications alongside those in engineering materials and manufacturing.

Product Engineering & Management BEng/MEng

Everything we use, eat, watch, hear or wear is created using the skills of production engineers and managers.

Production engineers and managers do not just create technological solutions. They also motivate, organise and interact with others to make sure products and services are provided when and where customers' needs exist.

The course is designed to ensure you graduate with the skills and knowledge that will allow you to not only cope with these changes, but proactively make them happen.

Sports Engineering BEng/MEng

Sports engineers design new products and/or improve and measure sports performance.

The course allows you to develop the tools and techniques of product design within sports product development. This includes knowledge of the physiological response of the body when taking part in sports and using sporting equipment.

This course is run by the Design, Manufacture & Engineering Management department with significant input from other specialist departments.

You'll develop skills in aesthetics and graphic communication alongside those in sports science, materials and manufacturing.

91%

**student satisfaction in
the National Student
Survey results 2015**



MSC/PgDip/PgCert

Postgraduate taught courses

Advanced Manufacturing: Technology & Systems

Manufacturing and engineering are thriving sectors at the heart of the UK economy. They generate jobs, promote economic growth and increase global trade.

Manufacturing engineers therefore play a vital role in integrating technology and management within the sector to achieve added value and deliver superior performance.

This course will prepare students for industrial careers within a reinvigorated global manufacturing sector.

Design Engineering

This course aims to address the issues associated with a rapidly changing market and the demands for better, cheaper and personalised products developed within the shortest possible time. It will provide a thorough training in design theories and process models, design methods, design techniques, computer supported product modelling, analysis, evaluation and digital and physical rapid prototyping of a design solution.

The course enhances the professional and creative abilities of graduates from a variety of technical disciplines, from mechanical, civil and industrial engineering to science, architecture, computing and electronics.

Design Engineering with Advanced Product Development/Sustainability

The Sustainability stream provides an opportunity to specialise in issues such as remanufacturing, product life cycles, and environmental impact to ensure that product development is responsibly conducted and managed from cradle-to-cradle.

The Advanced Product Development stream is designed for graduates in product design engineering (or equivalent) who wish to enhance their technical knowledge and practical design skills through the application of state-of-the-art manufacture to practical design settings.



Global Innovation Management

The MSc in Global Innovation Management is a unique two-year programme. It's offered jointly by:

- University of Strathclyde
- Aalborg University (Denmark)
- Hamburg University of Technology (Germany)

You'll have the opportunity to study at two of the universities.

The course focuses on new challenges in innovative global enterprise and provides you with:

- a practical and global perspective of innovation management
- skills applicable to larger multinational organisations and smaller enterprises
- broader views of Innovation Management including; technology management; research and development; product/service development
- increased research capability

Lean Six Sigma for Process Excellence

Lean Six Sigma is recognised as a leading process excellence programme. A number of professional jobs in the global market seek qualifications in Lean Six Sigma for achieving competitive advantage. This course aims to develop the process excellence leaders of tomorrow.

You'll be equipped with state-of-the-art concepts, methods, techniques and tools within Lean and Six Sigma methodologies. This'll allow you to contribute towards the competitiveness of industrial and commercial organisations worldwide.

Our postgraduate course in Mechatronics & Automation is the only course in the world that is sponsored by both the UK and Chinese Space Agencies



Mechatronics and Automation

This course provides you with a broad introduction to the issues encountered and techniques required in developing advanced mechatronic products and automation systems.

Mechatronics and automation is becoming an increasingly important discipline in today's digital society. New products have been designed applying mechatronic principles. Consumers and society have benefited tremendously from these new intelligent products that include:

- the latest mobile phones with mechatronic features
- intelligent robotic vacuum cleaners
- intelligent wheelchairs

This course trains you to lead mechatronic and automation product development; contribute as team members to future mechatronic product development; and provide expertise as mechatronic "specialists".

Operations Management in Engineering

Operations management is critical to the success of delivering customer satisfaction.

This course gives you the theories, concepts and tools to be able to analyse and implement solutions to operations management issues in an engineering environment.

You'll gain an in-depth understanding in operational issues related to engineering industries worldwide.

The course is aimed at graduates wishing to broaden their expertise from a technological undergraduate degree, or who want to work within the engineering industry.

Product Design

This course aims to provide graduates not only with enhanced skills in creative product design, but a deeper understanding of the cognitive, cultural and physical needs of users that inform new product design and development.

It will provide a thorough training in design theories and methods including product aesthetics and human-centred design, and the utilisation of advanced design techniques in digital modelling and physical rapid prototyping of design solutions.

The course will appeal to graduates of courses in industrial/product design or innovation-related courses who wish to influence future thinking and practice design.

Supply Chain and

- Operations management
- Logistics management
- Procurement management

Supply chain management is widely accepted as a critical business competency. Supply chain management includes:

- initial design
- procurement of materials and services
- processing and distribution to the customer either directly or through a network of distributors

In many companies, 80% or more of their turnover is spent outside of the organisation.

