London South Bank University

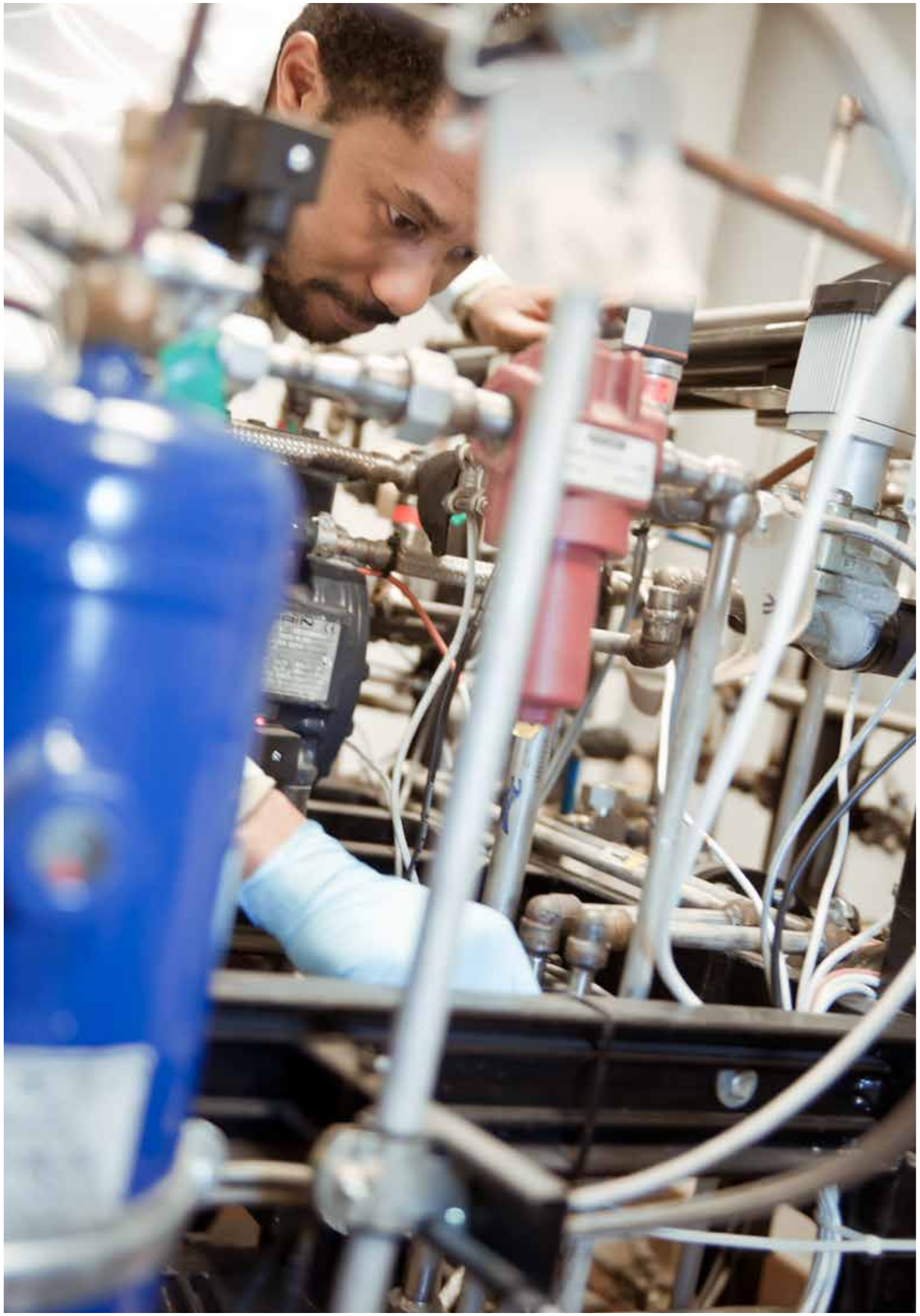
EST 1892

School of Engineering

Welcome to

The School of Engineering

Become what you want to be



Contents

Welcome to

The School of Engineering

At London South Bank University, we've been educating professional engineers for more than 100 years. Our expertise covers Computing, Informatics and Product Design as well as the more traditional engineering disciplines of Mechanical, Electrical and Electronic, Chemical and Petroleum Engineering.

Our accredited courses provide our students with industry-standard engineering skills and help them to achieve Chartered Engineer status.

Enterprise is foremost at the School of Engineering. Our Nathu Puri Institute was developed to foster enterprise among engineers, with the aim of creating next-generation leaders while supporting the UK engineering industry. Many businesses and organisations come to us to help solve their problems and we're one of the UK's leading Knowledge Transfer providers.

At London South Bank University we utilise our state-of-the-art facilities – such as our new £1.4 million 3D Virtual Engineering Lab – to deliver a modern teaching experience, enabling students to explore engineering and design projects in new and innovative ways. Thanks to our professional links with industry we are also able to give our students valuable opportunities to meet industry experts and engage in internships.

Our cutting-edge research has enabled us to develop a broad range of industrial and commercial products for some of today's most exciting engineering areas. We are one of the top 20 universities in the UK for engineering research and most of our work is rated internationally as excellent (REF 2014).

Our approach to course design is both research based and commercially oriented, ensuring that our graduates are primed for success in their chosen fields.

This brochure is designed to give you an insight into the various activities that staff and students engage in within the School, and ways in which a partnership with the School could benefit you or your organisation.

