



The Open
University

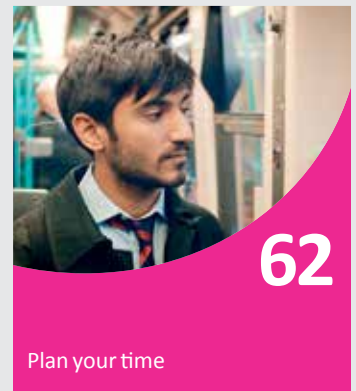
Engineering, Design and Technology

Prospectus 2016/2017



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Welcome

The most important thing you'll learn is what you're capable of

Hello and welcome to The Open University (OU). Are you as excited about changing your life as we are about welcoming you as a student? We believe there's never been a better time to join us.

Every year, thousands of people just like you decide to start studying with us. Our whole philosophy is based around recognising the importance of flexible, part-time study and finding ways to make that study more accessible to anyone who has the drive and desire to learn in an increasingly competitive world.

With the OU you're guaranteed outstanding value. Our qualifications are up to date and commercially focused, ensuring that new skills and knowledge gained as you work towards your goal are put into practice immediately.

We've established strong alliances with employers as a result of the flexible way we deliver our qualifications and our learning methods are respected and appreciated by employers and students alike.

We've opened up the world of higher education for anyone who wants to improve their life. We take your goals seriously, and we are here to help you make the right choices. We're the market leader for people who need studies to fit around busy working lives and family commitments. That's why we're so confident the OU is the right choice for you.

"If you're in two minds as to whether or not the OU is for you, the only thing I can say is do it. You won't regret it!"



Lindsay Dow,
studied with the OU

Life-changing learning

that's built around you



Experience and expertise

Many of our tutors are not only academic experts, they're also still working in their relevant industry.

Every day, someone, somewhere, is picking up the qualification they'll need to help fill the growing skills shortage in the engineering, design and technology sectors. You can be that person.

We recognise people like you, who are determined to succeed.

Getting an OU qualification in engineering, design and technology will give you valuable knowledge and skills that will set you up for a rewarding career.

Like thousands of other people looking to study with the OU, you've got something in common – you're eager to learn and improve yourself.



"I transferred my course materials to my iPad, Kindle and laptop - that way they were always with me when I had a moment free."

Karl Hamilton,
studied with the OU

We're confident we're the right choice for you. Here's why:

1. The support you need

We know you'll be giving it your all. So we'll give you the freedom and personal support you need to study your course, and get a qualification, your way.

2. The qualifications employers respect

Our qualifications have such an excellent reputation all over the world, you can be confident your life will change for the better thanks to studying with the OU.

3. The knowledge you want

Highly experienced tutors and quality resources that are second to none. You just can't get the same combination of expertise, materials and methods of learning anywhere else.

4. The technology that works

When it comes to finding new technologies that make your life and studying even easier, we never stand still. You can guarantee we'll stay ahead of the game on your behalf.

5. Life-changing learning

What we offer is a personalised learning experience, one that's been designed to fit in with careers and personal lives, and change your life forever.



“The OU is unlike most red-brick universities, it’s unique in a very precious way – it gives opportunity and flexibility to anyone who wants a higher education, no matter what their social and financial limitations.”

Fatema Islam, studied with the OU

You can do this – we know you can

We won’t pretend it’s easy, but you can be sure there’s no other university in the world that supports you the way we do. We’re pioneers in the method of distance learning, making The Open University truly unique.

We’re in the best possible position to give you all the help you’ll need to achieve your study goal, and make every moment of your studies worthwhile.

Simply choose your course, and change your life today

Whichever qualification you choose, you’ll be studying a curriculum that’s internationally relevant, which has been created and is taught by academics with industry insights and lifetimes of experience – people whose insights and research are out of this world.

We believe our courses are incomparable

We’ve forged unique partnerships with some of the world’s most influential thought leaders, the BBC being the most widely known. Our joint ventures educate the world, receive outstanding reviews and give us access to people who

bring relevant, practical knowledge to guide our research and shape the course content you’ll be studying.

From the materials in our undergraduate degrees to OpenLearn courses that anyone can access free of charge – all you have to do is take the first step. It’s all here for you, and because we’re committed to delivering our materials using some of the most up-to-date digital technologies, it’s all unbelievably accessible.

World-class resources

The Open University has more online library resources than any other university in the UK.

Reassuring credentials

Global employers and skills councils help us create our courses, so you’ll learn what’s actually needed to enhance your career.

Groundbreaking innovation

We never stand still. We’re developing new ways of learning all the time, to make your studying easier wherever you may be.

Highest standards
Just under 90% of the FTSE 100 have sponsored staff on OU programmes.

Excellent support
Our students all have their own tutor for each subject module – each tutor supports about 20 students.

Engineering, design and technology

Shaping the future



Find out more about what an OU qualification in engineering, design and technology could mean for you. Go to www.openuniversity.co.uk/careers.



Organisations depend on well-qualified people to give them a competitive advantage through product innovation. The better qualified you are, the more in demand you will be.

Technically speaking...

We're never satisfied with good enough. We're always exploring the opportunities for advancement, and that means pushing engineering, design and technology to their limits.

With that in mind, organisations want people who show initiative and have the drive, knowledge and skills to innovate successfully. An OU qualification in engineering, design or technology will give you a firm foundation on which to build a career as a professional engineer, designer or technologist.

Getting ahead, staying ahead

Studying for an undergraduate qualification with us means you can balance your ambitions for tomorrow with your career today. Gaining a postgraduate qualification in engineering, design and technology with the OU means you're in an excellent position to play an influential role in shaping industry, and your own career.

There has never been more demand for people with technical skills, knowledge and expertise. Our qualifications in engineering, design and technology have been designed by academics active in research in this field, working together with technologists in industry to ensure that what you learn is up to date and relevant within industry.



Achieving your goals – we're with you all the way

Our courses stand out on a CV. It's what employers are always looking for – people with the initiative and determination to succeed.

They're also ideally suited if you're simply fascinated by a subject, and want to fit world-class studies into an already busy life. Typical career areas our students pursue after gaining an OU qualification in engineering, design or technology include:

- the energy and environmental sector
- nuclear engineering and petrochemical engineering
- nanotechnology and biotechnology
- telecommunications, aerospace, space technology and exploration
- civil engineering
- biomedical engineering
- robotics
- the creative industries
- automotive industry (low carbon vehicle development in particular).

Shaping a course for your ambitions

Our courses in engineering, design and technology offer an excellent combination of practice-based skills development, professional theory and technical understanding. We offer a range of defined routes within these to emphasise specific areas of interest. An alternative option is our Open degree where you can choose from a wide variety of modules to suit your individual interests.

Engineering, design and technology is an all-encompassing field of study that's so rich in its content and potential, the sky's the limit.

The right qualifications

Engineering

Our engineering degrees meet the Engineering Council's educational requirements as accredited by the Institution of Engineering and Technology (IET), the Institution of Engineering Designers (IED) and the Chartered Institution of Building Services Engineers (CIBSE). Confirmation of accreditation with the Institution of Mechanical Engineers (IMechE) is pending.

The Bachelor of Engineering (BEng) (Hons) is CEng accredited and fulfils the educational requirements for Chartered Engineer (CEng) when presented with an accredited MSc. In addition, the programme meets the educational requirements for registration as an Incorporated Engineer.

The Master of Engineering (MEng) is CEng accredited and fulfils the educational requirements for registration as a Chartered Engineer.

Our MSc in Engineering is CEng accredited and fulfils the educational requirements for registration as Chartered Engineer when presented with an accredited honours degree.

In keeping with the Engineering Council's regulations these accreditations will be recognised by other member institutions of the Engineering Council. For the latest information, please visit engineering.open.ac.uk.

Design

The engineering and environment routes of our degree in design and innovation is accredited by the IED.

Technology

Our technology qualifications cover a wide range of fields – recognised with respect by bodies such as BCS, The Chartered Institute for IT, the Institution of Engineering and Technology (IET) and the Institute of Telecommunications Professionals (ITP), to name but three.



The flexibility to learn in your own way



Consistent quality

We're one of only 3 universities to consistently achieve over 90% for student satisfaction in the National Student Survey.



Exclusive access

As an OU student you'll have access to world-class library resources, whenever you need them.

With the OU, you have the flexibility you need to make your studies fit in around life's other commitments. We call it 'Supported Open Learning'.

Our teaching method is unique

You'll have more one-to-one contact than you'd have with other types of distance education and more flexibility than campus-based learning.

Our academics are respected the world over and you'll have access to all the latest research through the OU library.

What's more, if there's a new type of technology around or a better way to do things, you can guarantee we're already testing it on your behalf.

Always independent, never alone

You'll have opportunities to take part in tutorials, and we'll make sure you've got everything you need – whether you're studying from home, at work, or on the move.

As soon as your course starts we'll also put you in touch with a Student Support Team who can help you with any concerns about your studies.

Whatever you decide to study, you'll find like-minded students connecting with each other in our online forums – pretty much 24 hours a day.

We have a vibrant student community

We're here to help you every step of the way. In fact, people are often surprised by how social we are as a community – and our forums are alive with people just like you, whenever you log on, whether it's a module discussion group or one of the many informal Facebook groups set up by students.

Students Association

All students gain automatic membership to our strong and active Students Association – run by students, for students. You'll have the chance to influence University decisions, meet fellow students and develop new skills. To find out more go to www.openuniversity.co.uk/ousa.

You can also join the conversation at:

- Facebook.com/OUstudents
- Twitter.com/OUstudents
- Instagram.com/OUstudentslive

Need a little extra help?

Last year the OU supported over 22,000 students with disabilities or additional needs. So if you have any additional requirements, we'll do our best to make your studies accessible. We're only a phone call away, and we'll also be supporting you online and via email.

To find out if you qualify for extra financial help with study and travel costs, see page 68, call us on **+44 (0)300 303 5303** or go to www.openuniversity.co.uk/disability.

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[Twitter.com/openuniversity](https://twitter.com/openuniversity)

World-leading research

shaping our curriculum for you

The UK has immense strengths in engineering, design and technology. They're at the heart of wealth-generating industries – and our focus on advancing our understanding of them through research never waivers.

We're excited at the idea you may be joining us, because we never know who's going to bring that unique spark and thirst for discovery to us next.

Our research is world class. We've contributed to the safety of industrial engineering components worldwide; our research into residual stress measurement in materials has impacted on the design, assessment and safety standards in the aerospace industry. We are one of the UK's top materials engineering research centres: enhancing the lifespan and performance of safety-critical structures in a range of industries, benefiting the economy, public safety and society.

Seeing beneath the surface

It was the OU's research teams that led a £3.5m consortium, designing and building ENGIN-X – the world's first neutron diffractometer for probing the structure and condition of the materials in engineering components. As part of that

initiative, we developed Strain Scanning Software (SScanSS), which is installed at eight facilities worldwide and used by many multinational companies such as General Motors, John Deere, Airbus and Pacific Rail.

Better diagnostics

The Materials Engineering Group at the OU has an outstanding reputation for its work in measuring residual stress in engineering components – potentially preventing catastrophic failure of components.

We are the leading research facility in Europe in the use of

Contour Method: a powerful way of mapping two-dimensional distributions of residual stress in engineering components. To meet increasing demands from clients worldwide, we founded StressMap – a dedicated measurement services business unit.

Undergraduate study

You can get a head start to your career by studying with the OU. Our qualifications cover many areas, including computing and information technologies, design, engineering, environmental technologies and sustainable energy.

