



# **ELECTRONIC & ELECTRICAL ENGINEERING**

**At the Heart of Everything**

- Power for the concert
- Digital signal technology for sound & vision
- Smartphone communications to capture the moment
- Microelectronic & IT systems to share it with friends

# What is EEE & why study it ?

- **It is at the heart of everything in modern life.**
  - It is helping to deliver sustainable clean energy, reducing our carbon footprint.
  - It is revolutionising internet security, making it easier for us to buy products faster and more safely online.
  - It is using smart devices to gather patients' clinical data while they are still at home aiding doctors track medical conditions remotely.
  - It is supporting us communicate with others faster, more effectively and further away.
  - It is transforming our infrastructure networks – power grid, rail & road links, telecoms
  - It is redefining our social lives through consumer electronics
- **EEE is for people who want to create, design and apply new technologies or innovate the way we do things, to help solve real world problems.**
- Subject is very dynamic because it is technology driven, and has a broad-ranging impact
- Offers great career prospects - 2 million engineers needed in the UK by 2020

# What courses do we offer?

## **BEng [Hons] - 4 years or Integrated MEng – 5 years**

Admission dependent, but they follow a common curriculum meaning transfer from BEng to MEng is possible at the end of any of the first 3 years

All are fully accredited by the relevant professional organisation/s – important to you to become a “chartered engineer” and is sought by employers.

### **Core programmes**

- BEng / MEng [Electronic & Electrical Engineering \[EEE\]](#)
- BEng / MEng [Electrical & Mechanical Engineering \[EME\]](#)
- BEng / MEng [Computer & Electronic Systems \[CES\]](#)

### **Specialist programmes**

- MEng EEE with Business
- MEng EEE / EME or CES with International Study – (Year 4 spent abroad)
- MEng Electrical Energy Systems
- MEng Electronic & Digital Systems

# What subjects do these cover?

## Core

- Mathematics, analogue & digital circuits, electronic systems, software engineering, computer programming & IT, communications, Computer Aided Design and mechanical engineering

## Tailor /specialise in

- Business management, entrepreneurship, economics & finance
- International dimension - Up to a year abroad at an overseas partner institution
- Topics on generation, supply, distribution of electrical energy; the applications of electrical power; renewable energy technologies
- Topics in electronic, digital systems and technology development; intelligent software tools, re-programmeable hardware, nanotechnology & optical computing

## Yrs 1 – 3

- Core subjects provide fundamental knowledge and technical expertise across entire discipline, with teaching/learning delivery designed to develop problem-solving and analytical skills, and encourage innovation and creativity.

## Yrs 4 & 5

- Specialist topics chosen to meet individual interests and career aspirations
- Industry and/or research linked Individual project in Yr 4 & group project in Yr 5

# What are the entry requirements?



- To be considered for an offer, **MUST** achieve the minimum entry requirements
- Deferred entry is NOT accepted
- If Context or “Top-Up BBB” is offered –one grade reduction in unspecified subject

## ALL MEng

Highers: AAAAB, with Maths [A], Physics or Engineering Science  
A levels: Yr 1 entry AAB - BBB with Maths [A], Physics & ANO  
Yr 2 entry A\*AA - AAB with Maths [A], Physics & Computing  
IB: 36, with Maths & Physics HL6  
*HNC/HND/STEM/SWAP – no access to MEng in first instance*

## ALL BEng

Highers: AAAB, with Maths [A] Physics or Engineering Science  
A levels: Yr 1 entry ABB - BBB, with Maths [A], Physics & ANO  
Yr 2 entry AAA – ABB, with Maths, [A] Physics & Computing  
IB: 32, with Maths & Physics HL5  
HNC: Yr 1 entry – Pass all Units, including Maths for Eng 1 & 2 OR new Eng Maths 2 & 3, AND GU1 at A  
HND: Yr 2 entry – Pass all Units, including Maths for Eng 1- 3 OR new Eng Maths 3 & 4, Analogue Electronics, Digital Electronics, High Level Eng Software; AND GU 1 & 2 at A  
GU Access: Maths AB and Physics BB  
SWAP STEM FE: Pass all Units, with Merits in Maths HE1 and HE2  
SWAP Access  
to Engineering: Pass all units, with Merits in all Higher Maths and Higher Electrical units.

# How do you apply?



UCAS applications are sorted centrally and distributed to Departments for review.