Professor David Mba, Dean

The School at a glance

2020 Total students

33 Undergraduate courses

16 Postgraduate courses

6000 m² of engineering facilities

NO1 London modern university for research in general engineering (REF 2014)

Educating professional engineers for **over 100 years**

1st in the UK to admit women to an engineering course

High quality teaching

All our courses are either accredited or developed in partnership with professional bodies, and our academic staff are often industry professionals who continue to foster working relationships in their respective fields including running 'live' industry-led projects.

LSBU holds the highest possible rating for teaching from the independent Quality Assurance Association (QAA). Teaching in the School is applied and we set it against real-world challenges and case studies.

Staff bring their expertise and experience into the classroom, and practical modules and learning techniques help bring the taught materials to life. We are constantly looking for ways to innovate and improve our teaching, and our courses are taught in a supportive environment focused on student success.

LSBU's approach to teaching engineering is hands-on – students design, make and test projects throughout their degree alongside theoretical learning. This means that they can apply theoretical principles to solve real-world engineering problems very early on in their university careers. This experience of delivering innovation is an attractive proposition to employers.

Accreditations

Many employers actively seek graduates holding accredited degrees. Accreditations are a mark of quality assurance and professional relevance. Where appropriate, our courses are accredited by the following bodies:

Institution of Mechanical Engineers

iED support inspire achieve

IET Academic Partners The Institution of Engineering and Technology

energy INSTITUTE

IChemE Advancing Chemical Engineering Worldwide

A student's view

Abisola Ajani, BEng (Hons) Chemical and Process Engineering

Abisola describes herself as a woman who likes a challenge – and she has extended that not only to her education but also in inspiring and encouraging other young women to follow in her footsteps in studying Science, Technology, Engineering and Mathematics (STEM) subjects.

Abisola's LSBU journey began when she made us one of her choices after attending an Open Day while studying for her A-Levels. "I was able to see some of the Chemical Engineering facilities and look around the campus," she says of the experience. "I was also swayed by the fact that LSBU is one of very few universities in London where most of the buildings are on one site."

I hope to become a Chartered Chemical Engineer in the future and my time at LSBU has really helped me with that ambition. I've spent a year on work placement and made the most of the excellent networking opportunities here too."

When asked what she has enjoyed most about studying at LSBU, Abisola's answer comes as no surprise given that she has spent so much of her time at university giving back and inspiring others. "There's an easy answer to that question," she says. "It's the community. From my lecturers to my fellow students, it's the people who study and work at LSBU who make it a truly special place to be."

Many areas of expertise

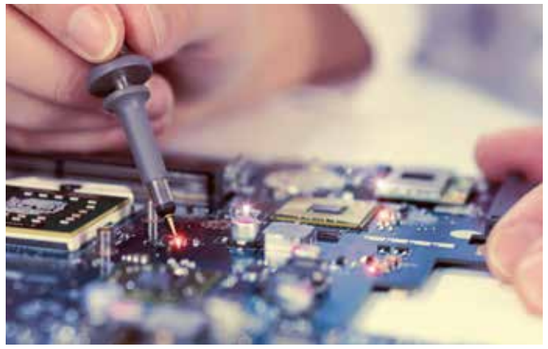
Our courses are grouped into four subject areas.

Chemical and Petroleum Engineering

Courses within this subject area are based on the study of chemicals and energy. Chemical and petroleum engineers are firmly focused on meeting the challenges of tomorrow. They use creative thinking and applied technical knowledge to use the earth's resources as efficiently as possible.

Computer Science and Informatics

Businesses rely increasingly on Computer Science and Informatics, and the speed with which computing technology continues to transform our daily lives is truly astonishing. Specialists in this subject area are in demand all over the world because their applied skills can revolutionise businesses and organisations of all kinds.



Electrical and Electronic Engineering

Our courses in this area are based on good design principles and applied engineering problem solving, and all of our degree courses in this subject are accredited by the Institution of Engineering and Technology.

Mechanical Engineering and Design

Mechanical Engineering and Design students engage in enterprising and problem-solving assignments, using good design practice and applied study. Courses cover vehicle engineering (shown above) as well as mechanical engineering and product design.

Case study: Dr Safia Barikzai

Dr Safia Barikzai: Course Director, BSc (Hons) Business Information Technology, Enterprise Champion for the School of Engineering