You can also aim for Chartered or Incorporated Engineer status, like many of the 5000 plus students currently working towards an OU engineering degree.

How undergraduate study works

To achieve your chosen qualification, you need to build up a set number of credits.



You gain credits by completing a series of modules.
Credits vary by module.



You choose the modules you want to study, year by year.
Depending on your qualification, some modules may be compulsory while others may be selected from a set of options.

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BSc (Hons) Environmental Management and Technology (Q72)	28
BSc (Hons) Computing & IT and Design (Q67)	31
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Foundation degree/Diploma of higher education	
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Getting started with an Access module

Access modules are designed to improve your confidence and refresh your study skills. You could even study for **free**.

They're also a great way to explore a subject that interests you and for getting an overall feel of what it's like to learn with the OU.

Access modules give an excellent insight to the way we offer Supported Open Learning: you'll have a personal tutor providing regular feedback through one-to-one telephone tutorials and further support throughout your study.

Each module offers a range of materials, online quizzes and course assignments that you'll complete over a period of 30 weeks. It takes around nine hours of study each week to stay on track.

You'll always get detailed written feedback on your work. And when you get that OU Access Module Certificate at the end of the course, you'll be well prepared to continue your studies towards a qualification.

Access modules start in February and October, every year.

Should I start with an Access module?

If you'd like to brush up on your study skills, improve your confidence, and make a practical decision about whether or not Supported Open Learning is right for you – then yes, an Access module is the ideal starting point.

And if you have little or no experience of university-level studies, then an Access module is a perfect introduction to what's needed, what you'll have to do, and how you'll study via distance learning.

What do I need to begin my studies?

After registering you'll receive your study materials in the post.

As well as access to a phone and equipment that plays DVDs, you will need the use of a computer with internet access. You don't need to go out and buy one though, the use of one at a library or drop-in centre will be fine.

Which Access module should I study?

The following Access module is linked to one or more of the qualifications we offer in engineering, design and technology.

Science, technology and maths Access module (Y033)

This module introduces you to a technically oriented range of subjects, including science; engineering and design; environment; mathematics; and computing and IT. As the foundation for further studies in these fields, this is the ideal module to explore mathematical and scientific ideas and techniques.

We offer two other Access modules, which are more relevant to other subject areas:

Arts and languages Access module (Y031)

People, work and society Access module (Y032)



Undergraduate qualifications

Registration for the 2016/2017 academic year opens for all undergraduate qualifications on 11 February 2016. Qualification start dates are based on the start date of the first applicable module(s) you can study as part of your qualification.

The qualification descriptions in this prospectus list the modules that are currently available for study. However, as we review our curriculum on a regular basis, the exact selection may change over time.

BA or BSc (Hons) Design and Innovation

Design and innovation have a huge impact on society well beyond the creative industries – finding solutions to problems that affect every aspect of our lives.

The Open University is at the forefront of teaching in this field; with a reputation for producing ground-breaking modules featuring online design studios, social networking, and inspiring study materials.

This degree enables you to study one additional subject alongside design and innovation – choosing from arts, business, design engineering or environment. You'll develop your understanding of the huge impact that design can have, and gain knowledge and skills that will be useful in a wide range of careers. Your study will focus on three key aspects: the process of design; working with and for others; and applying design and innovation in real-world contexts. Each of the core modules has a significant practical component.

Design at the OU is not focused on specific disciplines such as product or graphic design but rather addresses design in terms of design thinking and process, exploring how design and innovation can be applied in real world contexts.

Total credits: 360

Code: Q61

Start date:

Oct 2016

(registration closes 08 Sep 2016)

Feb 2017

(registration closes 05 Jan 2017)

Module availability is subject to change

On successful completion of this course, depending on your choice of second subject, you'll be awarded either a BA or BSc degree.

Career relevance and employability

A design and innovation approach can bring value to almost any activity, and is increasingly in demand with employers – for example in education, business, local government, leisure services, engineering, environment, and health. This degree will equip you to apply design and innovation skills in such 'embedded contexts' – areas outside the creative industries that are not traditionally thought of as 'creative', but nevertheless benefit hugely from the creativity that comes with design and innovation. As you study, you'll apply the thinking, methods, and techniques you learn to your own context, enabling you to produce a portfolio of highly relevant design work.



Career relevant

The most in demand workers globally are skilled trades people, engineers and technicians.

Stage 1

120 credits required

Design and innovation (all routes)

Your first module, *Design thinking: creativity for the 21st century* (U101), introduces the basics of the design process and creative thinking. You'll sketch and model prototypes and produce a portfolio of work in an online design studio environment, and explore issues such as: design and the individual; designing for others and with others; design and society; and the global impact of design.

Module summary CREDITS CODE

Compulsory module – 60 credits

<i>Design thinking: creativity for the 21st century</i>	60	U101
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Stage 1 modules in your chosen second subject:

Arts

The arts past and present (AA100) is a broad and fascinating introduction to a range of arts disciplines across multiple cultures and historical periods, including history, philosophy, music and English.

Module summary CREDITS CODE

Compulsory module – 60 credits

<i>The arts past and present</i>	60	AA100
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Business

An introduction to business and management (B100) will introduce you to the different internal and external elements of a business and help you understand the context in which a business operates.

Module summary CREDITS CODE

Compulsory module – 60 credits

<i>An introduction to business and management</i>	60	B100
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Design engineering

You'll begin with *Engineering: origins, methods, context* (T192), an introduction to engineering and design engineering, integrating key scientific concepts, mathematical techniques and study skills needed to support further studies in design engineering.

Next, in *Engineering: frameworks, analysis, production* (T193) you will explore patents, standards, manufacturing and materials, and be introduced to mathematical topics including calculus.

Module summary CREDITS CODE

Compulsory modules – 60 credits

<i>Engineering: origins, methods, context</i>	30	T192
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<i>Engineering: frameworks, analysis, production</i>	30	T193
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Environment

In *Environment: journeys through a changing world* (U116) you'll investigate contemporary environmental topics, drawing perspectives from the social sciences, science and technology to explore the issues arising from environmental challenges across the globe. You'll also develop the key skills and concepts needed to understand our changing world.

Module summary CREDITS CODE

Compulsory module – 60 credits

<i>Environment: journeys through a changing world</i>	60	U116
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Stage 2

120 credits required

Design and innovation (all routes)

Design essentials (T217) uses case studies to explore professional aspects of the design process. You'll continue to develop your practical skills – learning the basics of 3D computer modelling in addition to hand-drawn sketches – and investigate: design principles, designing for people, creativity and design, embodying design, materials and manufacturing.

Module summary	CREDITS	CODE
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Compulsory module – 60 credits		
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<i>Design essentials</i>	60	T217
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Stage 2 modules in your chosen second subject:

Arts

Exploring art and visual culture (A226) focuses on art from historical and contemporary perspectives, asking fundamental questions such as: 'What is art, and why do we need it?'. You will investigate different periods and styles of art – including the renaissance, baroque, impressionism, and modernism – and gain valuable critical insight into design history.

Module summary	CREDITS	CODE
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Compulsory module – 60 credits		
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<i>Exploring art and visual culture</i>	60	A226
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Business

You'll look in more detail at the distinct functions of a business in *Business functions in context* (B203), extending and enriching your Stage 1 studies. For example, you'll explore complex and interwoven factors that a business has to contend with, such as operations management, information management, and financial and accounting systems.

Module summary	CREDITS	CODE
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Compulsory module – 60 credits		
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<i>Business functions in context</i>	60	B203
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Design engineering

Engineering: mechanics, materials, design (T207) investigates how engineers solve technical problems through modelling and analysis – focusing on topics such as statics and dynamics; energy and endurance; and mathematical modelling.

Module summary	CREDITS	CODE
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Compulsory module – 60 credits		
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<i>Engineering: mechanics, materials, design</i>	60	T207
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Environment

Environment: sharing a dynamic planet (DST206) examines how environmental change has varied during the Earth's history; and the role of natural factors and human activity. You'll examine scientific and political uncertainties surrounding climate change, the provision of fresh water and sustainable agriculture; and why these issues are the source of social and political conflict.

Module summary	CREDITS	CODE
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Compulsory module – 60 credits		
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<i>Environment: sharing a dynamic planet</i>	60	DST206
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Stage 3

120 credits required

Design and innovation (all routes)

Innovation: designing for change (T317) considers innovation across a wide range of disciplines – how it comes about, how it develops, and how it is received – underpinned by ideas of sustainability and social responsibility. A final assessed project brings together everything you’ve learned.

Module summary CREDITS CODE

Compulsory module – 60 credits

Innovation: designing for change 60 T317

Stage 3 modules in your chosen second subject:

Arts

Art of the twentieth century (AA318) will consolidate and build on your critical knowledge, exploring contemporary conceptions of art, changing forms and media, the role of gender and identity, postmodernism and globalised culture.

By the end of your degree you’ll have a strong, practical understanding of how design and innovation relates to the arts, and a good critical awareness of art and design history.

Module summary CREDITS CODE

Compulsory module – 60 credits

Art of the twentieth century 60 AA318

On successful completion, you will be awarded the BA (Honours) Design and Innovation.

Business

Investigating entrepreneurial opportunities (B322) with *Marketing and society* (B324) will explore how to get new business ideas off the ground, plan and appraise projects, analyse potential markets; and then apply marketing concepts and theories to your own professional context.

Alternatively, you could study *Making sense of strategy* (B301), which focuses on strategic thinking and planning – using independent enquiry and collaborative working to examine the ideas and approaches that have influenced organisational strategies.

Module summary CREDITS CODE

Optional module(s) – 60 credits

Select from:

Investigating entrepreneurial opportunities 30 B322

Making sense of strategy 60 B301

Marketing and society 30 B324

On successful completion, you will be awarded the BA (Honours) Design and Innovation.

Design engineering

Structural integrity: designing against failure (T357) explores advanced engineering techniques such as stress analysis; failure modes and effects analysis; and complex materials behaviour.

Then in *The engineering project* (T452), you’ll demonstrate the concepts of design and engineering that you’ve learned throughout your studies – graduating with a strong, practical and analytical understanding of the relationship between the

two disciplines, and the ability to solve technical challenges using creativity and analysis.

Module summary CREDITS CODE

Compulsory modules – 60 credits

Structural integrity: designing against failure 30 T357

The engineering project 30 T452

On successful completion, you will be awarded the BSc (Honours) Design and Innovation.

Environment

The environmental web (U316) investigates the interdependence of environment and human activities; the consequences of environmental change; and how to act in the face of uncertainty. You’ll also explore and appraise environmental materials on the internet. You’ll finish your studies with a strong, practical understanding of how design and innovation can contribute to positive environmental action.

Module summary CREDITS CODE

Compulsory module – 60 credits

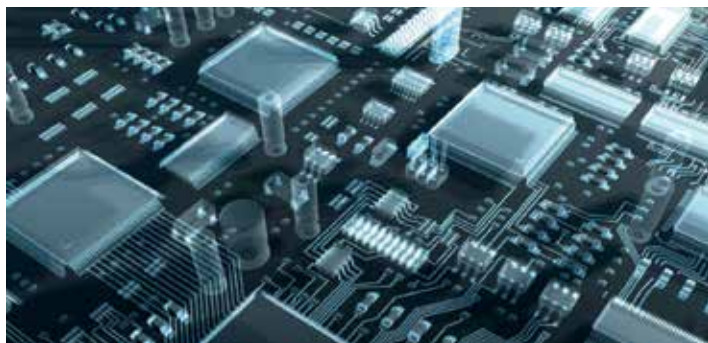
The environmental web 60 U316

On successful completion, you will be awarded the BSc (Honours) Design and Innovation.

