WHERE COULD ENGINEERING TAKE YOU?

Wondering what to do after your Level 3 course?

Use this leaflet to get an idea of your possible next steps in engineering.

Included in this leaflet:

Qualifications you could get after Level 3

'Accreditation' – what is it?

'Year in industry' 'sandwich year' 'placement year' – what is it?

Example courses and entry requirements in London

Engineering career profiles

Example higher and degree apprenticeships

Useful websites to help you research your options

OfS Uni Connect Programme

London NCOP

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This leaflet was produced by the Linking London Uni Connect Outreach Hub team in June 2020. This work is government funded as part of the Office for Students' Uni Connect (formerly NCOP) programme. The aim of the programme, and by extension this leaflet, is to provide students with impartial advice about their future options with an emphasis on encouraging progression to higher level study. This leaflet, in addition to its matching poster, have been produced to help colleges provide students with clear links between their curriculum and future career options. This leaflet is for students on Level 3 courses and in the early stages of considering their next steps.

If you have any comments, questions, or feedback please contact info@linkinglondon.ac.uk or our Outreach Hub Officers, Jess Brown (jess.brown@linkinglondon.ac.uk) and Melanie Green (melanie.green@linkinglondon.ac.uk)

What next?

So, you're on track to complete your Level 3 qualification(s) and thinking about continuing your studies in engineering. The next section lays out a few things you should consider.

What kind of qualification can you get after Level 3?

There are a range of Engineering qualifications you can study upon completion of your Level 3 course, depending on the grades you achieve and the kind of higher education provider you want to attend.

HNC – Level 4 – One year – Lower entry requirements

HND – Level 5 – One or two years – Lower entry requirements

BSc – Level 6 – Three years – Medium entry requirements

BEng – Level 6 – Three years – High entry requirements

MEng – Level 7 – Four years – Very high entry requirements

If you want to become a Chartered Engineer one day, you will need a master's degree.

Many universities will offer two kinds of engineering course: a BEng (bachelor's degree) and a MEng (master's degree – sometimes called an 'integrated master's degree').

A BEng will have slightly lower entry requirements than a MEng, however many universities will give you the option of switching to the MEng course if your grades are strong. You apply for a MEng course just like any other undergraduate course via UCAS.

Opting for a lower level engineering course, such as an HND or BSc, does not necessarily mean you can't eventually obtain a master's degree, it will just take more time.

UCAS has a really helpful 'undergraduate: what to study' page which includes a helpful explanation of the different kinds of higher education qualifications that exist.

You can find this by searching 'UCAS types of qualification' or by clicking here

Accreditation

Engineering is a profession, so many engineering degrees will have some form of professional accreditation. This is a sign that the content of the degree aligns with the knowledge and skills professional bodies believe a future engineer should have.

Which professional bodies are involved in accrediting Engineering degrees?

Institution of Mechanical Engineers (IMechE)

www.imeche.org/

Institution of Structural Engineers (IStructE)

www.istructe.org/

The Engineering Council (EngC)

www.engc.org.uk/

Joint Board of Moderators (JBM)

jbm.org.uk/

Institution of Civil Engineers (ICE)

www.ice.org.uk/

Do I get anything extra from an accredited degree?

An accredited degree is the first step towards achieving professional registration as an IEng (Incorporated Engineer), an EngTech (Engineering Technician), or CEng (Chartered Engineer).

Year in Industry

While researching possible degree options, you may notice lots of very similar course titles but with things like 'and a Year in Industry' or 'with Study in Industry' or 'with placement year' tacked on at the end. You might have heard of something called a 'sandwich degree' or 'sandwich year'. All of these mean the same thing.

What is it?

Like the name suggests, a course with a Year in Industry means exactly that – you spend a year working in industry, usually in between your second last and last year of study. This means your course will take an extra year to complete – for example, if you are doing a MEng with a Year in Industry, it would take five years to complete rather than the usual four years.

You are usually paid a reasonable salary for the work you do during your placement, so don't be put off the idea of a sandwich degree simply because you will finish your degree a year later. You gain invaluable work experience during a placement year that will be very helpful when you do finish your course and are looking for graduate employment; more and more universities offer the placement year as a part of their courses because they know graduate employers value graduates with that additional work experience. Really do your research to properly consider whether a Year in Industry option is right for you, as they work differently at different universities.

