Undergraduate Courses
School of
Electronic, Electrical and Systems Engineering

www.lboro.ac.uk/eese
Electronic, electrical and systems engineering continues to revolutionise the world we live in. At the heart of nearly all modern technology from the latest consumer products to sophisticated space satellite communications lies the art of the electronic, electrical or systems engineer. We are regarded as one of the UK’s leading universities to study this fascinating and important subject area.

Our close links with industry are a real advantage. We have an established placement scheme available to all of our undergraduates, which provides you with the opportunity to gain vital paid work experience in a professional environment. This gives a major boost to your employment prospects. We enjoy close working links with the world’s top companies including BAE Systems, JCB, IBM, Jaguar Land Rover, Microsoft, National Instruments and Rolls-Royce.

If you haven’t done so already, please do take the opportunity to visit our University campus and meet our staff and students so you can see and experience for yourself what we have to offer.

David Parish BSc (Hons) PhD MIET MIEEE
Professor of Communication Networks
Dean of School
Why Loughborough University?

Choosing where to study is one of the hardest decisions you’ll make in life. Loughborough University makes it easier by offering a mix of excellent facilities and opportunities – all on a superb 438-acre single-site campus. Bringing together 17,000 students and staff from over 100 different countries, there is a strong sense of community and a real buzz about the University that has seen us voted England’s Best Student Experience six years in a row.

At the centre of it all
Based in the heart of the English countryside, but with easy access to the rest of the UK, Loughborough University enjoys a well-established reputation for world-class research, innovative teaching and industry relevance.

Our great all-round student experience develops well-rounded graduates. Our degree courses cultivate presentation and team-working skills as well as creative problem-solving abilities – skills sought by employers.

Home from home
Almost 6,000 of our students live in University halls of residence on (or very close to) campus and we offer the widest range of accommodation to suit all budgets and catering preferences. Undergraduates who confirm Loughborough as their first choice before the end of July are guaranteed a place in our halls.

For further information: www.lboro.ac.uk/accommodation

Research that matters
The most recent Research Assessment Exercise (RAE) confirmed Loughborough as one of the country’s Top 20 research universities. With many academics involved in cutting-edge research addressing problems in social, economic and industrial practice, their work directly informs the learning experience.

For more information visit: www.lboro.ac.uk/research

An international experience
Loughborough has a proud history of welcoming students from around the world and, today, is home to 2,500 international students who contribute to our diverse and lively community. We offer a range of tailored support services, including bespoke English language courses and a one-week residential orientation course before the start of the academic year.

For more information visit: www.lboro.ac.uk/international

Award-Winning Students’ Union
Loughborough Students’ Union was ranked top in the country in the 2014 Whatuni Student Choice Awards, which are voted for exclusively by students at UK universities. As our Students’ Union is independently owned, it is essentially run by the students for the students. A key player in the Loughborough experience, the Union offers entertainment in the form of live comedy, performing arts and cinema. There are more than 100 clubs and societies, covering everything from creative writing, computing and cocktails, to Shakespeare and salsa. It also provides opportunities in volunteering and charity fund-raising. Indeed, the fund-raising arm of the Union – Loughborough Rag – is one of the most successful in the UK, regularly raising £1m a year for a variety of charitable causes.

For more information visit: www.lsu.co.uk

Extensive study resources and support
Loughborough has a strong tradition of providing excellent student support – from state-of-the-art facilities available around the clock, to award-winning mathematics support and library services. In addition, we provide advice on personal wellbeing, health, finance and legal matters, support for students with disabilities and additional needs, and of course careers advice. The Careers and Employability Centre can help you plan your career, offering careers fairs and drop-in sessions which could put your CV in the hands of your future employer.

For more information visit: www.lboro.ac.uk/careers

Sport for all
Of course, Loughborough is renowned worldwide for sport and counts Sebastian Coe, Paula Radcliffe and Steve Backley among its famous sporting alumni. In recognition of our sporting excellence Loughborough has been named University of the Year for Sport by The Times Good University Guide 2014. However, the focus is on providing sporting opportunities for all levels; from elite athlete to enthusiastic beginner. Our sports facilities are first class and include tennis, squash and badminton courts, sports pitches, all-weather play areas, the National Cricket Centre, the athletics stadium and a 50-metre swimming pool.

For more information visit: www.lboro.ac.uk/sport
What do Electronic, Electrical, and Systems Engineers do?

Electronic, Electrical and Systems Engineers change the world with revolutionary technologies, improve people’s lives around the globe and work to solve the planet’s energy needs. Studying this area of engineering opens up a world of opportunities to you and is a pathway to a well-paid and rewarding career.