MORE ONLINE



www.openuniversity.co.uk/q61



Bachelor of Engineering (Hons) (BEng)

From microscopic electronic devices to super structures like dams, bridges and towers, engineering has a vast scope that touches every area of our lives.

The BEng (Hons) is a fascinating and thorough general engineering qualification that explores the fundamentals of this creative and analytical subject, and provides a firm foundation on which to build a successful career. It covers the range of techniques, concepts and knowledge required by professional engineers – from materials and mechanics to design and modelling – and you'll have the opportunity to focus on electronics, engineering design, energy and sustainability, environmental technologies or mathematical methods. Learning outcomes have been designed to fulfil the Engineering Council's requirements under UK-SPEC, and early on in your studies you'll compile a personal and professional development plan. You'll work on real projects and attend two compulsory one-week residential schools – teaming up with other students to create innovative solutions to challenging problems.

This qualification is only available for part-time study, taking a minimum of six years.

Total credits: 360
Code: Q65

Start date:
Oct 2016
(registration closes 08 Sep 2016)

Apr 2017
(registration closes 09 Mar 2017)

Module availability is subject to change

Career relevance and employability

Qualified engineers are much in demand for their rigorous approach to problem solving and high level of numeracy – opening up a wide range of other career opportunities (such as management or finance) as well as in engineering itself.

This qualification is accredited by the Institution of Engineering and Technology (IET), the Institution of Engineering Designers (IED) and the Chartered Institution of Building Services Engineers (CIBSE).

The BEng is also CEng accredited and fulfils the educational requirements for Chartered Engineer when presented with an accredited MSc. In addition, the programme meets the educational requirements for registration as an Incorporated Engineer. You can also continue studying towards registration as a Chartered Engineer by studying the Postgraduate Diploma in Engineering, leading to the MSc in Engineering. The OU's MSc in Engineering fulfils the educational requirements for registration as a Chartered Engineer when presented with a CEng accredited honours degree. See also our MEng (M04) on page 22. For the latest information on accreditation, please visit engineering.open.ac.uk.



Stage 1

120 credits required

You'll begin with *Engineering: origins, methods, context* (T192), an introduction to engineering and design engineering, integrating key scientific concepts, mathematical techniques and study skills needed to support further studies in engineering.

Next, *Engineering: frameworks, analysis, production* (T193), will further extend your knowledge of engineering, covering patents, standards, manufacturing and materials, and introducing new mathematical topics including calculus.

A third introductory module *Engineering: mathematics, modelling, applications* (T194) is planned for October 2017.

Finally, in *Engineering: professions, practice and skills 1* (T176), you'll take the first steps to gaining professional engineering status through personal and professional skills development. You'll also attend a compulsory one-week residential school, where you will work on practical activities alongside your peers.

Module summary	CREDITS	CODE
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Compulsory modules – 120 credits

<i>Engineering: origins, methods, context</i>	30	T192
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<i>Engineering: frameworks, analysis, production</i>	30	T193
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<i>Engineering: mathematics, modelling, applications</i> (planned for October 2017)	30	T194
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<i>Engineering: professions, practice and skills 1</i>	30	T176
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Connected for life

The support doesn't stop once you've gained your OU qualification. Our vibrant OU Alumni Association has over 360,000 members connecting and networking.

Stage 2

120 credits required

All routes

You'll begin with *Engineering: mechanics, materials, design* (T207), which explores how engineers find solutions for technical problems; aspects of the mechanics of solids and fluids; and the structure and properties of materials.

You'll then study modules in your chosen subject area, before completing Stage 2 with *Engineering: professions, practice and skills 2* (T276). This module further develops the skills you need to achieve professional engineering status, and includes a second compulsory residential school focusing on the further development of your practical and analytical skills in a real-time face-to-face laboratory environment.

Electronics

Electronics: sensing, logic and actuation (T212) (planned for October 2017) will provide you with industrially relevant skills in the core aspects of electronics: *sensing* gives detailed awareness of the world, *logic* makes smart decisions and *actuation* produces tangible outputs.

Module summary	CREDITS	CODE
Compulsory modules – 120 credits		
<i>Engineering: mechanics, materials, design</i>	60	T207
<i>Electronics: sensing, logic and actuation</i> (planned for October 2017)	30	T212
<i>Engineering: professions, practice and skills 2</i>	30	T276

Engineering design

Design for engineers (T218) will introduce you to the essential skills, knowledge and practices of design, exploring the design process and the basic principles of developing designs towards engineering solutions.

Module summary	CREDITS	CODE
Compulsory modules – 120 credits		
<i>Engineering: mechanics, materials, design</i>	60	T207
<i>Design for engineers</i>	30	T218
<i>Engineering: professions, practice and skills 2</i>	30	T276

Energy and sustainability

Energy and sustainability (T213) investigates energy generation solutions, their effects and environmental impact, their underlying technologies, and the advantages and disadvantages of each.

Module summary	CREDITS	CODE
Compulsory modules – 120 credits		
<i>Engineering: mechanics, materials, design</i>	60	T207
<i>Energy and sustainability</i>	30	T213
<i>Engineering: professions, practice and skills 2</i>	30	T276

Environmental technologies

The online module *Environmental management 1* (T219) will build your capacity to engage with the systemic changes of environmental management at domestic, organisational and community levels through established and emerging approaches, such as life-cycle analysis and team working.

Module summary	CREDITS	CODE
Compulsory modules – 120 credits		
<i>Engineering: mechanics, materials, design</i>	60	T207
<i>Environmental management 1</i>	30	T219
<i>Engineering: professions, practice and skills 2</i>	30	T276

Mathematical methods

Mathematical methods (MST224) investigates the methods used to model and solve real-world problems, including differential equations, linear algebra and vector calculus.

Module summary	CREDITS	CODE
Compulsory modules – 120 credits		
<i>Engineering: mechanics, materials, design</i>	60	T207
<i>Mathematical methods</i>	30	MST224
<i>Engineering: professions, practice and skills 2</i>	30	T276

Continued on page 18.

Stage 3

120 credits required

You'll continue to study modules in your chosen subject area, before completing Stage 3 with a project module – *The engineering project* (T452).

You'll undertake a substantial, individual piece of work, interpreting and applying engineering and design concepts to the engineering of a new or existing product – consolidating your studies in a practical and meaningful way.

You'll conclude your professional development planning by reviewing the work you do in your engineering project. Identifying the skills you have developed over the course of your qualification is a vital part of your professional development.

Electronics

You will begin with a new electronics module (planned for October 2018), which will build on your Stage 2 studies.

You will look at the underlying technologies of modern electronic communications, such as mobile data and telephony, broadband, Wi-Fi and optical fibre in *Communications technology* (TM355).

In *Engineering small worlds: micro and nano technologies* (T356), you'll examine engineering with materials at the macro and micro scale, through detailed study of real devices.

Module summary CREDITS CODE

Compulsory modules – 120 credits

A new module in electronics planned for October 2018

Communications technology 30 TM355

Engineering small worlds: micro and nano technologies 30 T356

The engineering project 30 T452

Engineering design

Innovation: designing for change (T317) investigates the social, environmental and economic factors which influence a product's design and manufacture.

In *Structural integrity: designing against failure* (T357), you'll explore how engineers deploy knowledge of materials behaviour to prevent failure of components and structures.

Module summary CREDITS CODE

Compulsory modules – 120 credits

Innovation: designing for change 60 T317

Structural integrity: designing against failure 30 T357

The engineering project 30 T452

Energy and sustainability

Renewable energy (T313) reviews the eight main renewable energy technologies. You will apply this knowledge practically in your own project, where you can select the three renewables you are most interested in.

Engineering small worlds: micro and nano technologies (T356) examines engineering with materials at the macro and micro scale, through detailed study of real devices.

In *Structural integrity: designing against failure* (T357), you'll explore how engineers deploy knowledge of materials behaviour to prevent failure of components and structures.

Module summary CREDITS CODE

Compulsory modules – 120 credits

Engineering small worlds: micro and nano technologies 30 T356

Renewable energy 30 T313

Structural integrity: designing against failure 30 T357

The engineering project 30 T452



Environmental technologies

Innovation: designing for change (T317) investigates the social, environmental and economic factors which influence a product's design and manufacture.

In the online module *Environmental management 2* (T319), you'll learn to think strategically and creatively about environmental management, and adopt an innovative systems approach to sustainability. You'll explore the environmental issues prevalent at and around airports; organisational change; group learning; and environmental professional practice.

Module summary CREDITS CODE

Compulsory modules – 120 credits

<i>Environmental management 2</i>	30	T319
<i>Innovation: designing for change</i>	60	T317
<i>The engineering project</i>	30	T452

Mathematical methods

In the first module, *Structural integrity: designing against failure* (T357), you'll explore how engineers deploy knowledge of materials behaviour to prevent failure of components and structures.

Next, you'll choose two from three optional modules.

Deterministic and stochastic dynamics (MS327) explores core topics in the application of mathematics. If you choose this module, we recommend that you study it as your first option.

In *Mathematical methods and fluid mechanics* (MST326) you'll model simple fluid flows and learn how to solve ordinary and partial differential equations such as: Laplace's equation, the wave equation and the diffusion equation; some vector field theory; and Fourier analysis.

Graphs, networks and design (MT365) is about using ideas from discrete mathematics to model problems, and representing these ideas graphically. Application areas include communications; structures and mechanisms; electrical networks; transport systems; social networks; and computer science.

Module summary CREDITS CODE

Compulsory module – 30 credits

Structural integrity: designing against failure

30	T357
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Optional modules – 60 credits Select two from:

<i>Deterministic and stochastic dynamics</i>	30	MS327
<i>Graphs, networks and design</i>	30	MT365
<i>Mathematical methods and fluid mechanics</i>	30	MST326

Compulsory module – 30 credits

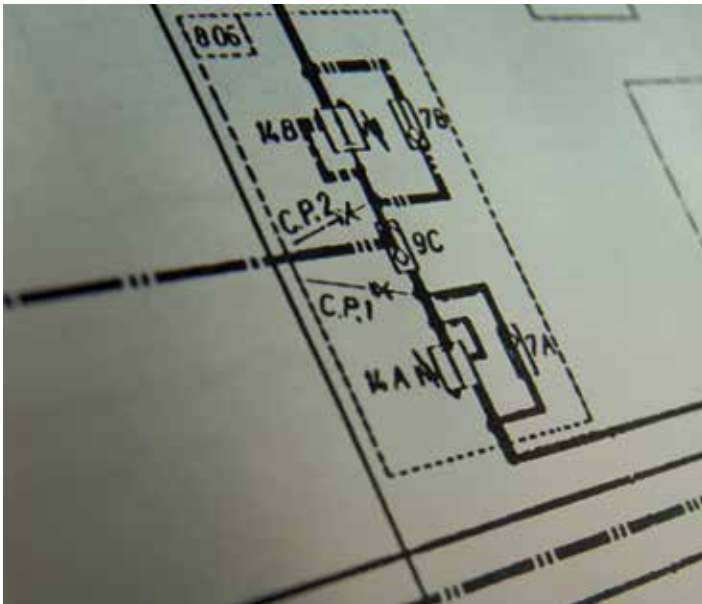
The engineering project

30	T452
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MORE
ONLINE



www.openuniversity.co.uk/q65



Top-up Bachelor of Engineering (Hons)

This qualification enables you to top up your knowledge and skills to honours degree level if you have completed an OU foundation degree or diploma of higher education in engineering, or equivalent, in the last eight years.