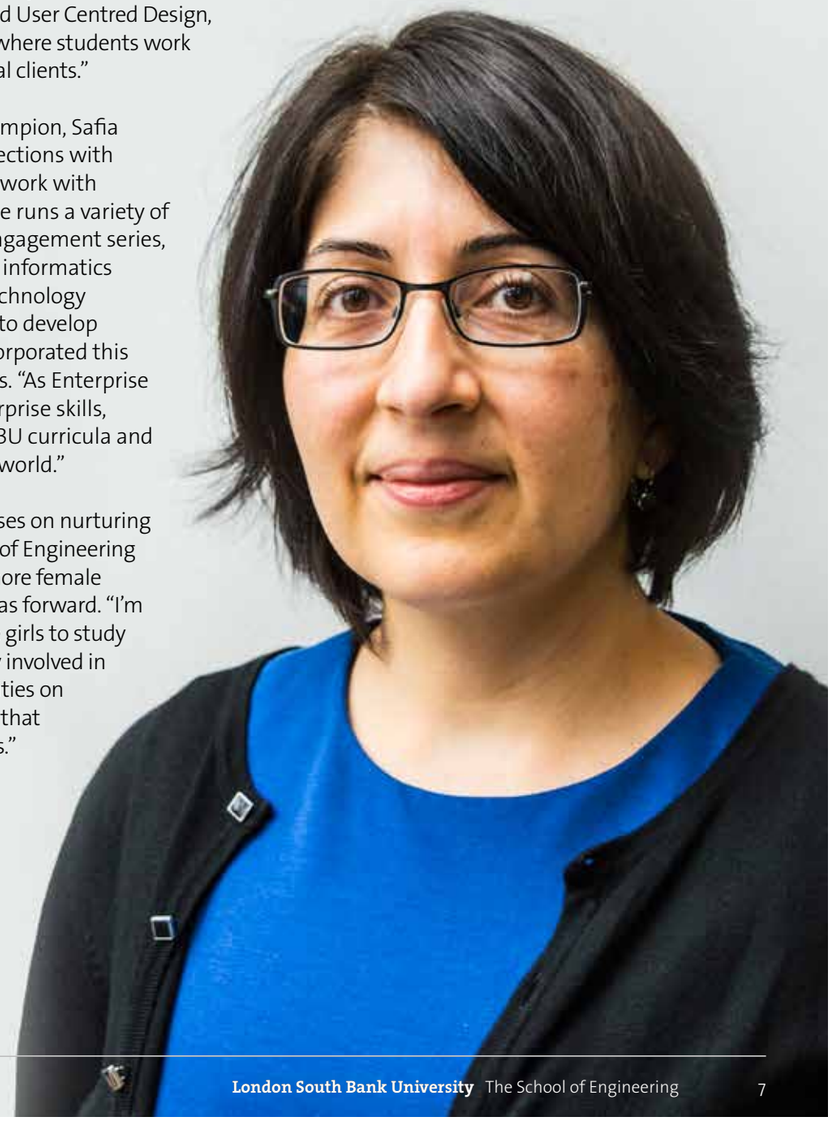
Safia Barikzai is a Senior Lecturer in the Division of Computer Science and Informatics and Enterprise Champion for the School of Engineering, working closely with the University's Entrepreneurship and Innovation Institute to provide work experience opportunities for her students.

"I have three roles: as a computing academic, a course director and an enterprise educator," says Safia. "I teach modules in Usability Engineering and User Centred Design, which have `live' coursework briefs where students work as usability consultants with external clients."

As part of her role as enterprise champion, Safia is actively engaged in making connections with businesses to allow students to network with employers before they graduate. She runs a variety of activities including the Employer Engagement series, which gets employers to work with informatics students. "Entrepreneurs require technology solutions and our IT students need to develop skills in presenting them, so we incorporated this within our curriculum," she explains. "As Enterprise Champions, we aim to embed enterprise skills, attitudes and behaviours within LSBU curricula and engage students with the external world."

Safia's current funded research focuses on nurturing entrepreneurship within the School of Engineering specially focusing on encouraging more female students to take their innovative ideas forward. "I'm passionate about encouraging more girls to study engineering subjects and I'm heavily involved in `Girls into Engineering' related activities on campus - an initiative that does just that through talks, events and workshops."

"We are able to nurture student and graduate entrepreneurs and it's really rewarding to see their businesses grow and become sustainable."



Applied research

Only by connecting our research to the real world can we deliver outstanding socioeconomic and cultural benefits, which improve the lives and experiences of people and their environments.

The School of Engineering's highly applied academic environment supports the communities we serve by providing the high quality applied research they need to improve and grow.

Our research is wide-ranging – but underlying all of it is the goal of creating new knowledge that has a practical purpose.

Our external research links also enhance student success by offering real-world project opportunities, enriching the learning experience and ensuring that our students have the knowledge and skills that are attractive to employers.

Within the School there are several research centres, any of which can be approached for commercial partnerships. We produce innovative solutions and support to industry and the public sector through consultation and research projects.

We are the top modern university in London for research in general engineering (REF 2014).

Case study

Going where no human can go

LSBU's School of Engineering's expertise in robotics – developing wall climbing, swimming, pipe crawling robots – reflects the multi-disciplinary approach of the University with robotics a blend of mechanical, electrical and control engineering as well as computer skills and software programming.

Robots can go into hostile environments, climb the side of a bridge to inspect for cracks, stick to the side of planes to look for corrosion, swim down to inspect damage to a dam and even go into nuclear power plants – places that humans either cannot go or that are expensive and time consuming to inspect.

"The joint development of a new Innovation Centre in Robotics is also another example of our close links with industry," says Professor David Mba. "The investment allows the School to support postgraduate research with the state of art equipment."

Development of robotics at LSBU has led to the launch of the London South Bank innovation Centre (LSBIC) in partnership with TWI in Cambridge. This research facility will take prototypes through to commercialisation.

Research in action: Keeping nuclear plants safe

Our research is helping Sellafield Ltd reduce the risks of hydrogen explosions in decommissioning nuclear plants.

Sellafield Ltd, the UK's leading nuclear decommissioning and reprocessing company, is tasked with managing hydrogen explosion hazards. In 1999, the group approached LSBU's team of experts in the field of explosions and fire research because of their modelling and experimental expertise in the area of Flammable Gas explosions.

Through the work the team has undertaken with Sellafield Ltd, the company has saved millions while making its processes and procedures safer. LSBU research into partial inerting demonstrated that it could perform as well as a fully inerted system when combined with an earlier start/quicker retrieval system.

The team has also provided the Hydrogen Working Group with a greater understanding of possible ignition sources. While electrical ignition is well recognised, the threats posed by mechanical ignitions were far less understood. LSBU's work broke new ground and provided a detailed understanding of all ignition mechanisms, as well as ways to assess the risks and probability of hydrogen explosions in a variety of different circumstances.