Discover a world of hidden magic

Many of the electrical devices we use are so commonplace we rarely consider their creation and we accept their role in our lives unquestioningly. However, each one requires an electrical power supply and electronic control, and each one functions only as part of a much larger system. Electrical engineers, electronic engineers and systems engineers are the people behind this world of everyday hidden magic.

Engineers are constantly developing, improving and innovating. The functionality and capability of all technology is advancing rapidly, but nowhere more so than in the disciplines of Electronic, Electrical and Systems Engineering.

Electronic Engineering

It is impossible to underestimate the impact of the microchip. Even a quick look around the high street, your home or workplace brings the realisation of how dependent our society is on electronics and the computer and how we have come to take it all for granted. Even the humblest gadget has functionality dependent on highly sophisticated, often networked, computer controlled design. Electronic Engineers research, design, develop and test precision components and systems or equipment that use electricity as their source of power.

Electrical Engineering

It is hard to imagine a world without electricity, yet our world is facing an energy crisis and all ways of producing the energy vital to the modern and developing worlds are under pressure to supply ever-increasing demand. Electrical Engineering is about more than power generation and distribution. Engineers in this field are researching and working to generate, store, distribute and use electricity in ever more efficient and low carbon ways. If the power we need is to be available and affordable in the future, there is much to be done.

Systems Engineering

Systems Engineering is not just about computers, though they are involved. It is about the performance and capability of whole systems. We expect things to work together but this does not happen by luck. Many technologies contribute to making a complex system work and no one part can be specified or designed, without considering all the others. That is why Systems Engineers look at the whole picture: hardware, software, ergonomics and human and organisational aspects, when they design, develop, maintain and improve the structure of the technology underpinning much of today’s world.

Electronic Engineers are involved in creating equipment to enable the latest medical treatments.

Without Electronic, Electrical and Systems Engineers our financial systems as we know them would not exist.
Sponsorship

Due to our exceptional reputation we attract a large number of companies looking to sponsor our students, with opportunities worth up to £2,200 per year.

These include Jaguar Land Rover, National Instruments, BAE Systems and the group of Power Academy companies. Sponsorships include paid summer and full-year work placements and although there is usually no commitment to take a graduate job offer the majority of sponsored students do start work with their sponsors after graduation.

The Power Academy. We are one of only eight universities in the UK who are members of the Institute of Engineering and Technology’s Power Academy. It is a consortium of energy companies established to address the skills shortage in power engineering through a combination of financial support and workplace mentoring for students. Scholarships are offered to students studying on our Electronic and Electrical Engineering degrees and are worth £2,200 per year plus paid placements.

BAE Systems. Our Systems Engineering degree is the only course in the UK sponsored by BAE Systems. They offer many sponsorships annually as Systems Engineering is a key skillset required for their company.

Defence Technical Undergraduate Scheme. Generous sponsorship opportunities are available for those committed to pursuing a career in the Armed Forces or Civil Service.

The Institute of Engineering and Technology (IET) scholarships. The IET offer a range of generous scholarships up to a maximum of £3,000 per year if you are studying on an accredited degree. All of our undergraduate courses are fully accredited so all are eligible for sponsorship.

National Instruments. National Instruments offer a sponsorship package of £1,500 for your second year and a one-year paid internship. The programme is designed to develop your professional engineering career and can be applied for in your first year of study.

Further details of all these opportunities are on our website www.lboro.ac.uk/eese

Power Academy Companies

AABB
Atkins
BAE Systems
Costain
CofE
London Underground
Mitsubishi
National Grid
Network Rail
Northern Ireland Electricity
Northern Power Grid
npower
Rolta-Royce
Scottish Power
Scottish and Southern Energy
Siemens
UK Power Networks
Western Power Distribution

“Western Power Distribution sponsored me throughout my course – a deal worth over £30k in total.”

Tom Molyneux

“I enjoyed company sponsorship and a variety of paid placements from BAE Systems throughout my course.”

Peter Pollock

Thomas helping to install an LV pillar.

© Western Power Distribution 2013
Outstanding Facilities

Our extensive laboratories allow you the opportunity to gain crucial practical skills and experience in some of the latest electrical and electronic experimental facilities.

Our facilities include:

- a 12 metre water tank used for acoustic calibration and prototype testing;
- two anechoic chambers;
- an electronic systems design laboratory;
- a high speed network testbed;
- a mobile communications research laboratory;
- an advanced virtual reality research laboratory;
- a bioengineering laboratory;
- a centre for renewable energy systems technology; and
- a wireless communications laboratory.

Working on one of the School’s National Instruments DaNi robots, programmed in LabVIEW, as part of an MEng Team Project.