You'll be able to tailor your studies to suit your background and previous study focus, developing your knowledge and skills to a higher level and opening up further career or educational opportunities. Your choices include structural integrity, micro and nano technology, design, environmental management, renewable energy and mathematics options. You will also complete an individual engineering project.

This top-up qualification matches the Stage 3 requirements of our BEng (Hons) (Q65). The learning outcomes have been designed to fulfil the Engineering Council's educational requirements for registration as Incorporated Engineer.

Total credits: 120
Code: Q78

Start date:
Oct 2016
(registration closes 08 Sep 2016)

Module availability is subject to change

Career relevance and employability

Qualified engineers are much in demand for their rigorous approach to problem solving and high level of numeracy. These skills open up a wide range of other career opportunities – for example in management or finance – as well as in engineering itself.

This programme is IEng accredited and fulfils the educational requirements for registration as an Incorporated Engineer.

On completion of this top-up qualification, you may wish to carry on with your studies and work towards our Postgraduate Diploma in Engineering, leading to the MSc in Engineering. The OU's MSc in Engineering is CEng accredited and fulfils the educational requirements for registration as a Chartered Engineer but only when presented with a CEng accredited honours degree. On completion of this top-up you need to apply to institutions for professional recognition through the individual case procedure. For the latest information on accreditation, please visit engineering.open.ac.uk.

Stage 3

120 credits required

This stage begins with a choice of modules. Your previous engineering study will help determine which you choose.

If you studied the OU module *Engineering: mechanics, materials and design* (T207) we would recommend any of the following:

- *Innovation: designing for change* (T317)
- *Engineering small worlds: micro and nano technologies* (T356)
- *Structural integrity: designing against failure* (T357).

Renewable energy (T313) would be an ideal choice if you studied *Energy and sustainability* (T213).

Environmental management 2 (T319) follows on from the study of *Environmental management 1* (T219).

Innovation: designing for change (T317) is recommended if you studied *Design for engineers* (T218).

We recommend any of *Deterministic and stochastic dynamics* (MS327), *Mathematical methods and fluid mechanics* (MST326), and *Graphs, networks and design* (MT365) if you studied *Mathematical methods* (MST224).

If you have a prior qualification from another institution, we can offer advice on which modules to take.

You'll conclude your studies with *The engineering project* (T452): an individual project on a topic of your choice which you'll research, develop and write up – presenting your findings in a substantial portfolio report that you can show to employers.

Module summary CREDITS CODE

Optional modules – 90 credits Select from:

<i>Deterministic and stochastic dynamics</i>	30	MS327
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<i>Engineering small worlds: micro and nano technologies</i>	30	T356
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<i>Environmental management 2</i>	30	T319
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<i>Graphs, networks and design</i>	30	MT365
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<i>Innovation: designing for change</i>	60	T317
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<i>Mathematical methods and fluid mechanics</i>	30	MST326
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<i>Renewable energy</i>	30	T313
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<i>Structural integrity: designing against failure</i>	30	T357
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Compulsory module – 30 credits

<i>The engineering project</i>	30	T452
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MORE
ONLINE



www.openuniversity.co.uk/q78



Master of Engineering (MEng)

This qualification offers you the opportunity to combine undergraduate and postgraduate level study in an integrated masters degree in engineering.

Your undergraduate study begins with a similar curriculum to our BEng (Hons) (Q65), which is a fascinating and thorough general engineering degree exploring the fundamentals of this creative and analytical subject. You'll have the opportunity to specialise in either engineering management, engineering modelling and applications, environmental engineering, or mechanics and materials. This qualification covers the range of techniques, concepts and knowledge required by professional engineers – from materials and mechanics to design and modelling. You'll work on real projects and you'll team up with other students to create innovative solutions to challenging problems at several residential schools. The learning outcomes have been designed to fulfil the educational requirements for Chartered Engineer (CEng) status as specified by the Engineering Council in the UK (EC) and the Professional Engineering Institutions in the UK Standard for Professional Engineering Competence (UK-SPEC).

Please note that this qualification is only available for part-time study, taking a minimum of eight years.

For residents of England and Wales only

If you are eligible for a Part-Time Tuition Fee Loan (student loan), you could gain funding for both the undergraduate and postgraduate modules in this integrated masters degree (MEng). For further information on fees and funding, see pages 64–67.

Total credits: 480
Code: M04

Start date:
Oct 2016
(registration closes 08 Sep 2016)

Apr 2017
(registration closes 09 Mar 2017)

Module availability is subject to change

Career relevance and employability

This qualification will help you to develop your knowledge, competences and skills in engineering, as well as a range of transferable skills, such as: the ability to use specialist knowledge to solve problems creatively; effective communication skills; project management skills; the ability to turn concepts into reality; and a professional approach to your work. The knowledge and practical experience you gain during your studies mean you'll be well placed to move into engineering and technology employment. At the same time, you'll be developing capabilities that are highly valued by employers in a variety of other sectors, where your logical thinking, numeracy skills, and team working abilities are in demand.

This programme is CEng accredited and fulfils the educational requirements for registration as a Chartered Engineer with the Institution of Engineering and Technology (IET), the Institution of Engineering Designers (IED) and the Chartered Institution of Building Services Engineers (CIBSE).

Confirmation of accreditation with the Institution of Mechanical Engineers (IMechE) is pending. For the latest information on accreditation, please visit engineering.open.ac.uk.

Stage 1

120 credits required

Stage 1 follows the same curriculum as the Bachelor of Engineering (Hons) (Q65), see page 16.

This stage is common to all routes.

At Stages 2, 3 and 4 you can choose to focus on engineering management; engineering: modelling and applications; environmental engineering; or mechanics and materials.

Stage 2

120 credits required

All routes

You'll begin with *Engineering: mechanics, materials, design* (T207), which explores how engineers find solutions for technical problems; aspects of the mechanics of solids and fluids; and the structure and properties of materials.

You'll then study modules in your chosen subject area, before completing Stage 2 with *Engineering: professions, practice and skills 2* (T276). This module further develops the skills you need to achieve professional engineering status, and includes a second compulsory residential school focusing on the further development of your practical and analytical skills in a real-time face-to-face laboratory environment.

Note: you will need to achieve a certain standard in Stage 2 before progressing to Stage 3.

Engineering management

You'll choose one from two optional modules. *Design for engineers* (T218) will introduce you to the essential skills, knowledge and practices of design, exploring the design process and the basic principles of developing designs towards engineering solutions.

The online module *Environmental management 1* (T219) will build your capacity to engage with the systemic challenges of environmental management at domestic, organisational and community levels through established and emerging approaches, such as life-cycle analysis and team working.

Module summary CREDITS CODE

Compulsory module – 60 credits

<i>Engineering: mechanics, materials, design</i>	60	T207
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Optional module – 30 credits Select one from:

<i>Design for engineers</i>	30	T218
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<i>Environmental management 1</i>	30	T219
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Compulsory module – 30 credits

<i>Engineering: professions, practice and skills 2</i>	30	T276
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Engineering: modelling and applications

Mathematical methods (MST224) investigates the methods used to model and solve real world problems, including differential equations, linear algebra and vector calculus.

Module summary CREDITS CODE

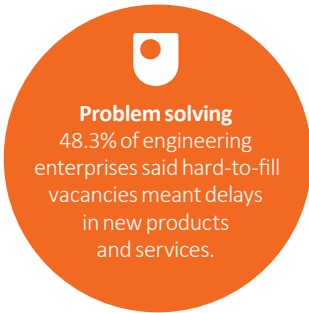
Compulsory modules – 120 credits

<i>Engineering: mechanics, materials, design</i>	60	T207
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<i>Mathematical methods</i>	30	MST224
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<i>Engineering: professions, practice and skills 2</i>	30	T276
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Continued on page 24.



Problem solving
48.3% of engineering enterprises said hard-to-fill vacancies meant delays in new products and services.

Stage 2

120 credits required

Environmental engineering

You'll choose one from two optional modules. *Energy and sustainability* (T213) investigates energy generation solutions, their effects and environmental impact, their underlying technologies, and the advantages and disadvantages of each. For more information on the second optional module, *Environment management 1* (T219), see *Engineering management* on page 23.

Module summary CREDITS CODE

Compulsory module – 60 credits

<i>Engineering: mechanics, materials, design</i>	60	T207
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Optional module – 30 credits

Select one from:

<i>Energy and sustainability</i>	30	T213
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<i>Environmental management 1</i>	30	T219
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Compulsory module – 30 credits

<i>Engineering: professions, practice and skills 2</i>	30	T276
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Mechanics and materials

You will study *Design for engineers* (T218), for more information on this module see *Engineering management* on page 23.

Module summary CREDITS CODE

Compulsory modules – 120 credits

<i>Engineering: mechanics, materials, design</i>	60	T207
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<i>Design for engineers</i>	30	T218
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<i>Engineering: professions, practice and skills 2</i>	30	T276
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Stage 3

120 credits required

All routes

At Stage 3, you'll deepen your understanding of engineering and extend your knowledge of your chosen subject area.

You'll conclude this stage with one from two postgraduate modules: *Managing technological innovation* (T848) that explores the processes that underpin technological innovation, or *Strategic capabilities for technological innovation* (T849), a multi-layered, practical, approach to strategic management of technological innovation.

Engineering management

You'll choose two or three from these optional modules.

Engineering small worlds: micro and nano technologies (T356) examines engineering with materials at the macro and micro scale, through detailed study of real devices.

In *Structural integrity: designing against failure* (T357), you'll explore how engineers deploy knowledge of materials behaviour to prevent failure of components and structures.

In the online module *Environmental management 2* (T319), you'll learn to think strategically and creatively about environmental management, and adopt an innovative systems approach to sustainability. You'll explore the environmental issues prevalent at and around airports; organisational change; group learning; and environmental professional practice.

Innovation: designing for change (T317) investigates the social, environmental and economic factors which influence a product's design and manufacture.

Module summary CREDITS CODE

Optional modules – 90 credits Select two or three from:

<i>Engineering small worlds: micro and nano technologies</i>	30	T356
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<i>Environmental management 2</i>	30	T319
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<i>Innovation: designing for change</i>	60	T317
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<i>Structural integrity: designing against failure</i>	30	T357
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Optional module – 30 credits Select one from:

<i>Managing technological innovation</i>	30	T848
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<i>Strategic capabilities for technological innovation</i>	30	T849
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Engineering: modelling and applications

You'll begin with *Deterministic and stochastic dynamics* (MS327), which explores core topics in the application of mathematics.

In *Structural integrity: designing against failure* (T357), you'll explore how engineers deploy knowledge of materials behaviour to prevent failure of components and structures.

Finally, in *Mathematical methods and fluid mechanics* (MST326) you'll model simple fluid flows and learn how to solve ordinary and partial differential equations such as: Laplace's equation, the wave equation and the diffusion equation; some vector field theory; and Fourier analysis.

Module summary CREDITS CODE

Compulsory modules – 90 credits

<i>Deterministic and stochastic dynamics</i>	30	MS327
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<i>Structural integrity: designing against failure</i>	30	T357
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<i>Mathematical methods and fluid mechanics</i>	30	MST326
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Optional module – 30 credits Select one from:

<i>Managing technological innovation</i>	30	T848
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<i>Strategic capabilities for technological innovation</i>	30	T849
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Stage 3

120 credits required

Environmental engineering

To follow on from your Stage 2 studies, you'll choose one of two optional modules.