Gathered field approach used by our Dept & applications consider :

- **subjects taken and grades [actual and/or predicted],**
- **teacher's reference,**
- **personal statement; and,**
- **an interview**

## Teacher Reference

Accurate portrait of applicant's academic abilities to date; and whether or not they have the skills and tools to cope with higher education; justification for any below par results; highlight non-academic roles/responsibilities and how they perform these.

## Personal Statement

What makes the applicant unique? Looking for *participation in non academic activities*– sport, culture, music, dramatic arts, overseas travel, volunteering AND an *interest in the course/[s] being considered* - to demonstrate well rounded individual, with initiative and drive [eg. DoE awards, clubs]

## Applicant Interview – held every Wed/Thurs afternoon throughout Jan/Feb

30-35 minute non-technical interview with academic staff

Meet with existing UG students to gain their perspective on student life & tour of department.

Parents are invited to attend – separate / concurrent programme delivered to them

**Decision on whether or not to proceed with offer posted on UCAS in mid-March**

# Why EEE at Strathclyde?



- **International department & largest of our kind in UK**
  - 30 different staff & student nationalities, & over 20 international partnerships
  - >800 undergraduates [550 Home; 250 Overseas]
  - Give students an international perspective through overseas study options & international development projects
- **Top ratings for both teaching and research in UK and overseas**
  - Our research breadth means we offer an extensive choice of modules which allow students to tailor their degree to personal interests
  - Our modules are always evolving to integrate new technologies and the latest research, so students are learning from those of the forefront of their subject
- **Industry-supported Scholarship Programme**
- **Industry Engagement to support student development**
  - Projects in Years 1 - 5
  - Site visits
  - Scholarship programme – many awards include PAID summer placements
  - Student networking events e.g. Annual Gala Dinner
- **We get students to where they want to go**
  - 92-95% course-related graduate employment rates

# Career prospects?

In the UK, we have:

- 550,000 engineering businesses, employing 5.6m people
- BUT a grave shortage of engineers
- **2m new employees needed by 2020**

Graduate employment rate for our courses: **92-95%**

Average Starting Salaries: **£25,000 to £33,000**, sector dependent

Average Lifetime Salaries: **£65,000**, sector dependent

*(Source: Destination of Higher Leavers 2015)*





# Become a....

Graduate Electrical Engineer

Power Systems Engineer

Electronics Engineer

Project Engineer

Forensic Security Engineer

Loss Prevention Officer

Software Developer

Product Design Engineer

Technology Analyst

R & D Software Engineer

Graduate Mechanical Engineer

System Modeller

Engineering consultant

Instrumentation Control Engineer

# Working for....



## **Oil & Gas**

Aker Solutions; BNFL; Petrofac Engineering;  
BP; Conoco Phillips; Maersk

## **Power & Energy**

Iberdrola; ScottishPower Energy Networks;  
National Grid; EDF; SSE; Siemens; Centrica

## **Aerospace & Defence**

Rolls-Royce; GE Aviation Systems; Clyde Space;  
BAE Systems; Thales; Qinetiq Malvern; LT-3 TRL

## **Infrastructure & Automotive**

Red Bull Infiniti Formula 1; Jaguar LandRover;  
Network Rail

## **Information Technology**

KDAB; Sopra Steria; SIMul8; IBM

## **Finance**

Morgan Stanley; Citi;  
Barclays; Tesco Bank; JP Morgan

## **Electronics Design**

Xilinx; Selex ES; Linn Products;  
Wolfson Microelectronics

## **Telecommunications**

Telesoft Technologies; Samsung;  
CISCO; Motorola; Stream Technologies

## **Project Management & Engineering Consultancy**

Arup; Atkins Global; AMEC; Arcadis  
Mott McDonald, The Wood Group



# Admissions Information

Mrs Gillian McArthur

Marketing, Recruitment & Admissions Coordinator

E: [gillian.mcarthur@strath.ac.uk](mailto:gillian.mcarthur@strath.ac.uk)

Dr Martin Given / Mr Douglas Grant

Undergraduate Academic Selectors

E: [eee-ugadmissions@strath.ac.uk](mailto:eee-ugadmissions@strath.ac.uk)

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

Places available for 2016 (provisional)

- EEE & Associated Courses: 105
- EME Courses: 45 - 50
- CES Courses: 20 - 25



University of  
**Strathclyde**  
**Glasgow**