Student programming a ZedBoard. We invest a significant amount each year making sure that our students use industry-standard engineering tools so that they are proficient when they qualify.

Inside one of our anechoic chambers: measuring the radiation performance of a reconfigurable antenna typically used in WIFI and other wireless applications.
Your Learning Experience

You will be taught via a combination of lectures, tutorials, laboratory experiments and practical engineering exercises.

The courses are taught in a modular format with typically eight modules running concurrently and approximately two contact hours per module per week. Contact hours are approximately 18-21 hours per week during non-project based semesters. You'll be assigned a personal tutor who will provide advice and help you to choose your subject options.

You'll work on tutorial questions in your own time. These are designed to reinforce and develop understanding of material covered in lectures. Tutorial sessions give you the opportunity to sort out any problems with particular questions and clarify points you may not have understood during lectures. Group and individual project work form an important part of your course and will help you develop vital project management and communication skills for your future career. Examples of typical project work can be found in the course descriptions.

Lab sessions are also very important as they help you reinforce concepts and give you practical understanding. In depth research and development projects are undertaken in the final years of the BEng and MEng.

Assessment
At the end of each module you'll be assessed either by examination, coursework or a combination of both. With the successful completion of each module, you accrue a set number of credits, which over time lead to the award of your final degree. The first year does not count towards the final degree mark but you must pass. This provides you with an ideal opportunity to find your feet and understand your subject fully.

The MEng and BEng courses
The first two years of a BEng or MEng share the same format and structure. The MEng differs from the BEng by offering the opportunity to study technical and management topics at a more advanced level in the later years of the course.

The option of taking an industrial placement year is available on both the MEng and BEng courses. MEng courses can therefore take four or five years to complete, while those leading to BEng take three or four years. MEng students have the choice to take their placement either between Parts B and C or between Parts C and D.

It is possible to transfer from a BEng to an MEng at the end of the first year and up to the end of the second year providing that the transfer progression criteria have been met.

Course structure

<table>
<thead>
<tr>
<th>Year</th>
<th>MEng</th>
<th>MEng (with placement)</th>
<th>BEng</th>
<th>BEng (with placement)</th>
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<tbody>
<tr>
<td>1</td>
<td>Part A</td>
<td>Part A</td>
<td>Part A</td>
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<tr>
<td>2</td>
<td>Part B</td>
<td>Part B</td>
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<tr>
<td>3</td>
<td>Part C</td>
<td>Placement*</td>
<td>Part C</td>
<td>Placement</td>
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<tr>
<td>4</td>
<td>Part D</td>
<td>Part C</td>
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<td>5</td>
<td>Part D</td>
<td>Part C</td>
<td>Part C</td>
<td>Part C</td>
</tr>
</tbody>
</table>

* Placement after second year or before final year

Staff
Our staff are closely connected with industry and pursue a diverse range of research interests in Electronic, Electrical and Systems Engineering. Areas of particular prominence include modern communication systems, low carbon energy technologies, high power and short pulse energy technologies, and the design and operation of complex systems.
Electronic and Electrical Engineering

Electronic and electrical devices and systems are vital to modern society. They are central to almost all the new and fast-moving technological changes of the 21st Century. This course is designed to develop engineers with a firm grounding in electronics, plus the specialist skills required to work at the forefront of electrical engineering, power and control.

This course involves extensive project work linked to real-life engineering problems allowing you to develop important professional skills such as team-working, presentation skills, project management and report writing. These will enable you to pursue a career as a professional electronic or electrical engineer or choose from a wide range of other career options.

During this course you can take the option of a paid industry placement. Completing a placement not only gives you real world experience but you will also gain an additional qualification of a Diploma in Industrial Studies. This is an experience that will really help you stand out when applying for your first engineering job.

About the course

Students will gain a thorough grounding in the electronic and software engineering skills needed to design and develop embedded systems and innovative technical products such as vehicle management systems, genius consoles and digital cameras – skills very different from those learned in computer science or computer design degrees. The course suits inquisitive and driven students who aim to be at the forefront of modern technological developments.

We offer this course as a three year BEng or four year MEng, each with an additional optional industrial placement year. Whilst the broad philosophy of the MEng and BEng is the same, MEng students are required to study a wider range of technical subjects with additional depth and are also exposed to a number of management topics.

The first two years of the course have a core structure and content which provides you with an understanding of the fundamental concepts and principles of electronic and electrical engineering. In the later parts of the course the broad range of optional modules available provides opportunities to specialise in different areas according to personal strengths and interests.

The MEng and BEng are accredited as being in complete and partial fulfilment respectively of all educational requirements for Chartered Engineer status by the Institute of Engineering Technology, the Institute of Measurement and Control and The Energy Institute.