You can choose *Renewable energy* (T313) which reviews the eight main renewable energy technologies. You will apply this knowledge practically in your own project, where you can select the three renewables you are most interested in. Alternatively, the online module *Environmental management 2* (T319), takes a more strategic approach to managing the environment, and concentrates on the creative and innovative sides of sustainability.

Finally, the compulsory module *Innovation: designing for change* (T317), investigates the social, environmental and economic factors which influence a product's design and manufacture.

Module summary CREDITS CODE

Optional module – 30 credits
Select one from:

<i>Environmental management 2</i>	30	T319
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<i>Renewable energy</i>	30	T313
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Compulsory module – 60 credits

<i>Innovation: designing for change</i>	60	T317
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Optional module – 30 credits
Select one from:

<i>Managing technological innovation</i>	30	T848
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<i>Strategic capabilities for technological innovation</i>	30	T849
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Mechanics and materials

Innovation: designing for change (T317) investigates the social, environmental and economic factors which influence a product's design and manufacture.

In *Structural integrity: designing against failure* (T357), you'll explore how engineers deploy knowledge of materials behaviour to prevent failure of components and structures.

Module summary CREDITS CODE

Compulsory modules – 90 credits

<i>Innovation: designing for change</i>	60	T317
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<i>Structural integrity: designing against failure</i>	30	T357
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Optional module – 30 credits
Select one from:

<i>Managing technological innovation</i>	30	T848
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<i>Strategic capabilities for technological innovation</i>	30	T849
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Stage 4

120 credits required

All routes

You'll begin this stage with *The MEng individual project* (T460). It will provide a challenging but valuable opportunity for you to engage in – and learn from – a research scenario of your choosing.

Next, you'll continue your study of engineering at postgraduate level and further extend your knowledge of your chosen subject area (see module details below).

You'll conclude this stage with the postgraduate module *Team engineering* (T885). This module, about working collaboratively, is based around two residential-school weekends. You'll work in a small team on an engineering project via email, telephone and online conferencing to submit a final report.

Engineering management

You'll study two compulsory modules. In *Problem solving and improvement: quality and other approaches* (T889) you'll examine a wide range of problem solving approaches, methods and techniques and examine their underpinning concepts, principles and theoretical backgrounds to enable you to investigate problems properly and generate robust, effective solutions that are sustainable. Introducing materials processing from the perspective of a design engineer, *Manufacture materials design* (T805) explores the interactions between materials and design in the manufacture of components.

Module summary CREDITS CODE

Compulsory modules – 120 credits

<i>The MEng individual project</i>	30	T460
<i>Manufacture materials design</i>	30	T805
<i>Problem solving and improvement: quality and other approaches</i>	30	T889
<i>Team engineering</i>	30	T885

Engineering: modelling and applications

You'll study two compulsory modules. *Calculus of variations and advanced calculus* (M820) develops the theory of the calculus of variations and other related topics. *Finite element analysis: basic principles and applications* (T804) introduces some of the computational modelling and analysis techniques used in engineering the products, processes and systems that support our modern lifestyles.

Module summary CREDITS CODE

Compulsory modules – 120 credits

<i>The MEng individual project</i>	30	T460
<i>Calculus of variations and advanced calculus</i>	30	M820
<i>Finite element analysis: basic principles and applications</i>	30	T804
<i>Team engineering</i>	30	T885

Environmental engineering

You'll study two compulsory modules. *Environmental monitoring and protection* (T868) provides the skills necessary to undertake environmental assessment work, interpret the results and suggest appropriate remedial measures. In *Managing for sustainability* (T867) you will increase your understanding of delivering and supporting sustainability management in your workplace.

Module summary CREDITS CODE

Compulsory modules – 120 credits

<i>The MEng individual project</i>	30	T460
<i>Environmental monitoring and protection</i>	30	T868
<i>Managing for sustainability</i>	30	T867
<i>Team engineering</i>	30	T885

Mechanics and materials

There are two compulsory modules. *Finite element analysis: basic principles and applications* (T804) introduces some of the computational modelling and analysis techniques used in engineering the products, processes and systems that support our modern lifestyles. Introducing materials processing from the perspective of a design engineer, *Manufacture materials design* (T805) explores the interactions between materials and design in the manufacture of components.

Module summary CREDITS CODE

Compulsory modules – 120 credits

<i>The MEng individual project</i>	30	T460
<i>Finite element analysis: basic principles and applications</i>	30	T804
<i>Manufacture materials design</i>	30	T805
<i>Team engineering</i>	30	T885

MORE
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www.openuniversity.co.uk/m04



BSc (Hons) Environmental Management and Technology

How can we best manage the environment, given the pressures that threaten its future? How do we design more sustainable practices and use technology effectively while doing so?

The BSc (Hons) Environmental Management and Technology is a must for anyone with an interest in this critical subject. You'll explore the complexities of the natural and built environments; how our activities influence them both; and how they influence what we do, whether at home, in communities or in organisations. This interdisciplinary degree combines aspects of science, management, technology and social science to help you understand the environmental systems in which we live and work, and how we can improve the way we act within them. You'll gain the knowledge and skills needed to understand and manage local, national and international environmental problems more sustainably, as well as developing your analytical, design and systems thinking skills.

Total credits: 360
Code: Q72

Start date:
Oct 2016
(registration closes 08 Sep 2016)

Feb 2017
(registration closes 05 Jan 2017)

Module availability is subject to change

Career relevance and employability

This degree develops broad and specialist skills that are in demand in the public and private sectors, consultancies and conservation organisations. It is directly relevant to careers in pollution control; waste management and recycling; water quality and resources; energy management; planning and sustainability; environmental management and consultancy; and environmental education. You'll learn to think creatively; tackle complex issues; and collect, analyse and interpret complex quantitative and qualitative data. You'll also gain practical skills in problem solving, project work, digital literacy, communication, and interdisciplinary team working.

Stage 1

120 credits required

In *Environment: journeys through a changing world* (U116) you'll investigate contemporary environmental topics, drawing perspectives from the social sciences, science and technology to explore the issues arising from environmental challenges across the globe.

Next, you'll study a new module – planned for October 2017 – focusing on some of the key ideas in science.

Module summary CREDITS CODE

Compulsory modules – 120 credits

<i>Environment: journeys through a changing world</i>	60	U116
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A new module on the nature of science (planned for October 2017)	60	S112
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Stage 2

120 credits required

You'll start Stage 2 with two compulsory modules.

Energy and sustainability (T213) investigates energy generation solutions, their effects and environmental impact, their underlying technologies, and the advantages and disadvantages of each.

The online module *Environmental management 1* (T219) will build your capacity to engage with the systemic changes of environmental management at domestic, organisational and community levels through established and emerging approaches, such as life-cycle analysis and team working.

Finally, you'll choose one of two modules:

Environmental science (S206) takes a holistic approach to the study of landforms, soils and water flows, habitats, and anthropogenic influences. You'll study the processes that link together different environments; and gather data through virtual, interactive field trips.

Alternatively, *Environment: sharing a dynamic planet* (DST206) examines the role of natural factors and human activity in environmental change; and why climate change, the provision of fresh water and sustainable agriculture are the source of social and political conflict.

Module summary	CREDITS	CODE
Compulsory modules – 60 credits		
<i>Energy and sustainability</i>	30	T213
<i>Environmental management 1</i>	30	T219
Optional module – 60 credits		
Select one from:		
<i>Environmental science</i>	60	S206
<i>Environment: sharing a dynamic planet</i>	60	DST206

Continued on page 30.



Stage 3

120 credits required

At Stage 3, you'll study three compulsory modules.

Renewable energy (T313) reviews the eight main renewable energy technologies. You will apply this knowledge practically in your own project, where you can select the three renewables you are most interested in.

In the online module *Environmental management 2* (T319), you'll learn to think strategically and creatively about environmental management, and adopt an innovative systems approach to sustainability. You'll explore the environmental issues prevalent at and around airports; organisational change; group learning; and environmental professional practice.

Finally, in *Innovation: designing for change* (T317), you'll consider innovation across a wide range of disciplines – how it comes about, how it develops and how it is received – underpinned by ideas of sustainability and social responsibility.

Module summary CREDITS CODE

Compulsory modules – 120 credits

<i>Environmental management 2</i>	30	T319
<i>Renewable energy</i>	30	T313
<i>Innovation: designing for change</i>	60	T317

Diploma of Higher Education in Environmental Management and Technology (W48)

We also offer a diploma of higher education which follows the same curriculum as Stages 1 and 2 of the BSc (Hons) Environmental Management and Technology (Q72).



MORE
ONLINE



www.openuniversity.co.uk/q72



BSc (Hons) Computing & IT and Design

With this joint honours degree you can focus your studies on an area of computing & IT and combine it with design – dividing your time equally between subjects.

Organisations are critically dependent on computing technologies, and people who can apply specialist IT knowledge within the context of another discipline are in particular demand. This degree will help you establish or develop a varied and fulfilling career, and position yourself to meet the needs of today's employers.

Total credits: 360
Code: Q67

Start date:
Oct 2016
(registration closes 08 Sep 2016)

Feb 2017
(registration closes 05 Jan 2017)

Module availability is subject to change

Career relevance and employability

Organisations increasingly value IT teams with wider business skills in addition to technical ability. This joint honours degree opens the way for careers in information technology, computing, communication technology, gaming and related fields – and with a sound grounding in design you'll be well placed for roles in a wide range of sectors.

You'll gain experience of team working and undertake a substantial piece of project work on a topic you've selected. You'll also gain a range of valuable transferable skills in communication, time management, analysis and problem solving.

Continued on page 32.

Stage 1

120 credits required

Computing & IT

Your computing & IT studies will begin with *My digital life* (TU100), which gives you hands-on experience of designing, building and programming computers, and explores the profound technological, economic, political and ethical changes brought about by information technology.

Design

The first design module, *Design thinking: creativity for the 21st century* (U101), will teach you the essentials of the design process, and encourage you to think creatively and productively in producing design prototypes.

Module summary CREDITS CODE

Computing & IT

Compulsory module – 60 credits

<i>My digital life</i>	60	TU100
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Design

Compulsory module – 60 credits

<i>Design thinking: creativity for the 21st century</i>	60	U101
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Stage 2

120 credits required

Computing & IT

You'll focus on one of five areas:

- Computer science: *Object-oriented Java programming* (M250) and *Algorithms, data structures and computability* (M269) – designing small computer programs using Java and Python programming languages; stating problems so they can be solved by computer.
- Digital technologies: *Communication and information technologies* (T215) – principles underpinning new technologies including online communication and collaboration; storing, manipulating and transmitting data.
- Networking: *Cisco networking (CCNA)* (T216) configuring a LAN/WAN using Cisco equipment (ideal preparation for industry-standard CCNA exams); configuring networks.
- Software development: *Object-oriented Java programming* (M250) and *Software development with Java* (M256) – designing computer programs; Java programming skills; using software tools, e.g. IDE and UML; designing and implementing software systems, e.g. graphical user interface.
- Web development: *Object-oriented Java programming* (M250) and *Web technologies* (TT284) – Java programming skills; application development processes underpinning the World Wide Web; plan, design, implement and test web applications.

Design

Design essentials (T217) will develop skills and tools needed to research, plan and develop a design project. You'll also learn how to translate your design ideas into well-specified products.