Examples of HE Engineering Courses and Entry Requirements in London FE Colleges and Universities

This mapping was correct at the time of print in July 2020. While we have tried to ensure that this information is as up to date as possible we take no responsibility in terms of the accuracy. Please always check the relevant provider for the latest information. This is not an exhaustive list of all institutions in London offering courses in engineering.

	UCAS Tariff	A-Level	BTEC L3 Extended Diploma	Access to HE Diploma	GCSE
Brunel University London *BEng (Hons) Civil Engineering with Placement*	Not accepted	BBB - including B in Maths and grade B in one of the following subjects; Physics, Chemistry, Biology, Geography, Geology, Environmental Science, Environment Studies or Design and Technology	D*DD in Engineering, Mechanical Engineering, Manufacturing Engineering, Electrical/Electronic Engineering, with Distinctions in Dynamic Mechanical Principles in Practice and Further Engineering Mathematics	D: 30 credits M: 15 credits All Maths and Science units must be Distinctions at level 3.	A minimum of 5 GCSEs at grade C or grade 4 and above are required, including English Language and Mathematics
City of Westminster College *HNC (Level 4) Civil Engineering*		Relevant A Levels (e.g. Mathematics or Physics)	BTEC Level 3 qualifications in Building Services Engineering or Civil Engineering		GCSE English Language and Maths at Grade 4 (C) or above
King's College London *BEng (Hons) General Engineering*	Not accepted	AAB	Check with institution	D: 33 credits M: 12 credits Access to HE Diploma in a relevant subject (Engineering, Mathematics, Science).	Check with institution
Kingston University London *BEng (Hons) Aerospace Engineering, Astronautics & Space Technology*	112 points	BBC - To include Maths and Science subjects (Physics, Chemistry and Biology)	DMM - must include Distinction in Further Maths for Technicians & Further Mechanical Principles or equivalent	D: 15 credits M: 30 credits Equivalent of 112 UCAS points from an Engineering based Access Course	5 GCSE subjects grades A*-C including Mathematics and English Language
London South Bank University *BEng (Hons) Power Engineering (Mechanical)*	120-128 points	BBB – Must include Maths or Physical Science	DDM – Must include Maths	D: 24 credits M: 21 credits 50% of the course must include Mathematics and Physical Science subjects	5 GCSEs A-C including Maths and English or equivalent (reformed GCSEs grade 4 or above)

	UCAS Tariff	A-Level	BTEC L3 Extended Diploma	Access to HE Diploma	GCSE
Middlesex University London *BEng (Hons) Mechatronics*	112 points	112 UCAS points including 80 points or above from at least two Science or Numerate subjects	DMM	M: 45 credits, Access pass with 45 credits at Level 3 (45 credits merit or higher)	GCSE grade C or above in English and Maths (reformed GCSEs grade 4 or above)
Richmond upon Thames College *HNC (Level 4) Mechanical Engineering*		AS/A2 levels in Physics and Mathematics at grade D above (preferably C or higher in AS/A2 Mathematics)	BTEC National Diploma/Certificate - Level 3 in Mechanical Engineering		
South Thames Colleges Group *HNC (Level 4) Construction and the Built Environment (Civil Engineering)*	48 points	DD	PPP in Construction, or related subjects	P: 45 credits. Must include maths-orientated units such as further maths and structure mechanics / analysis and design.	To include English Language and Mathematics grade C/4 or above (or level 2 equivalent).
University College London *BEng (Hons) Engineering (Civil)*	Not accepted	A*AA	D*D*D*	Not accepted	Grade C or 5 required in English Language, Mathematics and Physics (or Double Award) at grade A or 7 if not offered at A level. For UK-based students, a grade C or 5 or equivalent in a foreign language GCSE (other than Ancient Greek, Biblical Hebrew or Latin) is required.
University of East London *BEng (Hons) Civil Engineering*	96 points	CCC Including A2 Level Mathematics and Physics Grade D	MMM in a relevant Engineering subject	Access to HE Diploma in a relevant Engineering subject	Applicants should have, or be working towards, grade C/4 in GCSE English and Mathematics
University of Greenwich BEng (Hons) Civil Engineering	112 points	32 Points from Mathematics, a physical science or a numerate subject.	Engineering (required units: Calculus to Solve Engineering Problems (Unit 7) and Further Engineering Mathematics (Unit 8), both at Merit) or related subject	Access to Engineering accepted on a case by case basis	English language and mathematics at grade C/4, and one GCSE science subject at Grade C/4 or above. Also accept equivalent qualifications at Level 2, such as Functional Skills in Mathematics and English
University of West London *BEng (Hons) Electrical and Electronic Engineering*	112 points	BBC	DMM	Access to Engineering Diploma	English and Maths (grade 9 – 4 / A* - C) or Level 2 equivalents.
University of Westminster *BEng (Hons) Software Engineering*	96-120 points	CCC-BBB	MMM-DDM	96 to 120 UCAS Tariff points from the Access course	English Language grade C/4 and Maths grade C/4
Uxbridge College (HCUC) *HNC (Level 4) Electrical & Electronic Engineering*		One A-Level either in maths, physics or engineering with grade C or above	MPP in Electrical and Electronic Engineering plus the unit: Maths for Engineering Technicians at grade Merit or above		Grade A*-C (grade 9 - 4) in English, maths, and science or equivalent