The partnership with Sellafield Ltd has been successful for both parties. Since 2008, LSBU has carried out research contracts valued at over £1 million, and our team of explosion and fire research experts is now sponsored by Sellafield. Sellafield, meanwhile, estimates it has potentially saved around £500 million in installation and operating costs at its Magnox Swarf Storage Silo retrieval project thanks to the innovative work proposed by LSBU. There is global interest in LSBU's work too. The Hydrogen Technical Guide developed in partnership with LSBU has attracted attention from the Department of Energy in the USA, where no such equivalent exists.

With further research and collaboration planned, savings look set to increase. LSBU is proud of the role it has played in helping Sellafield Ltd make the UK's nuclear power plants even safer.

LSBU has carried out research contracts valued at over £1 million, and our team of explosion and fire research experts is now sponsored by Sellafield.

Research areas

Advanced materials

Our research encompasses electronic and function materials, condensed matter theory and surface engineering including the development of new materials, thin films and coating processes. Our surface engineering research is directed at making new types of functional surfaces for enhancing engineering performance, manufacturing processes, energy efficiency and environmental compatibility. The group's work has a focus on nanomaterials and nanotechnology. There is a strong track record of external funding from the EU, EPSRC, TSB and industry.

Areas of interest include:

- Photovoltaics for renewable energy
- Two-dimensional materials including graphene for energy related and biomedical applications
- Functional oxides for solid state cooling and photoelectrochemical cells
- Soft magnetic materials

Contact:
Prof. Hari Reehal
reehalhs@lsbu.ac.uk

Big data and informatics

The Big Data and Informatics Research Group (BDIRG) works collaboratively with external bodies and has an interdisciplinary approach, working across business, science and engineering projects. Recent projects have included work on graphic shapes and fonts for information visualization, and electronic government, focusing on the Kingdom of Bahrain.

Areas of interest include:

- Big data analytics
- Business intelligence
- Visualisation and graphics
- Software metrics
- Business process re-engineering

Contact:
Prof. Ebad Banissi
banisse@lsbu.ac.uk

Biomedical and communication

The Biomedical Engineering and Communication Research Centre aims to provide advanced research and training in a broad range of areas relating to Biomedical Engineering and Communication Systems and to develop collaborative research links with the health and telecommunication industries, academia and clinical institutions. Work includes an ongoing EPSRC funded project, Digital Agent Networking for Customer Energy Reduction (DANCER), started in September 2012, with a total budget of £911K being spent over 4 years. As part of this project, the group developed a smart energy saving system using ultra-wide band broadband wireless technology for indoor environments and two imaging methods for biomedical and agricultural applications.

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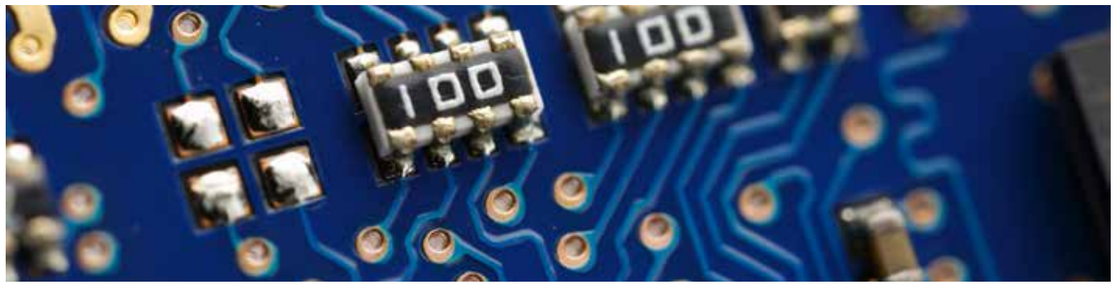


Energy and environment

The Energy and Environment Research group aims to provide a thriving research environment and advanced training in a broad range of areas relating to Green Process Engineering, which looks at designing sustainable and safe chemical processes, and Explosions and Fire Research, which focuses on hydrogen safety, as well as Petroleum Engineering. Its research is supported by collaborative links and funding from the EPSRC, the Royal Society, the European Commission and industrial partners.

Contact:
Prof. Basu Saha
sahab@lsbu.ac.uk

Intelligent monitoring and asset management

The Intelligent Monitoring and Asset Management Research Centre focuses on monitoring the condition of machines and systems; diagnosis and prognosis methods and novel asset management. The Centre's research goals are to maximise systems availability, prevent un-planned shutdowns, optimize maintenance services, reduce overall operating costs and increase returns on investment.

Core areas of expertise include:

- Machine condition monitoring
- Machine fault diagnosis and prognosis
- Advanced signal processing for machine applications
- Machinery asset management

Contact:
Prof. David Mba
mbad@lsbu.ac.uk

Robotics

The multidisciplinary research within the School of Engineering over the years has led to the development of a series of intelligent, automated robotic systems for the non-destructive testing (NDT) and inspection of large structures, often located in remote and hazardous environments. These have included swimming, wall climbing and pipe crawling robots which deploy a range of NDT techniques for industrial inspection in the nuclear, petro-chemical, food processing, energy and aviation industries.

In 2015 LSBU established the new London South Bank Innovation Centre (LSBIC) in partnership with TWI in Cambridge, which aims to take robot prototypes to commercialisation. This partnership provides research opportunities and funding for LSBU PhD students.