Example projects

- Underwater Tether Message System
- Robotic Head Development
- Portable Fingerprint Recognition System
- Stage Lighting Controller
- Remote Controlled Vehicle Navigation System
- Acoustic Tracking of a Moving Bat
- Mobile Telephone Monitoring of Landslides
- Fabric Antenna Systems for Clothing
- Defined Radio
- Personal Radio
- Solo Project
- Systems Engineering for Projects
- Applying Management Theory
- Systems Engineering Applications
- Defined Radio
- Information Theory and Coding
- Integration of Renewables
- Intelligent Signal Processing
- Digital Communications
- Computer Networks
- Digital Signal Processing for Software Defined Radio
- Electrical Machine Modelling
- Electromagnetic Compatibility
- Electromagnetism
- Electronic System Design with FPGAs
- Energy Storage
- Sustainable Power Sources
- Renewable Energy Sources
- Power Electronics for Renewables
- Renewable Energy Sources
- Sensor and Actuators for Control
- Fuzzy Logic
- Neural Networks
- Sun Tracker Systems
- Wind Power
- Solar Thermal Systems
- Understanding Complex Systems
- Renewable Power Sources
- Wind Power

£26,000

**AVERAGE STARTING SALARY**

*Based on mean salary – DLHE 2013*

Entry requirements

MEng

- A-Level: ABB (MEng) / ABB (BEng) from 3 A-Levels including Maths and at least one science subject
- IB: 34 points including 5 at HL Maths and 5 at HL in a science subject (MEng) / 34 points including 5 at HL or 5 at SL in Maths and 5 at HL or 6 at SL in a science subject (BEng)

BTEC Level 3 Diploma: 120 (MEng) / 120 (BEng) / DDM profile to include distinction in further Maths for Technicians (BEng)

Entry requirements correct at the time of print. Please check our website for the latest version and any other qualifications.

Placement Year

Professional Recognition

Additional Award

Year 1 (MEng and BEng)

Compulsory Modules:

- Circuits
- Signals and Systems
- Mathematics
- Electromagnetism
- Programming and Software Design
- Electronics
- Introduction to Systems Engineering for Projects
- Project

Year 2 (MEng and BEng)

Compulsory Modules:

- Communications
- Control System Design
- Electromechanical Systems
- Electronics
- Engineering Project Management
- Mathematics

- Plus one option from Computer Architecture; Engineering Mechanics; Renewable Energy Laboratory; Software Engineering

Final Year BEng (Year 3)

Compulsory Modules:

- Business Management
- Solo Project

- Plus five options – see optional modules below

Year 3 and Final Year BEng (Year 4)

Compulsory Modules:

- Applying Management Theory
- Business Management
- Group Project
- Individual Advanced Project

- Plus five options – see optional modules below

- Advanced Control
- Advanced Photonics
- AEC Engineering
- Biophotonics Engineering
- Business Management
- Computer Networks
- Digital Communications
- Digital Interfacing and Instrumentation
- Digital Signal Processing for Software Defined Radio
- Electrical Machine Modelling
- Electromagnetic Compatibility
- Electromagnetism
- Electronic System Design with FPGAs
- Energy Storage
- Engineering Mechanics
- Fast Decision Sensors
- Finite Element Laboratory
- Fundamentals of Digital Signal Processing
- Human Factors in System Design
- Information Theory and Coding
- Integration of Renewables
- Intelligent Signal Processing
- Modern Control
- Modern Control
- Microwave Circuits
- Laboratory
- Microwave Communication Systems
- Mobile Network Technologies
- Power Electronics for Renewables
- Power Systems Engineering
- Renewable Energy Sources
- Sensors and Actuators for Control
- Software Engineering
- Solar Power
- Solar Thermal Systems
- Sustainability and Energy Systems
- Systems Engineering Applications
- Technology and Verification of VLSI systems
- Understanding Complex Systems
- Water Power
- Wind Power

Please note that optional modules are subject to availability and timetable permitting.

Contact details for all courses

T: +44 (0)1509 227029 | E: eise@lboro.ac.uk | www.lboro.ac.uk/eise
David Read, MEng Electronic and Computer Systems Engineering

guaranteed me a job for when I graduate as I will be returning there once I graduate. My placement was split into two halves and I got to see two different sides of the same company, Rolls-Royce. It was extremely beneficial as I got to see what a real engineering working environment was like while working within a large team.

“I completed a professional placement last year at Control and Data Services who are part of Rolls-Royce.”

It was extremely beneficial as I got to see what a real engineering working environment was like while working within a large team. My placement was split into two halves and I got to see two different sides of my chosen career in software engineering: design and verification. It has also guaranteed me a job for when I graduate as I will be returning there once I have finished my degree.