Engineering Career Options

Below we have included a few brief snapshots of careers and roles that you could pursue in the field of engineering. Much of this information was sourced from Prospects – we recommend looking online at their job profiles for engineering and manufacturing,

Role/Career
Aeronautical Engineer
Salary
Starting: £22,000-£28,000 With experience: £28,000-£60,000+
Brief description
Concerned with improving flight safety, fuel efficiency, speed and weight, as well as reducing system costs and using advancing technologies to meet customer needs. The role is increasingly addressing the environmental impact of air travel.
Qualifications required
Degrees are available in aeronautical or aerospace engineering but employers may accept other relevant degrees such as: computer science/software engineering, electrical and electronic engineering, mathematics, mechanical engineering, physics/applied physics, production/ manufacturing engineering, space-related courses.

Role/Career
Electronics Engineer
Salary
Starting: £21,000-£25,000 With experience: £28,000-£65,000
Brief description
An electronics engineer will design, develop and test components, devices, systems or equipment that use electricity as part of their source of power. Involved at any stage of a project including the initial brief for a concept, the design and development stage, testing of prototypes and the final manufacture and implementation of a new product or system. Usually working in project teams with colleagues in other branches of engineering.
Qualifications required
Most electronics engineers have a degree in electrical or electronic engineering. Other relevant subjects for entry into the profession include: aeronautical engineering, communications engineering, computer/ software/computer science engineering, mathematics, mechanical engineering, physics and applied physics, production and manufacturing engineering. Those with an HND, relevant NVQ Level 3 qualification or an apprenticeship, may be considered for an engineering technician post.

Role/Career
Civil Engineer
Salary
Starting: £23,500-£26,500 Average salary for members of the Institution of Civil Engineers (ICE): £50,000
Brief description
Civil engineers are involved with the design, development and construction of a huge range of projects in the built and natural environment. The role is central to ensuring the safe, timely and well-resourced completion of many project areas.
Qualifications required
Minimum requirement of a BEng honour's degree in a relevant engineering subject is usually required for entry into civil engineering

Role/Career
Production Manager/Operations Manager
Salary
Starting: £25,000 With experience: £30,000-£60,000
Brief description
Production managers are involved with the planning, coordination and control of manufacturing processes. Production managers will make sure goods and services are produced efficiently at the correct cost, quality and amount.
Qualifications required
Foundation degree, HND or degree in the following may help secure a job: business or management, chemistry, electrical and electronic engineering, food science and technology, materials science and technology, mechanical engineering, physics, process engineering transport, distribution or logistics.

Role/Career
Land/Geomatics Surveyors
Salary
Starting: £20,000-£25,000 With experience: £25,000-£45,000
Brief description
Land/geomatics surveyors measure and collect data on specific areas of land, including information about boundaries, building and features, both natural and man-made for purposes such as property construction.
Qualifications required
Most employers would prefer a relevant honour's degree such as: civil or structural engineering, earth science, environmental science, geographical information science, geography or physical geography, geology, land or estate surveying, mathematics, physics, surveying and mapping science.

Role/Career
Sound Engineer
Salary
Starting: £15,000 With experience: £20,000-£40,000
Brief description
Responsible for manipulating acoustics to achieve a desired sound. Contexts could include live events, commercial music, TV, radio or advertising.
Qualifications required
Most entrants have an honour's degree relevant to a music technology subject such as sound recording or audio engineering. Foundation degree or HND in the subject may also provide an entry route, however the field is extremely competitive.

Apprenticeships

What kind of apprenticeships are out there?