Contact:
Prof. Tariq Sattar
sattartp@lsbu.ac.uk

London's enterprising university

London South Bank University's mission is to be recognised as an enterprising civic university that addresses real world challenges. By engaging in applied research and ensuring that our courses have a vocational focus, we remain firmly rooted in the community around us. We empower our students through enterprise opportunities, helping them develop into valuable members of the business community. The School of Engineering is a committed part of this – our Knowledge Transfer Partnerships (KTPs) and research help build knowledge and provide proven solutions to business.

Student opportunity

LSBU offers a number of ways for students to get involved in enterprise. Our Student Entrepreneurship Support Service is a one-stop shop for advice about starting up a business and keeping it going – this is available to students before and after graduating. We also organise enterprise internships, giving students the chance to get involved in the workings of a small start-up. We run the Spark Scheme, which gives £500 of funding, office space, mentoring, guidance and the chance to bid for further funding.

We also offer a 12-month Graduate Entrepreneur Scheme, which offers graduates funding, office space, training and specialist advice.

LSBU has partnered with university start-up specialists Start Up Republic to launch LSBU Rocket, the UK's first student business accelerator scheme designed and delivered in collaboration with leading figures in the start-up community. The scheme is providing £15,000 worth of start-up support to seven LSBU student and graduate businesses accepted onto the programme.

44 LSBU graduate start-ups last year

220 business ideas supported in 2014-15

Over 4,000 students engaged in enterprise activities

Focus on: Kadeza Begum

BSc (Hons) Product Design, start-up business owner, KDEVISION

Kadeza owns her own design company, which designs and produces unique home wares, gifts and accessories. She was inspired to follow this path after her sandwich year, spent working for two design companies.

LSBU's Graduate Entrepreneur Scheme, run by our enterprise team, helped her company become a reality. It supports ambitious graduates who want to start their own business or social enterprise – providing start-up funding and office space with a programme of business mentoring, advice and support.

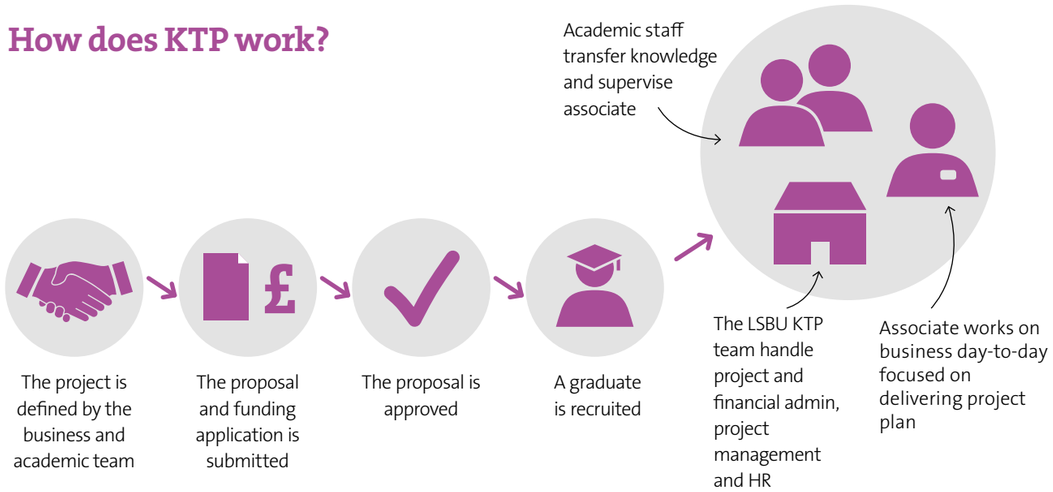
"The enterprise team were great – their support and guidance really encouraged me to keep going and believe in my business and products as much as they do! With their funding I bought my laser cutter, and I've had my own studio since February 2014."

This support, coupled with the creative thinking and practical making skills Kadeza gained on her course, is really helping her to make her company KDEVISION successful.

"My course gave me the graphics skills to design my own logo, website and marketing materials, knowledge that has enabled me to make investment decisions, and the confidence to be able to trust in my own design ability and judgement."

Knowledge Transfer Partnerships

How does KTP work?



Knowledge Transfer (KT) programmes are designed to help businesses improve their competitiveness and productivity by tapping into the knowledge, technology and skills offered by universities.

LSBU is one of the UK's leading KT providers and won the collaborative Innovation Excellence Award at the London Knowledge Transfer Awards. We are also among a handful of universities that have been commended by the Higher Education Funding Council for England (HEFCE) for our KT work.

Our KTP team can help define your strategic challenge, and then find the right academic expertise for your project from across the University.

KTPs are part Government-funded (up to 67% of the costs) with your organisation investing the final third. Our KTP team guides you through the whole process: advising on the grant application process and proposal writing. The team also manages the administration of the project throughout the KTP lifecycle.

Each KTP project has an academic supervisor who supports and mentors the KTP associate to deliver the project for your company.

KTP at work

LSBU helps Faber Music defeat internet piracy in sheet music

Faber Music reached out to London South Bank University to help with two crucial computing challenges affecting their company.

Firstly, they needed to provide a much-needed platform through which third-party musicians could licence their arrangements via digital channels. As no such system existed, this innovation would remove the hassle associated with licensing for digital sheet music.

Secondly, Faber needed to counter the dissemination of illegal sheet music via unlicensed websites by enabling top-quality, value-for-money, fully-licensed equivalents to flourish.

"One of the main problems that we face as a music publishing company is that there exist a number of extremely large, multi-million pound websites that give away sheet music, that is protected by copyright, for free," explains Sarah Holcroft, Director of Digital at Faber Music.

"Not only illegal, the quality is poor – often containing wrong lyrics and chords."