David Read, MEng Electronic and Computer Systems Engineering

Electronic and Computer Systems Engineering

MEng / BEng

Sophisticated electronic systems underpin key aspects of our lives including communication, health and entertainment. This course is designed to meet high industrial demand for graduates with the skills to design and build hardware and software that control modern electronic, computer and network systems. Students develop these sought after skills through extensive project work linked to real-life engineering problems and through the practical aspects of the course, using the latest technologies and tools employed by modern industry.

During this course you can take the option of a paid industry placement. Completing a placement not only gives you real world experience but you will also gain an additional qualification of a Diploma in Industrial Studies. This is an experience that will really help you stand out when applying for your first engineering job.

The job opportunities available to graduates of this course are exciting and diverse and at the cutting edge of rapidly evolving technologies.

About the course

This course is offered as a three year BEng or four year MEng, each with an additional optional industrial placement year. Whilst the broad philosophy of the MEng and BEng is the same, MEng students are required to study a wider range of technical subjects with additional depth and are also exposed to a number of management topics.

The first two years of the course have a core structure and content which provides you with an understanding of the fundamental concepts and principles of electronic and computer engineering. In the later parts of the course the breadth of optional modules available provides opportunities to specialise in different areas according to personal strengths and interests.

The MEng and BEng are accredited as being in complete and partial fulfilment respectively of all educational requirements for Chartered Engineer status by the Institute of Engineering and Technology, the Institute of Measurement and Control and The Energy Institute.

Example MEng projects

- Autopilot for Advanced Quad Rotor Aerial Vehicle
- Motion and Sound Tracker for Monitoring Marine Mammal Behaviour
- Water Location System
- Environment Mapping Utilising Multiple Robot Sensors
- Implementation of Visual Network Systems
- Control Systems and Control Management System for Digital Signage
- Big Brother Among Us Again: Online Video Surveillance Measures

Entry requirements

A-Level AA (MEng) / ABB (BEng) from 3 A-Levels including Maths and at least one science subject.

IB: 37 points including 6 in HL Maths and 6 at HL in a science subject.

(MEng) / 34 points including 5 at HL or 6 at SL in a science subject (BEng).

BTEC Level 3 Diploma: DDD (MEng) / DD (BEng) profile to include distinction in Further Maths for Technicians.

Entry requirements correct at the time of print. Please check our website for the latest version and other qualifications.

UoL codes

MEng: 4 years full-time

MEng DKT*: 5 years full-time sandwich

BEng: 3 years full-time

BEng (Hons) DKT*: 4 years full-time sandwich

*BSc in Industrial Studies

Contact details for all courses T: +44 (0)1509 227029  |  E: eese.ug@lboro.ac.uk  |  www.lboro.ac.uk/eese

98% GRADUATE EMPLOYABILITY – AS PER 6 MONTHS AFTER GRADUATION (DLHE 2013)

Please note that optional modules are subject to availability and timetabling permitting.
“Many things attracted me to the University and the Department. The great links with industry was a big pull; getting a degree from Loughborough University opens up so many opportunities for you.”

After graduating, I hope to progress onto the BAE Systems graduate scheme. My degree has given me a wide range of engineering knowledge, built on a solid foundation of systems engineering, leaving me well equipped for an exciting future.

Simon Booth, MEng Systems Engineering

Systems engineers lie at the heart of most engineering, it is a structured and comprehensive approach to solving today’s complex technical challenges. This course is designed to create graduates with the ability to design and manage complex engineering projects, maximizing efficiency, performance and safety whilst minimizing costs.

During this course you can take the option of a paid industry placement. Completing a placement not only gives you real world experience but you will also gain an additional qualification of a Diploma in Industrial Studies. This is an experience that will really help you stand out when applying for your first engineering job.

Systems Engineers are an integral part of many key industries including automotive and aerospace, medicine, defence, transport and manufacturing.

About the course
This course is offered as a three year BEng or four year MEng, each with an additional optional industrial placement year. While the broad philosophy of the MEng and BEng is the same, MEng students are required to study a wider range of technical subjects with additional depth and are also exposed to a number of management topics.

You will learn the key skills required by a systems engineer including mathematics, electronics, computing, control and dynamics. In addition, there is a wide choice of optional modules allowing you to pursue particular strengths or interests, such as business and management, design and ergonomics, communications or renewable energy.

The MEng and BEng are accredited as being in complete and partial fulfilment respectively of all educational requirements for Chartered Engineer status by the Institute of Engineering Technology, The Institute of Measurement and Control and the Royal Aeronautical Society.