If you're thinking about doing an apprenticeship in the field of engineering after you complete your Level 3 course, there are a few options available. Below are some examples to give you an idea of the kinds of apprenticeships that may be available in this field. The salary ranges and entry requirements we have included are to give you a general idea, but are in no way absolute and you should always check individual apprenticeship vacancies for the specific details. You can use the government's **'find an apprenticeship'** service and **RateMyApprenticeship** to find vacancies and resources to help with the application process.

Higher Apprenticeship	
Qualification obtained	Level 4 or 5 (Higher National Certificate or Diploma)
Length	2-4 years
Yearly salary	£8,000-£18,000
Role type	Technician, Project Manager

Example higher apprenticeship	
Role	Construction Supervisor
Qualification obtained	Construction Site Engineering Technician – Level 4 (Higher National Certificate)
Yearly Salary	£16,000-£18,000
Length	2-3 years
Entry requirements	5 GCSEs (incl. Maths, English, and Science) - Grade B/6 64-112 UCAS Tariff points

Degree Apprenticeship	
Qualification obtained	Level 6 or 7 (Bachelor's degree with honours or Master's degree)
Length	5 years
Yearly salary	£16,000-£21,000
Role type	Surveyor, Civil Engineer

Example degree apprenticeship	
Role	Civil Engineering Degree Apprenticeship
Qualification obtained	Civil Engineer – Level 6 (degree with honours)
Yearly Salary	£21,000
Length	5 years
Entry requirements	5 GCSEs (incl. Maths, English, and Science) - Grade B/6 BTEC: DDM with Further Maths A Level: BBC incl. Maths or Further Maths

Next Steps

Research your options

You need to be proactive and spend time finding out what options are available and most suitable for you. We have included a few helpful websites at the end of this leaflet which can be a good place to start. Research what work experience options are out there.

Create a shortlist of courses, higher education providers, and apprenticeships that you are interested in

You might want to make your own spreadsheet, word document, specific notebook, or notes document on your phone to help with this. You'll want to keep a note of any application deadlines, open days or talks, and other key information like accommodation and financial support available.

Speak to your college careers team about your plans

It's always good to discuss your plans with people who have lots of experience helping people like you make decisions. Chatting to people in your support network, like friends and family, is helpful but make sure to also use the careers professionals available to you through college. You can also speak to current engineering students using platforms like UniBuddy and The Student Room.

Useful Websites

Prospects

Prospects has lots of information and advice about graduate careers and opportunities. They have a range of job profiles related to the Engineering and Manufacturing sector on their website, as well as lots of other helpful resources.

Search **'Prospects engineering job profiles'** or click:

www.prospects.ac.uk/job-profiles/browse-sector/engineering-and-manufacturing

UCAS

UCAS has tons of resources to help guide you in your next educational steps. Creating an account on the UCAS Hub should be one of the first things you do. UCAS has a variety of subject guides that provide more information on different subject areas, like aerospace engineering or civil engineering. The UCAS course search tool is also really helpful to see the range of courses out there at all the different higher education providers in the UK.

Search **'UCAS hub'** or click:

www.ucas.com/dashboard

Search '**UCAS course search**' or click:

digital.ucas.com/search

Search **'UCAS subject guides'** or click:

www.ucas.com/explore/subjects

Find an apprenticeship

The government's apprenticeship search tool is one of the best ways to find higher and degree level apprenticeships.

Search **'find an apprenticeship'** or click:

www.findapprenticeship.service.gov.uk/

RateMyApprenticeship

RateMyApprenticeship also advertises apprenticeship vacancies and has lots of resources available to help you through the apprenticeship application process, as well as reviews from current apprentices.

Search **'ratemyapprenticeship'** or click: **www.ratemyapprenticeship.co.uk/**

Unibuddy

A service which connects prospective students with university ambassadors (current students) and staff.

Search 'unibuddy' or click: **unibuddy.com**

The Student Room

You can access advice from prospective, current, and former students on this platform.

Search 'the student room' or click: **www.thestudentroom.co.uk**

Tomorrow's Engineers

An organisation which aims to inspire more young people into engineering careers. There are lots of resources available on their website which provide more information about different routes into engineering as well as in depth explanations of the different elements of the engineering sector – you can find these under 'careers resources'.

Search 'tomorrow's engineers' or click: **www.tomorrowsengineers.org.uk**

National Careers Service

This is a government service which can be helpful in providing an overview of entry requirements and routes into certain careers, including engineering.

Search 'national careers service engineering' or click: **nationalcareers.service.gov.uk/job-categories/engineering-and-maintenance**

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