Uncertain of how best to solve their two challenges, a knowledge transfer partnership, or KTP, was the solution. Every KTP has a full-time, dedicated and embedded 'associate' who uses their skills to accelerate the project at hand. With an MSc in Business Information Technology and a BSc (Hons) in Electronic Engineering, Riccardo Zanella was brought on board to become the associate for this project.

"The solution for Faber consisted of a central hub where third-party companies or composers can upload their digital musical content," explains Zanella. "This content is then 'skinned' onto a bespoke website for that company and enables each E-Partner to sell their music through Faber's technology.

"These partners want to be able to sell their content but they do not have the capability, knowledge or technology to do so. Faber can now offer them that."

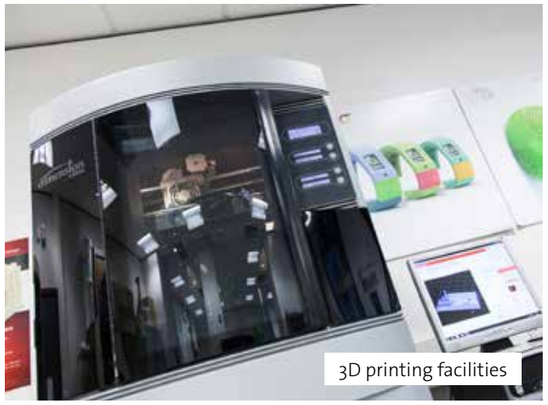
Shushma Patel, Professor of Information Systems at LSBU, has been the Academic Supervisor working with Zanella on this KTP. "The complex intellectual property aspects of this project have been overcome to create a fit-for-purpose platform. The feedback from the E-Partners has really given us a boost and set the path for further development."

The E-Partners system has provided Faber with a state-of-the-art proprietary e-commerce platform that enables the company to sell both physical and digital products online through multiple channels. The KTP has enabled an entirely new stream of revenue for digital sheet music, and Faber have already launched seven E-Partner stores, with 40 more ready and waiting.

Outstanding facilities

Students and researchers are supported by extensive technical workshops and laboratories. There's also access to a range of industry-standard software.


3D virtual engineering lab


3D printing facilities

Specialist laboratories

- State-of-the-art virtual engineering laboratory with multi-avatar virtual reality capability
- Electronics laboratories for process and machine control, and coding for microprocessors and the Arduino platform
- Chemical engineering laboratories
- Dedicated robotics and mechatronics laboratory
- Engine laboratory (diesel and petrol)
- Thermodynamic laboratory
- Materials testing laboratory
- Control and robotics laboratory
- Hardware and software laboratory
- Analogue and digital electronics laboratory
- Electronics project room

Design and manufacturing workshops

- Traditional soft modelling and prototyping facilities, the latest Computer Numerical Control (CNC) machining technology, industry-standard lathes, milling machines and metal sheet cutters
- Rapid prototyping technology – multi-material 3D printers, laser cutters and vacuum casting systems.

Software packages

- Adobe Suite (Photoshop, Illustrator, InDesign, After Effects, Premiere)
- Autodesk Suite (AutoCAD, Inventor, Alias, VRed)
- Ansys
- CISCO certification
- C++ programming
- Eclipse
- GAP – produced by Petroleum Experts
- HYSYS
- LabView
- Siemens NX
- MATLAB
- Microsoft training courses
- Microsoft SQL Server 2012
- Netbeans 7.x with Java 7
- Oracle
- PETREL
- Prosper
- Python
- SAS
- Visual Paradigm

Collaborations and partnerships

Through our academic partnerships in the UK and overseas we offer a diverse range of courses in some inspiring locations. These important partnerships build on the existing expertise found at LSBU and give our students an extra enriching dimension to their studies. Internationally, LSBU offers exchanges with several universities in the USA. The School of Engineering has close partnerships with the British University in Egypt, the Independent Studies of Science and Technology, Greece, Auston Institute of Management, Singapore, and Lucerne University of Applied Sciences and Arts. In the UK, the School partners with Carshalton College and East Berkshire College.

LSBU also works closely with local schools, FE and sixth form colleges. These relationships ensure that we align our outreach and recruitment activities with the mission of these institutions to enable their students to make well-informed and appropriate decisions about their own futures. We organise activities and projects for young people that encourage their participation in Higher Education, including hosting and delivering modules for the Access to higher education courses at Lambeth College. We also support older students as they go through the process of applying to LSBU, and we help them and others who may be the first in their families to come to university make the transition to student life.

Employer sponsored study

Over 1,000 cross-sector partners sponsor their employees to study at LSBU. Our relevant, practical and accredited courses are designed for the modern workplace and are kept up to date with input from leading professional bodies and industry experts.

LSBU's engineering portfolio has a strong research underpinning and we are recognised as a top modern university in London for research in general engineering.

Our industry partners, such as GSK and Transport for London, entrust us to provide their employees with the skills they need to support their organisation. Our teaching methodology combines traditional theory based teaching with applied learning techniques that result in the type of highly trained and innovative employees that employers want.

On campus learning has the advantage of allowing employees to access peer support when they are studying, and our intensive day release BEng programmes, delivered over four years, minimise the amount of time employees spend away from the workplace.

Sponsoring a member of staff to study can unlock previously hidden potential, and help grow your organisation by allowing you to manage your talent, engage with staff, support career progression and bring new skills to your organisation.

For more information visit **www.lsbu.ac.uk/courses/employer-sponsored-study** or email **business.sponsor@lsbu.ac.uk**.