Example MEng projects
- Underwater Video-Acoustic System for assessing Effects of Marine Noise on Fish
- Exploring the Function of the Vascular Embryonic Heart
- Web Interface for Solar Heating Controller
- Artificial Neural Networks to Control Multiple RoboCrabs
- Foggy Resistance of Re-Biased Biometric System
- Development and Evaluation of a Lab-Scale Wind Turbine
- Power Tool Vibration Emission – Effect of Accelerometer Placement and Grip Forces

Entry requirements
A-Level: AAB (MEng) / ABB (BEng) from 3 A-levels including Maths and at least one science subject. IB: 37 points including 6 in HL Maths and 6 at HL in a science subject. (MEng) / 34 points including 5 at HL or 6 at SL in Maths and 5 at HL or 6 at SL in a science subject (BEng)

BTEC Level 3 Diploma: DDD (MEng) / DDM (BEng) profile to include merit in Further Maths for Technicians

Contact details for all courses T: +44 (0)1509 227029 | E: eese.ug@lboro.ac.uk | www.lboro.ac.uk/eese

97% OF OUR EMPLOYED GRADUATES ARE IN PROFESSIONAL OR MANAGERIAL ROLES 3 YEARS AFTER GRADUATION (TAKE 2018/19 AS EXAMPLE, 2019/20 RESULTS NOT AVAILABLE AT TIME OF PRINT)
Year in Industry Option

We offer industry placements on all of our courses. In the last three years we’ve sent 150 students on placements with some of the world’s top engineering companies.

The placement year is optional but is strongly encouraged because of the many benefits it can provide. Most students go on their placement after the second year, but MEng students can opt to take it after the third year.

Key benefits of an industrial placement

- Improved job prospects on graduation – some placement students are offered a permanent job with their host company when they graduate.
- Completing a placement gives you real world experience that will help you stand out when applying for your first engineering job.
- Financial reward – the average salary for a placement student is over £16,500 per annum.
- Professional status – a year of industrial work experience can contribute towards achieving professional status.
- Professional skills – skills such as time management, team working, presentation skills and project management are developed on placement.
- Professional practice – you have the opportunity to put your knowledge gained during your degree into practice within a working environment alongside professional engineers.

“Working in a supportive environment and benefitting from close liaison with other engineers I’ve gained invaluable business and technical skills from ‘hands-on’ experience of software, hardware and testing projects.”

Ben Swarbrick on placement with Siemens

Finding a placement

Our students are keenly sought after by high profile engineering companies who know from past experience that Loughborough students are enthusiastic and equipped with the knowledge and skills needed to make a positive contribution to their organisation.

We have an Industrial Training Coordinator who gathers and supplies information about placement opportunities and advises students on what to expect from the placement experience. The placement process is overseen by the Department’s Industrial Placement Tutor and we make every effort to help our students secure placements which match their interests and ambitions.

Companies providing recent placements

|--------|-------------|-------------|-------------|-----|-----------------|-----|-------|-------------------|-----|-----------------|------------|---------------|-------------------|------|----------|------------|----------|----------|

Student Placement Video

Luke Ellis on placement with JCB

“I’ve learnt a huge variety of skills and got a lot of practical experience.”

Watch the video at www.lboro.ac.uk/engineering/jcb
“Loughborough is so much more than the degree you study. By investing in a good work-life balance and taking advantage of the incredible opportunities on offer, you’ll really make the most of your university experience”.

My first placement was with Jaguar Land Rover in the summer after my first year at Loughborough. I applied after seeing it advertised within the School, and with assistance from the Careers Centre with my CV and interview technique, I was lucky enough to be accepted into the Electrical Integration Team. It was a fantastic introduction to engineering in the real world and I left with a real appreciation and understanding of the development process for luxury cars.

At the start of my second year I applied to Microsoft. I knew it was a long shot, but I’ve always wanted to work for one of the top tech companies in the world. Luckily, my early experience with Jaguar Land Rover paid off, and resulted in me being accepted for a role within the London Bing team. I thoroughly enjoyed my time there as a Program Manager, and the full year gave me time to discover and even specialize in my passions – the design and experimentation behind new user experiences.

This year I am back to Loughborough for my third year. Having had such a great placement year, I knew I wanted to work with Microsoft and Bing. I also wanted to experience what it was like to work with the core user experience team in the USA. So, using the contacts I had gained, I was able to secure a U.S. internship with Microsoft for the summer between my third and fourth year. This is the point where you join me – about to head off to Seattle for 3 months!