Module summary CREDITS CODE

Computing & IT

Optional module(s) – 60 credits

Select one of five options:

• Computer science

<i>Object-oriented Java programming</i>	30	M250
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<i>Algorithms, data structures and computability</i>	30	M269
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• Digital technologies

<i>Communication and information technologies</i>	60	T215
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• Networking

<i>Cisco networking (CCNA)</i>	60	T216
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• Software development

<i>Object-oriented Java programming</i>	30	M250
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<i>Software development with Java</i>	30	M256
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• Web development

<i>Object-oriented Java programming</i>	30	M250
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<i>Web technologies</i>	30	TT284
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Design

Compulsory module – 60 credits

<i>Design essentials</i>	60	T217
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Stage 3

120 credits required

Computing & IT

Depending upon your choice of modules at Stage 2, you can delve deeper into one of a number of topics that include software engineering, human-computer interactions and communications technology.

Design

You'll start with *Innovation: designing for change* (T317), which considers innovation across a wide range of disciplines – how it comes about, how it develops, and how it is received – underpinned by ideas of sustainability and social responsibility.

In the final module, *The computing and IT project* (TM470), you'll research, develop and write up a project on a topic of your choice – presenting your findings in a substantial portfolio report that you can show to employers.

Module summary CREDITS CODE

Computing & IT

Optional module – 30 credits

Select one from:

Communications technology 30 TM355

Data management and analysis 30 TM351

Interaction design and the user experience 30 TM356

IT systems: planning for success 30 TM353

Software engineering 30 TM354

Web, mobile and cloud technologies 30 TM352

Design

Compulsory module – 60 credits

Innovation: designing for change 60 T317

Final project

Compulsory module – 30 credits

The computing and IT project 30 TM470



Filling the skills gap

There will be an expected 2.56 million job openings in engineering companies up to 2022.

MORE
ONLINE



www.openuniversity.co.uk/q67

BA or BSc (Hons) Open degree

The BA or BSc (Hons) Open is the most flexible degree programme in the UK because you can study any subjects you like, in any combination. This means you can build a qualification that's unique to you.

The degree allows you to choose modules from any subject area so you can, for example, combine engineering, design and technology modules with modules from other disciplines, such as science or the humanities.

Total credits: 360
Code: QD

Start date:
Oct 2016
(registration closes 08 Sep 2016)
Feb 2017
(registration closes 05 Jan 2017)

Career relevance and employability

Highly regarded by employers, an Open degree equips you with a wide range of expertise, skills and capabilities that are much sought after in today's highly competitive job market.

An Open degree on your CV shows more than your level of knowledge about a subject. It demonstrates to employers that you're someone who is up for a challenge and committed to successfully seeing it through, with excellent time management and prioritising skills.

An Open degree containing a number of our cutting edge engineering, technology and design modules will enable you to explore how to design, engineer, and manage in situations where technology and people interact. Your studies will help you to develop a skill set that's in high demand. Employers in many sectors seek people with numerical skills, creativity, scientific knowledge and team-working experience. Graduates with experience of engineering, technology and design modules possess these skills. This could lead to exciting employment opportunities in business and industry, as well as the public and voluntary sectors – your knowledge and expertise will be equally valued in the UK, Europe and further afield.



How you can focus your Open degree on engineering, design and technology

The suggested route opposite shows how you can focus on an aspect of engineering, design and technology, in combination with other subjects that are of particular interest to you. However, this is just one example of the many combinations you can study and you are not restricted to this route in any way.



Freedom to learn

Our Open qualifications mean you can study at your own pace, and choose the modules that interest you most.



Great choice

The OU's Open degree is the largest degree programme in the UK.

Stage 1

120 credits required

Your first module, *Design thinking: creativity for the 21st century* (U101), introduces the basics of the design process and creative thinking.

You'll sketch and model prototypes and produce a portfolio of work in an online design studio environment, and explore issues such as: design and the individual, designing for others and with others, design and society, and the global impact of design.

For your remaining 60 credits, you'll have a free choice from a wide range of OU level 1 modules across different subject areas.

Module summary	CREDITS	CODE
<i>Design thinking: creativity for the 21st century</i>	60	U101
Choose from a wide range of OU level 1 modules	60	–

Stage 2

120 credits required

You will resume your design studies with *Design essentials* (T217), which uses case studies to explore professional aspects of the design process.

You'll continue to develop your practical skills – learning the basics of 3D computer modelling in addition to hand-drawn sketches – and investigate: design principles, designing for people, creativity and design, embodying design, materials and manufacturing.

For your remaining 60 credits you'll have a free choice from a wide range of OU level 2 modules across different subject areas.

Module summary	CREDITS	CODE
<i>Design essentials</i>	60	T217
Choose from a wide range of OU level 2 modules	60	–

Stage 3

120 credits required

Your last design module, *Innovation: designing for change* (T317), considers innovation across a wide range of disciplines – how it comes about, how it develops, and how it is received – underpinned by ideas of sustainability and social responsibility.

A final assessed project brings together everything you've learned.

For your remaining 60 credits you'll have a free choice from a wide range of OU level 3 modules across different subject areas.

Module summary	CREDITS	CODE
<i>Innovation: designing for change</i>	60	T317
Choose from a wide range of OU level 3 modules	60	–

Diploma of Higher Education Open (W34) and Certificate of Higher Education Open (T09)

We also offer a diploma of higher education which follows the same structure as Stages 1 and 2 of the Open degree and a certificate of higher education which follows the same structure as Stage 1 of the degree.

MORE
ONLINE



www.openuniversity.co.uk/qd

Qualifications

Foundation degree/Diploma of higher education

Foundation Degree in Engineering

This qualification is also available as a Diploma of Higher Education in Engineering (W11).

Engineering is at the heart of the built environment, and plays a central role in every aspect of our lives – from electricity generation and transport networks to smartphones and bicycles.

If you're working in engineering-related employment at a technical level¹ and would like to boost your career, this qualification is for you. It applies the study of engineering fundamentals like energy, design, manufacturing, materials, mechanics and structural analysis, to the solution of real-life problems; and builds on your existing skills and experience to support your professional development plans. A step up from an apprenticeship, the qualification combines academic skills with the needs of your workplace. It also provides a route to an honours degree in engineering, or to our popular Open degree – paving the way to new career opportunities.

¹We offer a specialised route in materials fabrication. If you are studying, or have recently completed, The Welding Institute (TWI) Diploma at Technologist level you can obtain credit towards this qualification, reducing the number of OU modules you need to complete. Call **+44 (0)300 303 5303** for more details.

Total credits: 240

Code: X11

Start date:

Oct 2016

(registration closes 08 Sep 2016)

Apr 2017

(registration closes 09 Mar 2017)

Module availability is subject to change

This qualification is only available for part-time study, taking a minimum of four years.

To help you decide if you have the necessary skills to start, you can use our online diagnostic quiz *Are you ready to start an Engineering qualification?* at www.openuniversity.co.uk/ready-for-engineering.

Career relevance and employability

Engineering knowledge and skills are highly valued (and often essential) in many occupations.

This qualification will help you develop and demonstrate a sound grasp of engineering principles, the ability to apply them, and an awareness of surrounding issues. Two work-based modules will guide you through activities closely linked to your workplace, and there's a strong focus on professional development planning. You'll also be well prepared for further study should you wish to top up to a full honours degree – and you'll develop key transferable skills such as information handling and numeracy; IT and communication; analysing and solving problems; team working; planning and organising.

This qualification is Incorporated Engineer (IEng) accredited and fulfils the educational requirements for registration as an Incorporated Engineer when presented with an IEng accredited honours degree (i.e. the Top-Up BEng (Hons) (Q78). For the latest information on accreditation, please visit engineering.open.ac.uk.

Stage 1

120 credits required

You'll begin with *Engineering: origins, methods, context* (T192), an introduction to engineering and design engineering, integrating key scientific concepts, mathematical techniques and study skills needed to support further studies in engineering.

Next, *Engineering: frameworks, analysis, production* (T193), will further extend your knowledge of engineering, covering patents, standards, manufacturing and materials, and introducing new mathematical topics including calculus.

A third introductory module *Engineering: mathematics, modelling, applications* (T194) is planned for October 2017.

For your work-based module, *Engineering at work* (T198), you'll focus on the sector in which you work by looking at aspects of how your organisation functions. You'll also take the first steps to gaining professional engineering status by developing a personal development plan.

Module summary CREDITS CODE

Compulsory modules – 120 credits

Engineering: origins, methods, context 30 T192

Engineering: frameworks, analysis, production 30 T193

Engineering: mathematics, modelling, applications (planned for October 2017) 30 T194

Engineering at work 30 T198

Stage 2

120 credits required

You'll begin with *Engineering: mechanics, materials, design* (T207), exploring how engineers find solutions for technical problems; aspects of the mechanics of solids and fluids; and the structure and properties of materials.

To complete Stage 2, you'll study one further work-based module and one from a choice of four options.

In *Change, strategy and projects at work* (T227), you'll study project management and execution, looking at the processes of change and strategies for effectively managing change.

For your optional module you'll choose from: *Energy and sustainability* (T213), *Design for engineers* (T218), *Environmental management 1* (T219), *Mathematical methods* (MST224) or a new module *Electronics: sensing, logic and actuation* (T212) (planned for October 2017). Whichever you choose you'll develop analytical, communication, and learning skills in a context that provides grounding for further study.

By the end of your studies you'll be in a good position to progress your career in engineering.

Module summary CREDITS CODE

Compulsory modules – 90 credits

Engineering: mechanics, materials, design 60 T207

Change, strategy and projects at work 30 T227

Optional module – 30 credits Select one from:

Design for engineers 30 T218

Electronics: sensing, logic and actuation (planned for October 2017) 30 T212

Energy and sustainability 30 T213

Environmental management 1 30 T219

Mathematical methods 30 MST224

Postgraduate study

Successful innovation depends on the knowledge and skills of both engineers and technology managers. Specialist engineering and technology skills are in great demand throughout all sectors of the economy: public, private and voluntary – and their imagination, ability to solve problems and technical expertise are behind the hundreds of innovations and developments that are transforming our daily lives.

How postgraduate study works

You work towards a postgraduate qualification at the OU by studying a series of modules.



Modules are our units of study. To work towards a qualification, you first need to choose and register on a module that counts towards that qualification. With each module you successfully complete you'll earn a set number of credits which you build up to gain your qualification.

Postgraduate qualifications	39
Engineering	40
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MSc in Engineering (F46)	43
Technology management	44
Postgraduate Certificate in Technology Management (C49)	45
Postgraduate Diploma in Technology Management (E08)	46
MSc in Technology Management (F36)	47
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Postgraduate Certificate in Systems Thinking in Practice (C72)	49
Postgraduate Diploma in Systems Thinking in Practice (E28)	50
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Postgraduate modules	52

Postgraduate qualifications

The qualification descriptions in this prospectus list the modules that are currently available for study. However, as we review our curriculum on a regular basis, the exact selection may change over time.



There's more online

To find out more about a qualification that interests you, go to www.openuniversity.co.uk/pg.