Career destinations

Our graduates go on to find success in all kinds of areas. Engineering as a career is varied, well paid and secure, and career destinations can be in any one (or more than one) of a range of sectors and at different points in the engineering process, such as designing, testing, making or maintenance. Graduates work in product design, power generation, renewable energy, automotive design and manufacturing, robotics, transport systems, telecommunications and IT, and within a range of research sectors.

Graduates are supported in finding work through the University's employability service, and the School also has partnerships with a range of commercial organisations that provide placement opportunities for our students.

Focus on: Arash Farhadi

MSc Petroleum Engineering, Reservoir Engineer

"I enjoyed my time as an undergraduate student at LSBU, and loved living in London. Plus I knew about the quality of lecturers and the facilities on offer so it made sense to complete my Masters here. I probably enjoyed lab work the most, the experiments and also using the computer simulation software. The course isn't all theory and you get to practice applying knowledge – something that's expected of you once you enter the industry."

Arash is currently working as a Reservoir Engineer for an oil and gas consultancy firm. He is involved in developing simulation models to predict oil reservoir performance to determine optional production techniques to maximise profits and reduce risks. "My company are developing me quickly – I'm being trained to work across Europe. I think my internships during my time at LSBU definitely helped, and I would recommend doing one to anyone looking to work in this sector. The time I spent developing my IT and software skills really helped too – these are things you have to know at this level."

View from: Sue Black

LSBU alumna and OBE

Tech evangelist, social entrepreneur, thought leader, writer, speaker and mum – Dr Sue Black (PhD Computer Science, 2001) is all these things and more. For twenty years, LSBU alumna Dr Sue Black has worked tirelessly to get more women into technology, inspired by her own life-changing experiences. Her steadfast dedication and innovation earned her an OBE in 2016's New Year Honours List.

Having dropped out of school at 16, by 25 Sue was living in a refuge, with no job, few qualifications, and three children aged under three. "I knew I needed to build a career and support my family," she says. "I thought about what I'd enjoyed at school, and kept coming back to the same thing: maths." Having found a place to live, Sue enrolled in a university access course at Southwark College – then she applied to study computer science at LSBU.

"Most of the other students had come straight from studying computer science A-level," she says. "I had a lot of catching up to do." Nevertheless, it was clear she'd found her path. "My supervisor called me in and said, 'Have you thought about doing a PhD?'"

The conference and networking events Sue attended as part of her PhD, many of them male-dominated, made her aware of the barriers that faced women in technology. Then, at a Women in Science conference in the late 1990s, she met Aliza Sherman, founder of pioneering US online network Webgrrls. "I just thought," explains Sue, "why don't we have something like that here? So I set it up."

The result was BCSWomen. Initially based in London, the group soon went nationwide. Sue ran the group in her spare time while pursuing her academic career, first at LSBU, and later as head of department at the University of Westminster. More recently, she set up #techmums, which offers free training for mums on low incomes and with no computer experience. The six-week programme covers app design, coding, social media and online security.

Sue hopes that #techmums may inspire women to go further, and learn more about technology. She believes the time is ripe, too, for women to take advantage of new opportunities in technology. "The Internet is creating a more level playing field," she says. "Big corporates are recognising that they need the best talent – and that can come from anywhere."

Sue's book *Saving Bletchley Park: How #socialmedia saved the home of the WWII codebreakers* is out now and available via Amazon.

"I always say to people at the start of courses, "If I can do it, so can you". All I did was work out where I wanted to be and put one foot in front of the other until I got there."

Focus on: Jamie Fairclough

BSc (Hons) Engineering Product Design, Design Engineer

If you were to ask most Engineering Product Design students what their dream job would entail, the odds are that it would involve working for a world-leading brand involved in an exciting, cutting-edge industry. For LSBU graduate Jamie Fairclough, that dream has become a reality.

"I'm a design engineer at McLaren Automotive," says Jamie. "I work as part of a team designing bespoke tooling for assembling high performance road vehicles. What I like about it most is that it covers all aspects of the vehicle, from body assembly and paint to engine installation and interior fitting. We get to study the whole vehicle to gain an understanding of how to build it accurately, easily and safely."

"While I was on my placement year, I learned professional CAD skills for in-house manufacture, and I now use CAD to develop our ideas at McLaren," he says. "I'll model and assemble the design concept and verify its strength and integrity so that we can forward the electronic data to manufacture. Once that's done, we can move in and start manufacture."

Looking to the future, Jamie hopes to become more involved with new projects at McLaren. "We're growing exponentially right now, and there are lots of ideas and development right on the cutting edge of tech - it's an exciting palace to be."

"The Engineering Product Design course at LSBU is one of only a few that still teach tactile making techniques alongside traditional lecturing. As a result, I learned a variety of creative techniques that drive the design process, helping me to bring my ideas to life."