Two additional highlights of my time at Loughborough have been LSUTV (Loughborough Students’ Union TV) and Sno (Loughborough Snow Sports Club). Both have given me the chance to meet some of my best friends and have a great learning experience too. During my time at LSUTV I became the head of publicity, which taught me a wide range of skills completely separate from my degree.

Alex Campbell, MEng Electronic and Electrical Engineering

“Loughborough is so much more than the degree you study. By investing in a good work-life balance and taking advantage of the incredible opportunities on offer, you’ll really make the most of your university experience”.}

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Alex Campbell, MEng Electronic and Electrical Engineering

“The student culture at Loughborough can be likened to one big family.”

I studied my A-Levels in Kenya and coming to the UK for university was a big change. I wanted to pick a university that would play to my strengths, broaden my knowledge and skills but also one that I could enjoy for the full duration of my time as a student.

I chose to come to Loughborough University, not only because of its long standing position as the “Best student experience” but also because it was among the top universities in England for my chosen degree. In addition, as one of the largest university campuses in England I loved that everything from lecture rooms to accommodation were available within one gate.

The teaching in the School was second to none. The degree curriculum is structured in such a way that I felt I fulfilled my potential. In my final year project I put the theory I’ve learnt into practice. It was a very gratifying experience building a system from start to finish and overcoming the numerous electrical challenges along the way.

As an international student, I was overwhelmed by the environment at Loughborough: I made so many friends, the International Office were really supportive and there are a wide range of societies you can join to meet new people outside of your degree. I was a part of the Model United Nations Society and attended many international conferences, meeting a lot of people from all over the world.

Precious Kaijuka, MEng Electronic and Electrical Engineering

“Loughborough is so much more than the degree you study. By investing in a good work-life balance and taking advantage of the incredible opportunities on offer, you’ll really make the most of your university experience”.}

My first placement was with Jaguar Land Rover in the summer after my first year at Loughborough. I applied after seeing it advertised within the School, and with assistance from the Careers Centre with my CV and interview technique, I was lucky enough to be accepted into the Electrical Integration Team. It was a fantastic introduction to engineering in the real world and I left with a real appreciation and understanding of the development process for luxury cars.

At the start of my second year I applied to Microsoft. I knew it was a long shot, but I’ve always wanted to work for one of the top tech companies in the world. Luckily, my early experience with Jaguar Land Rover paid off, and resulted in me being accepted for a role within the London Bing team. I thoroughly enjoyed my time there as a Program Manager, and the full year gave me time to discover and even specialize in my passions – the design and experimentation behind new user experiences.

This year I am back to Loughborough for my third year. Having had such a great placement year, I knew I wanted to work with Microsoft and Bing. I also wanted to experience what it was like to work with the core user experience team in the USA. So, using the contacts I had gained, I was able to secure a U.S. internship with Microsoft for the summer between my third and fourth year. This is the point where you join me – about to head off to Seattle for 3 months!

Two additional highlights of my time at Loughborough have been LSUTV (Loughborough Students’ Union TV) and Sno (Loughborough Snow Sports Club). Both have given me the chance to meet some of my best friends and have a great learning experience too. During my time at LSUTV I became the head of publicity, which taught me a wide range of skills completely separate from my degree.

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Precious Kaijuka, MEng Electronic and Electrical Engineering
Inspiring Graduates

Due to their unique and specialist skills, engineers are the top earners in terms of starting salaries alongside graduates from medicine and dentistry (Times Good University Guide). Chartered Engineers command even higher salaries and once you have reached this status you can expect to earn a salary of over £50,000 per year.

As well as a top salary, a degree in Engineering presents wide reaching opportunities from world leading blue chip organisations to developing countries. With a degree in Electronic, Electrical and Systems Engineering from Loughborough University you can expect to have gained a diverse skill set. This will include project management, team work, leadership, business acumen and people management as well as technical expertise, setting you up for a successful career. We are favoured by many leading organisations as a source of exceptional graduates.

"My degree allowed me to develop both the in-depth technical knowledge, and broad interpersonal skills necessary to get a head start in the world of engineering.”

After graduating from Loughborough I joined the Jaguar Land Rover graduate scheme. I am almost halfway through the scheme and so far have completed several placements ranging from purchasing to issue containment in the manufacturing plants. In between placements, my main role is as an Electronics Engineer working on a smartphone integration platform called InControl Apps, which allows certain Android/iOS applications to be used through the car’s touchscreen. This is a diverse role which has drawn on and pushed both my technical and personal abilities, with my responsibilities including testing, managing suppliers, issue investigation and development of proof of concept applications.

I’m almost certain that I wouldn’t be where I am now if it weren’t for my time at Loughborough University. My degree allowed me to develop both the in-depth technical knowledge, and broad interpersonal skills necessary to get a head start in the world of engineering. In addition, we were all encouraged to undertake industrial placements, and the experience gained from my three placements at JLR was invaluable in allowing me to develop skills in a real world setting.