Qualifications Engineering

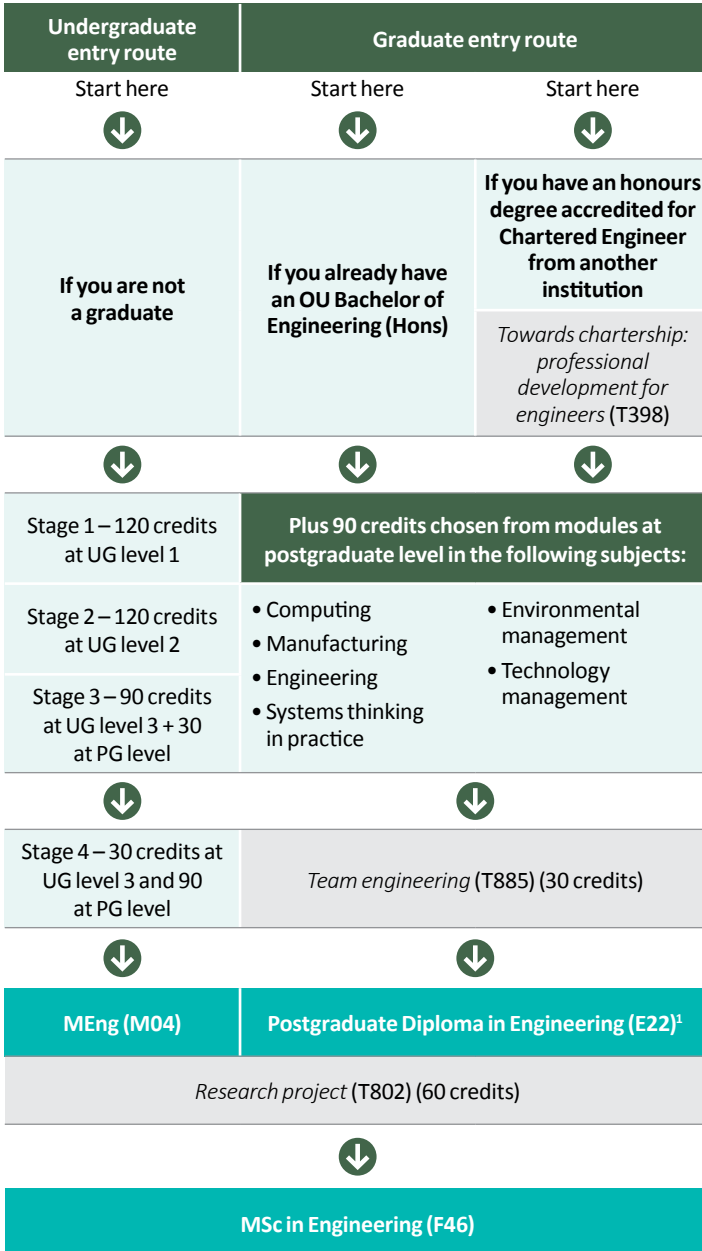
Engineering is one of the most rewarding disciplines you can study. It offers tremendous variety, intellectual challenge and the high level of satisfaction that comes from problem solving.



Study routes

The OU offers two routes to an MSc in Engineering, either via our integrated masters starting at undergraduate level (see page 22) or, if you already have an OU

Bachelor of Engineering (BEng) or an accredited honours degree from another institution, via our postgraduate diploma entry route.



¹If you have an honours degree, but it is not accredited for Chartered Engineer (CEng), you can still register for the Postgraduate Diploma in Engineering (E22). Please note that if you choose to continue your studies with the MSc in Engineering (F46), your MSc will not be accredited for CEng. (It can only be accredited if your underpinning honours degree is accredited for CEng.) For the latest information on accreditation, please visit engineering.open.ac.uk.

■ = Module ■ = Qualification

Postgraduate Diploma in Engineering

Total credits: 135 Code: E22

This flexible diploma enables you to combine modules from engineering analysis and technology management to shape a qualification that suits your career aspirations.

You will broaden and deepen your understanding of professional engineering, and work collaboratively on a project module. The diploma

also provides a route to a masters level engineering qualification, and can help you progress towards Chartered Engineer registration.



Module summary CREDITS CODE

Compulsory module – 15 credits

If you haven't studied *Key skills for professional engineers* (T397) as part of your Bachelor of Engineering (Hons), you will need to begin with the following undergraduate OU level 3 module:

Towards chartership: professional development for engineers 15 T398

Plus 60 credits from any postgraduate technology module with a code beginning T8, TD8 or TU8, but excluding any project modules.

Plus 30 credits from any postgraduate computing, mathematics, science or technology module with a code beginning T8, TD8, TU8, M8 or S8, but excluding any project modules.

Plus 30 credits from the following compulsory module:

Team engineering 30 T885

For module descriptions see pages 53–58 or go to www.openuniversity.co.uk/pg.

Module availability is subject to change.



MSc in Engineering

Total credits: 195 Code: F46

This MSc builds on your diploma studies by enabling you to investigate an issue or problem on a topic of professional relevance to you, and takes you a step further towards becoming a Chartered Engineer (CEng).

This course will help you develop a professional approach to your work, extend your engineering skills, and develop a range of transferable skills such as the ability to solve problems creatively, communicate effectively, manage projects and turn concepts into reality.

Our MSc in Engineering is Chartered Engineer (CEng) accredited and fulfils the educational requirements for registration as a Chartered Engineer when presented with a CEng accredited honours degree. Our accreditations are with the Institution of Engineering and Technology (IET), the Chartered Institution of Building Services Engineers (CIBSE) and

the Institution of Engineering Designers (IED). We are waiting for confirmation of extension to our accreditation from the Institution of Mechanical Engineers (IMechE). For the latest information on accreditation, please visit engineering.open.ac.uk.

Planning your studies

- To study for this qualification you need to hold our Postgraduate Diploma in Engineering (E22) or our MEng (M04)¹.
- You must complete this MSc within five years of the date your Postgraduate Diploma in Engineering (E22) or MEng (M04)¹ was awarded.

Module summary CREDITS CODE

For this masters degree you require one of the following qualifications:

Postgraduate Diploma in Engineering	135	E22
MEng ¹	–	M04

Plus 60 credits from the following compulsory module:

<i>Research project</i>	60	T802
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¹If you are currently studying or have successfully completed our MEng graduate entry route (M03) you can count this in place of M04 but note that the same five-year time limit does apply.

For module descriptions see pages 53–58 or go to www.openuniversity.co.uk/pg.

Module availability is subject to change.

Postgraduate Certificate in Technology Management

Total credits: 60 Code: C49

If technology, innovation and change are factors in your organisation or role, this certificate will extend your knowledge, skills and capability – adding value to your career and your workplace.

It provides a rounded view of the management of technology and technological innovation, investigating topics such as the nature and types of technological innovation, technology transfer, and eco-innovation – which are relevant to all economic and organisational sectors and types of technology.

The optional modules explore technology management within fields such as computing and ICT, business and management, development management and environmental management.

Module summary CREDITS CODE

Compulsory module – 30 credits

<i>Managing technological innovation</i>	T848	30
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Plus 30 credits from the following optional modules:

<i>Advanced routing – CCNP 1</i>	T824	30
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<i>Capacities for managing development</i>	T878	30
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<i>Conflict and development</i>	T879	30
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<i>Continuing professional development in practice</i>	U810	30
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<i>Data management</i>	M816	30
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<i>Digital forensics</i>	M812	30
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<i>Information security</i>	M811	30
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<i>Managing for sustainability</i>	T867	30
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<i>Managing systemic change: inquiry, action and interaction</i>	TU812	30
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<i>Manufacture materials design</i>	T805	30
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<i>Multilayer switching – CCNP 3</i>	T826	30
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<i>Network security</i>	T828	30
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<i>Optimising networks – CCNP 4</i>	T827	30
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<i>Problem solving and improvement: quality and other approaches</i>	T889	30
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<i>Project management</i>	M815	30
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<i>Software development</i>	M813	30
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<i>Software engineering</i>	M814	30
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<i>Strategic capabilities for technological innovation</i>	T849	30
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<i>Thinking strategically: systems tools for managing change</i>	TU811	30
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For module descriptions see pages 53–58 or go to

www.openuniversity.co.uk/pg.

Module availability is subject to change.

Postgraduate Diploma in Technology Management

Total credits: 120 Code: E08

This postgraduate diploma is designed to help you manage technology and innovation more effectively and realise its potential benefits – making a real difference to your organisation and your own professional development.

You'll begin by focusing on the operational aspects of managing technological innovation and change, before engaging with a range of capabilities that are key to the development and delivery of technological innovation – applying your learning to your own context as you study.

A wide range of optional modules enables you to choose a study pathway that suits your particular interests, including computing and ICT, business and management, development management and environmental management.

Module summary CREDITS CODE

Compulsory modules – 60 credits

<i>Managing technological innovation</i>	30	T848
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<i>Strategic capabilities for technological innovation</i>	30	T849
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Plus 60 credits from any of the optional modules listed for the Postgraduate Certificate in Technology Management (C49), (see page 45).

For module descriptions see pages 53–58 or go to www.openuniversity.co.uk/pg.

Module availability is subject to change.



MSc in Technology Management

Total credits: 180 Code: F36

Technology has the capability to transform products and processes and, if managed effectively, can make a significant contribution to organisational performance, economic growth and social wellbeing.

This MSc will provide you with the knowledge and skills critical to making the right decisions about technology strategy, innovation and management to really make a difference to your organisation and your own professional development. It is applicable to a wide range of sectors, including IT, manufacturing, healthcare, defence, financial services, local and national government services – and throughout your studies you'll be encouraged to apply your learning to your own particular technology context.

You'll begin by focusing on the operational aspects of managing technological innovation and change, before moving to explore a range of capabilities that are key to the strategic development and management of technological innovation. Your studies will conclude with an in-depth investigation of a technology management topic or problem of your choice.

Module summary CREDITS CODE

120 credits from the following qualification:

Postgraduate Diploma in Technology Management	120	E08
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Plus 60 credits from either the Research route or the Professional route below:

Research route:

Research project	60	T802
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Professional route:

The MSc professional project	30	T847
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Plus Problem solving and improvement: quality and other approaches	30	T889
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Or Project management	30	M815
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Or, if you have already counted one of these modules towards the Postgraduate Diploma in Technology Management (E08), you may study a further 30 credits from any one of the optional modules that count towards the Postgraduate Certificate in Technology Management (C49), (see page 45). Alternatively, you may study two of the following 15-credit modules:

<i>Entrepreneurship: experience and perspective</i>	15	BB846
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<i>Leadership and management in intercultural contexts</i>	15	BB848
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<i>Management beyond the mainstream</i>	15	BB847
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<i>Marketing in the 21st century</i>	15	BB844
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<i>Strategic human resource management</i>	15	BB845
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<i>Sustainable creative management</i>	15	BB842
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For module descriptions see pages 53–58 or go to www.openuniversity.co.uk/pg.

Module availability is subject to change.

Qualifications

Systems thinking in practice

Understanding the increasingly complex and interconnected world we live in often demands more than common sense.

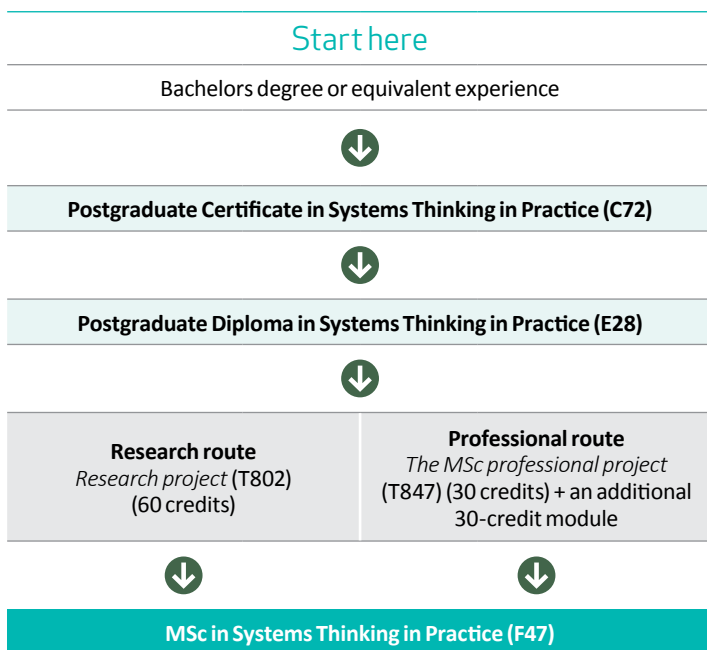
In everyday situations involving people, the environment and technology, where views and needs conflict, a systems approach can help you find better strategies and opportunities.