Course list

Undergraduate

Advanced Vehicle Engineering BEng (Hons)/ MEng (Hons)
Business Information Technology BSc (Hons)/ Top-up to BSc
Business Intelligence BSc (Hons)/Top-up to BSc
Chemical Engineering BTEC HND
Chemical and Process Engineering BEng (Hons)
Computer Engineering BEng (Hons)/MEng (Hons)
Computer Science BSc (Hons)
Computer Systems and Networks BEng (Hons)
Computer Systems Management BSc (Hons)/ Top-up to BSc
Computing Foundation year
Computing BSc (Hons)/Top-up to BSc
Digital Business BSc (Hons)/Top-up to BSc
Electrical and Electronic Engineering BTEC HND/HNC
Electrical and Electronic Engineering BEng (Hons)/ MEng (Hons)
Electrical Engineering and Power Electronics BEng (Hons)/MEng (Hons)
Engineering Extended Degree Programme
Engineering Product Design BSc (Hons)
Information Technology BSc (Hons)/Top-up to BSc
Mechanical Engineering BEng (Hons)/MEng (Hons)
Product Design BSc (Hons)
Special Effects Design BSc (Hons)
Telecommunications Engineering BEng (Hons)/ MEng (Hons)

Postgraduate

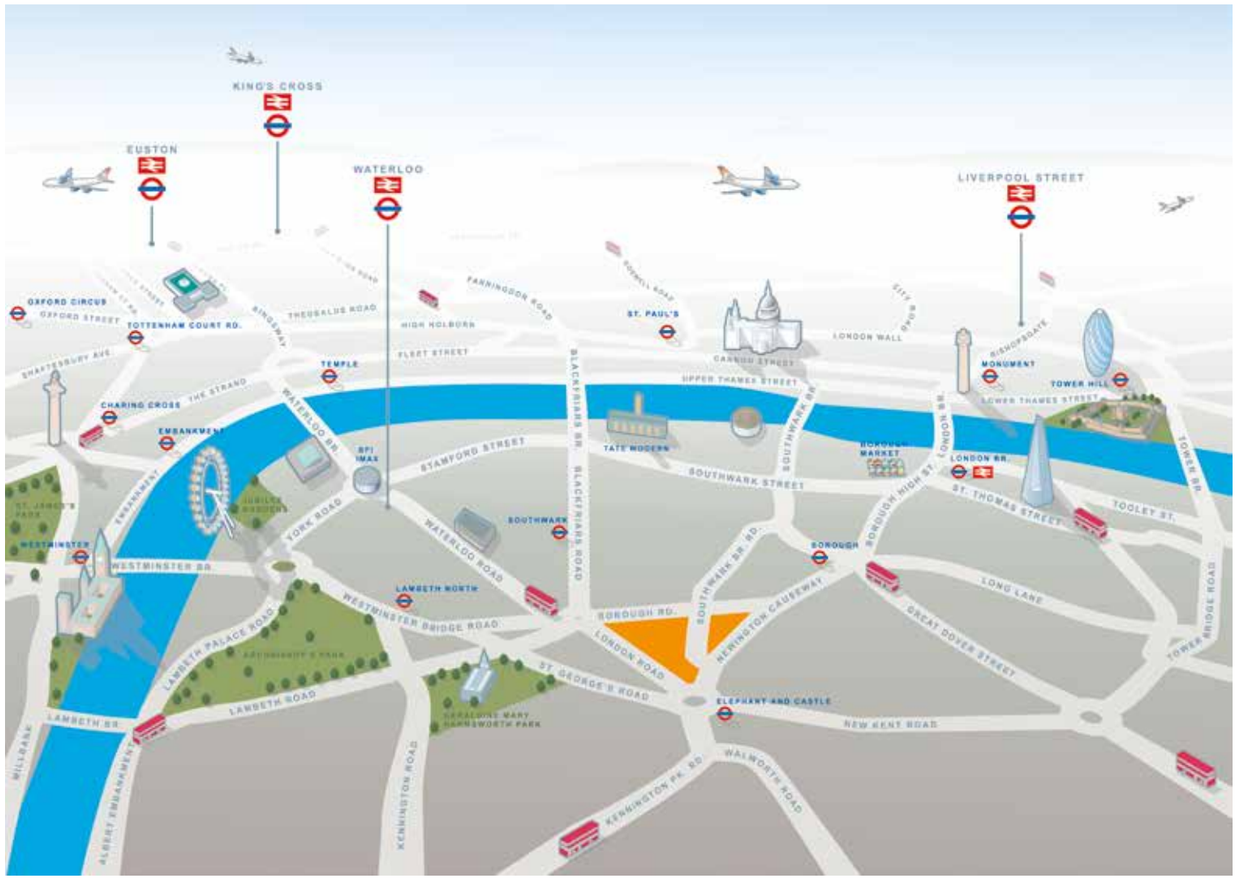
Advanced Telecommunications and Wireless Engineering MSc
Biomedical Engineering and Instrumentation MSc
Business Intelligence and Social Media MSc
Electrical and Electronic Engineering MSc
Engineering Management MEM
Engineering Project Management MSc
Internet and Database Systems MSc
IT Management for Business MSc
Mechanical Engineering MSc
Mechatronics, Robotics & Embedded Systems MSc
Petroleum Engineering MSc
Social and Digital Media MSc

Research

Chemical Process and Energy Engineering PhD
Electronic and Electrical Engineering MRes/PhD
General Engineering MRes/PhD
Mathematics and Computer Science PhD
Mechanical Engineering PhD
Production and Manufacturing Engineering PhD

Central location

LSBU has a fantastic central location which is just minutes away from Elephant and Castle Underground station. It's also close to London Bridge and Waterloo mainline stations, giving access from further afield. It's connected to the rest of South London by several bus services.



How to apply

You can apply for full-time undergraduate courses through ucas.com and postgraduate and research courses through the UKPASS system. For part-time undergraduate courses please apply direct to LSBU. International students should also apply direct to LSBU. See lsbu.ac.uk for more details.

Contact

Course enquiries:
0800 932 8888
course.enquiries@lsbu.ac.uk
www.lsbu.ac.uk/course-finder

Research:
020 7815 6923
crs-research@lsbu.ac.uk
www.lsbu.ac.uk/research

KTPs:
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