This course helps you become effective in managing this. It's designed for those who work or are planning to work within supply chain management. It's also suitable for those with a background in support functions such as:

- sales
- maintenance
- finance
- marketing



Postgraduate Research

We offer many opportunities for postgraduate research, including MPhil, PhD, Industrial Doctorate and Engineering Doctorate (EngD) postgraduate degrees.

Currently, there are more than 70 research students studying within the department across five key research areas:

- creativity & innovation
- materials
- operations
- sustainability
- technology

Our PGR students are located in a custom-designed research office, the Leonardo Suite, which facilitates the building of a strong research community and enables students from our range of disciplines to share ideas and learn from each other.

Facilities

The department benefitted from an extensive refurbishment of the James Weir Building which now includes state-of-the-art studio spaces, meeting areas, offices and social spaces.

We are also well equipped with state-of-the-art tools to help design, prototype, manufacture and perform research on a broad range of items. Our skills and equipment are put to work on a number of student, commercial and research projects.

Advanced Forming Research Centre (AFRC)

The AFRC is a collaborative venture between the University of Strathclyde, Scottish enterprise, the Scottish Government and leading multinational engineering firms.

The £40m facility is part of the department and focuses on developing forming and forging technologies to support the development of high integrity components.

3D Printing and Manufacturing

We host one of the most advanced rapid prototyping and manufacturing labs in the UK which includes facilities such as:

- Fused Deposition Modelling
- 3D printing
- Laser Cutter/Etcher
- 3D Colour Laser Scanner

Our department is also home to the Space Mechatronic Systems Technology Laboratory (SMeSTech).

Work in this field advances research in space related robotics, vision and mechatronics technology and systems development.

Students have the opportunity to collaborate with industry to solve real-world problems





Industry Partnerships

All of our programmes are closely linked with relevant industries. As a student within the department you will have the opportunity to work on projects assigned by companies based on real situations, solving real problems. This collaboration with companies ensures our students have the key skills that industry needs and gain direct, practical industry experience.

Research

The Department of Design, Manufacture & Engineering Management is a vibrant and active research community and sits in the top ten of all UK universities in research performance power rankings, for both business and management studies as well as mechanical, aeronautical and manufacturing engineering.

Our research is centred on the vision of 'Delivering Total Engineering'. We investigate processes, systems and technology to support and enable engineering from concept to remanufacture. Our vision embodies the university ethos of 'useful learning' through practical application of research and close collaboration with industrial partners.

Our research takes place through a number of world-class research centres and groups which sit within the Advanced Design and Manufacturing Hub, a cohesive and integrating framework for advanced manufacturing research across the Department and elsewhere in the Faculty and University.

We focus on five key research themes: creativity and innovation, materials, operations, sustainability and technology.

Career Opportunities

Gaining a degree from the Department of Design, Manufacture and Engineering Management will equip you with the necessary skills and expertise to excel within the professional world.

Our focus on “Delivering Total Engineering” will help you work with colleagues from different disciplines and build upon practical industry experience; assets that are highly valued by potential employers.

Many companies return year on year to recruit from our department. Our graduates now work for companies such as:

- Adidas
- Apple
- Diageo
- Dyson
- Ford
- Google
- Nike

“DMEM was a brilliant and vital stepping stone to where I am today. It taught me the framework for design and the fundamentals of engineering, manufacture and engineering management.”



Fees

2016-2017 fees

All fees are for full-time courses and per academic year unless stated otherwise.

International

£17,500

Cost of Living

UG - £5,700/ £7,000

PG - £7,500 - £9,300

Entry Qualifications for International Students

Required subjects are indicated following minimum accepted grades.

MEng Requirements

A Levels

Year 1 entry: ABB; Year 2 entry: AAB (including Maths & Physics)

International Baccalaureate

34 points (Maths HL5, Physics HL5)

BEng/BSc (Hons) Requirements

A Levels

BBB (including Maths and/or Physics)

International Baccalaureate

32 points (Maths and Physics at HL5)

China

Undergraduate

Students with GPA of 80 on their Senior Middle/High school Certificate/Diploma can be accepted to most undergraduate programmes. Alternatively, students with good grades in their Chinese University/College Entrance Examination (Gaokao) may also be accepted.

Postgraduate

Students are required to have a GPA of approximately 80 in academic subjects from a four-year Bachelors degree. Students interested in PhD must usually have a Masters and must include a proposal in their application.

English Language Requirements

If English isn't your first language, you'll need to provide proof of English language proficiency from the International English Language Testing System (IELTS).

Our IELTS requirement is 6.0, with no individual element below 5.5.

Preparation courses for international students

The University of Strathclyde International Study Centre offers preparation courses for international students (non EU/UK) who do not meet the entry requirements for an undergraduate or Master degree at the University of Strathclyde. This includes pre-undergraduate Foundation and Pre-masters programmes. To find out more visit isc.strath.ac.uk



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University of Strathclyde Glasgow

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