Ern Arrowsmith, Electronic and Electrical Engineering MEng, Graduated 2013, Graduate Electronics Engineer, Infotainment, Jaguar Land Rover

"During my time with the company I have faced many different challenges and relied heavily on the skills and knowledge I acquired from the Loughborough Systems course.”

After graduating from the MEng Systems Engineering course I went to work for BAE Systems Military Air and Information Business. During my time with the company I have faced many different challenges and relied heavily on the skills and knowledge I acquired from the Loughborough Systems course. My first role in the company was working in avionics in the Systems Integration rigs for the Typhoon fast jet aircraft. After six months I moved into Typhoon Export where I operate within a small team, working towards meeting the requirements of our export customers and helping secure new business. I plan to spend my next six months working on Unmanned Aerial Vehicles (UAVs), preparing for the future of the business.

Whilst I am more than happy pursuing a career in aerospace, I am thankful to the Systems Engineering course for giving me the flexibility to work in almost any sector and thankful to BAE Systems for sponsoring me. If I could make a recommendation to any budding engineer it would be to see what Systems Engineering has to offer and to use the opportunities available to expand your knowledge.

Helena Chantry, Systems Engineering MEng, Graduated 2012 Systems Engineer, BAE Systems

Graduate roles and destinations include:

- Graduate Electronics Engineer, Aero Engine Controls
- Consultant Engineer, Atkins
- Engineering Technician, BAE Systems
- Control Engineer, BP
- Operations Manager, British Sugar
- Controller and Instrumentation Engineer, Centrica
- Electronic Engineer, GE Aviation
- Systems Software Engineer, Hewlett Packard
- Product Development Engineer, Jaguar Land Rover
- Systems Engineer, Lockheed Martin
- Project Logistics Coordinator, Lotus
- Trainee Engineer, Ministry of Defence
- Graduate Engineer, National Grid
- Test Engineer, Rolls Royce
- Engineering Offices, Royal Air Force
- Surface Production Engineer, Shell
- Project Manager, Siemens
- Electrical Design Engineer, Triumph Motorcycles

Image courtesy of Jaguar Land Rover

"Inspiring Winners Inspiring You"
Admissions

Applications for undergraduate courses must be made online through the Universities and College Admissions Service (UCAS). This applies to all UK, EU and international students.

If you are at school or college you will fill in an online application. After checking your details and having added the academic reference your school or college will submit the completed online application to UCAS. Other UK applicants or those from outside the UK, who are not at school or college, can apply independently online and will be responsible for ensuring their academic reference is attached by their referee and for submitting the completed application online to UCAS. For entry in 2015, you should apply between the start of September and 15 January. Applications received after this date will only be considered if places are still available.

Loughborough’s institution name is LBR0, and our institution code is L79. We do not consider places for entry in 2015 if the start of September and 15 January. Applications received after this date will only be considered if places are still available.

Loughborough University accepts a wide range of qualifications for entry onto our undergraduate degrees, the main ones of which are detailed in this brochure. Please check the online prospectus for the most up-to-date entry requirements for your course: www.lboro.ac.uk/undergraduate

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Tuition fees
Loughborough University set the following annual fees for full-time UK/EU entrants in 2014/15:

- All undergraduate degree courses £9,000
- Science and Engineering Foundation Studies £9,000

Students enrolling in September 2015 wishing to undertake a placement year would do so in 2017/18*. The sandwich placement fee for 2017/18 is £1800.

*Students enrolled on certain Masters courses wishing to take a placement year may have the option of doing so in 2016/17.

Student loan for tuition
UK/EU students can take out a loan to cover the cost of tuition fees. The loan is paid back in instalments once you are earning a minimum salary.

Student loan for living costs
Eligible students permanently resident in the UK will also be able to take out a loan to help with living costs. The amount depends on where you live and where you are studying. The loan is paid back in instalments once you are earning a minimum salary.

For further information visit www.gov.uk/student-finance

Government Maintenance Grant
In addition to the student loan, students from low income families may be eligible for a maintenance grant from the Government to help with living costs. The loan does not need to be repaid. Detailed information on how to apply for this financial assistance can be obtained from Student Finance England. The Student Awards Agency for Scotland, the Welsh Assembly Government and Student Finance NI also produce the relevant guidance on student financial support.

Scholarships and Bursaries
The University offers a generous package of scholarships and bursaries. Please visit www.lboro.ac.uk/funding for the latest information.

Fees and funding (UK/EU students)

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#InspiringWinners

since 1909