Systems thinking in practice – regarded by some as one of today’s basic literacies – examines ways of managing complex interconnected situations across discipline and skill boundaries.

Planning your studies

- You should normally hold a UK bachelors degree, or equivalent. If you do not hold a bachelors degree, it may be possible to demonstrate your ability to study at postgraduate level by successfully completing a module and linking your studies to the programme at a later date. For more information and advice go to www.openuniversity.co.uk/pg or call our Student Recruitment Team on **+44 (0)300 303 5303**.
- Modules can count towards these qualifications for a maximum of eight years after we have stopped presenting them.

Study route diagram



■ = Module ■ = Intermediate qualification ■ = Qualification

Postgraduate Certificate in Systems Thinking in Practice

Total credits: 60 Code: C72

This certificate may well change the way you think about the situations you face.

You will learn to think more holistically, understanding the roles other people play, taking account of the interconnectedness of all the components making up the problem situation and working more collaboratively. You will find out how to relate the ideas of key systems thinkers to your own practice.

The discipline of systems thinking gives you the tools to challenge your approach to complex situations; to assess how all the different components within a situation are related; to consider the roles other people play; to recognise that each person brings with them their own perspective on a situation and to work with those multiple perspectives.

Module summary CREDITS CODE

30 credits from one of the following optional modules:

<i>Managing systemic change: inquiry, action and interaction</i>	30	TU812
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<i>Thinking strategically: systems tools for managing change</i>	30	TU811
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Plus 30 credits from either the other module listed above or the following optional modules:

<i>Capacities for managing development</i>	30	T878
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<i>Conflict and development</i>	30	T879
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<i>Continuing professional development in practice</i>	30	U810
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<i>Data management</i>	30	M816
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<i>Development: context and practice</i>	30	T877
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<i>Digital forensics</i>	30	M812
<i>Information security</i>	30	M811
<i>Institutional development</i>	30	TU872
<i>Making environmental decisions</i>	30	T891
<i>Managing for sustainability</i>	30	T867
<i>Managing technological innovation</i>	30	T848
<i>Problem solving and improvement: quality and other approaches</i>	30	T889
<i>Project management</i>	30	M815
<i>Software development</i>	30	M813
<i>Software engineering</i>	30	M814
<i>Strategic capabilities for technological innovation</i>	30	T849

For module descriptions see pages 53–58 or go to www.openuniversity.co.uk/pg.

Module availability is subject to change.



Postgraduate Diploma in Systems Thinking in Practice

Total credits: 120 Code: E28

This diploma develops your ability to approach and tackle complex, messy problem situations, providing practical tools that will help bring new perspectives. It may well change how you think about a task and situation.

You will consider the roles other people play, reflect on your own and others' practice and assess how the different components within a situation are related.

You will develop the skills to think more holistically and to work more collaboratively with others, in order to move towards effective solutions and avoid systemic failures.

Module summary CREDITS CODE

Compulsory modules – 60 credits

<i>Managing systemic change: inquiry, action and interaction</i>	30	TU812
<i>Thinking strategically: systems tools for managing change</i>	30	TU811

Plus 60 credits from the optional modules listed for the Postgraduate Certificate in Systems Thinking in Practice (C72) (see page 49) or from the 60-credit module *Leading healthcare improvements* (K827).

For module descriptions see pages 53–58 or go to www.openuniversity.co.uk/pg.

Module availability is subject to change.



MSc in Systems Thinking in Practice

Total credits: 180 Code: F47

This MSc explores the way we think about and approach tasks or situations. Everyone brings with them their own perspective, which means that we all see things in different ways.

The discipline of systems thinking in practice will provide you with the tools to challenge your approach to complex situations, consider the roles other people play, and assess how different components within those situations are related.

You will also develop the skills needed to think more holistically and work more collaboratively to avoid systemic failures. In the MSc you will have the opportunity to develop your capability to plan, organise and carry out an extended independent study.

Module summary CREDITS CODE

120 credits from the following qualification:

Postgraduate Diploma in Systems Thinking in Practice	120	E28
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Plus 60 credits from *either* the Research route *or* the Professional route below:

Research route:

Research project	60	T802
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Professional route:

The MSc professional project	30	T847
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Plus 30 credits from the optional modules listed for the Postgraduate Certificate in Systems Thinking in Practice (C72), (see page 49).

For module descriptions see pages 53–58 or go to www.openuniversity.co.uk/pg.

Module availability is subject to change.

MORE ONLINE



For more information on any of our postgraduate qualifications, go to www.openuniversity.co.uk/pg

Postgraduate modules

The following pages provide more detail on each of the postgraduate modules.

Assessment key

EMA: End-of-module assessment

iCMA: Interactive computer-marked assignment

TMA: Tutor-marked assignment



Development: context and practice (T877)

Credits: 30 at PG level

Study weeks: 21

Assessment: 3 TMAs, 1 examination

Start: 07 May 2016
register by 31 Mar 2016
 05 Nov 2016
register by 30 Sep 2016
 06 May 2017
register by 31 Mar 2017

This online module explores the context in which development practice takes place, and development practice itself. It asks you to think about development activities from multiple perspectives – to think ‘out of the box’ – about what development activity and theory are all about. It takes a multidisciplinary approach to development, highlighting the interconnectedness of different historical and theoretical perspectives as well as the contradictions between these and the reality on the ground. This module provides an ideal introduction to international development, facilitating the building of skills that will give you a good grasp of contemporary development theory and practice.

Environmental monitoring and protection (T868)

Credits: 30 at PG level

Study weeks: 20

Assessment: 3 TMAs, 1 examination

Start: 05 Nov 2016
register by 30 Sep 2016

To conserve our environment, we need to ensure that any deterioration which can be prevented is addressed. This online module will equip you with the knowledge of the different environmental monitoring techniques for water, noise, air and wastes; how to model and interpret the impacts of pollutants; and the techniques available to eliminate the pollutants. Computer models and rich examples make for an interesting and useful coverage of water pollution control, noise control, air quality management, and solid wastes management. You will gain the skills necessary to undertake environmental assessment work, interpret the results, and suggest appropriate remedial measures, bearing in mind pollutants can be a reusable resource.

Finite element analysis: basic principles and applications (T804)

Credits: 30 at PG level

Study weeks: 21

Assessment: 1 TMA, 3 iCMAs, 1 EMA

Start: 05 Nov 2016
register by 30 Sep 2016

Engineering is at the heart of modern life. Today, engineers use computers and software in the design and manufacture of most of the products, processes and systems that make up our lifestyles. This module introduces the finite element method and instils the need for comprehensive evaluation and checking when interpreting results. It covers basic theory; modelling, meshing and analysing component models for stresses, deflections, temperatures and vibrations under operating conditions and loads; treatment of boundary conditions and restraints; and examples of good practice for safe and effective application in use.

Modules

Making environmental decisions (T891)

Credits: 30 at PG level

Study weeks: 21

Assessment: 3 TMAs, 1 EMA

Start: 07 May 2016
register by 31 Mar 2016
05 Nov 2016
register by 30 Sep 2016
06 May 2017
register by 31 Mar 2017

Many decisions and actions, both individual and collective, affect our environment; yet economic and political considerations often dominate. Defining environment to include biophysical, social, political, economic and other factors, this online module uses a systems framework to integrate environment with other elements when making environmental decisions in complex situations. You will explore a contemporary case of environmental decision making concerning fracking, as well as a range of further examples around water, energy, agriculture and climate change. You will also be able to consider an environmental decision-making situation of your own choosing, through the development of a project.

Managing for sustainability (T867)

Credits: 30 at PG level

Study weeks: 22

Assessment: 3 TMAs, 1 EMA

Start: 07 May 2016
register by 31 Mar 2016
05 Nov 2016
register by 30 Sep 2016
06 May 2017
register by 31 Mar 2017

This module will increase your understanding of delivering and supporting sustainability management. You will develop a multidisciplinary perspective on resources, sustainability and health and safety management which will incorporate strategy, policy, data collection and knowledge management. It will introduce you to a systemic approach for studying organisational operations and methods for quantifying and optimising resource use and energy use while using tools to reduce environmental, societal and financial risk. You will also learn how to improve the efficiency and effectiveness with which your organisation can incorporate sustainability issues and to identify future trends and drivers for change in this area.



Managing systemic change: inquiry, action and interaction (TU812)

Credits: 30 at PG level

Study weeks: 24

Assessment: 3 TMAs, 1 EMA

Start: 01 Nov 2016
register by 30 Sep 2016

This module views change as inescapable in managing everyday situations ranging from personal to workplace to society in general. Rather than passively accepting change this module will equip you with skills to shape the nature and direction of change. It will develop your abilities to manage change with others to avoid systemic failures and improve joined-up actions amongst stakeholders along supply chains, in projects or, even, social activism. It is about learning to use systems thinking and practice to help you engage with change and act accordingly to recognise the interconnected nature of organisations and environments.

Managing technological innovation (T848)

Credits: 30 at PG level

Study weeks: 26

Assessment: 3 TMAs, 1 EMA

Start: 01 May 2016
register by 31 Mar 2016
01 Nov 2016
register by 30 Sep 2016
01 May 2017
register by 31 Mar 2017

The history of technological innovation has been nothing short of remarkable, affecting our lives, the effectiveness of organisations, the profitability of industries, the well-being of societies and the prosperity of nations. Understanding the processes that underpin technological innovation is therefore crucial, whether you are a user or producer. And if you are involved in managing innovation processes, an understanding of the overall process of innovation and its variations is a core professional competence. This module examines innovation from a management perspective, enabling you to improve how you contribute to the process and management of technological innovation.

Manufacture materials design (T805)

Credits: 30 at PG level

Study weeks: 22

Assessment: 3 TMAs, 1 EMA

Start: 07 May 2016
register by 31 Mar 2016
06 May 2017
register by 31 Mar 2017

Introducing materials processing from the perspective of a design engineer, this online module explores how to make components. You will focus on the interactions between manufacturing, materials and design rather than studying each one independently. The main routes to the manufacture of components – casting, forming, cutting and joining, along with additive manufacturing and surface engineering – are set in a business context to help you develop your decision-making skills. By gaining a deeper understanding of the scientific and technological principles that govern these basic processes, you will be able to play a more effective role as a professional engineer. A continually evolving databank of manufacturing processes plays a key role in your study.

Problem solving and improvement: quality and other approaches (T889)

Credits: 30 at PG level

Study weeks: 22

Assessment: 3 TMAs, 1 EMA

Start: 01 May 2016
register by 31 Mar 2016
01 Nov 2016
register by 30 Sep 2016
01 May 2017
register by 31 Mar 2017

Problem solving is a necessary activity for all organisations. However, it is frequently ineffective: chronic problems that were supposedly solved re-emerge, and opportunities remain unrealised. Although many organisations have had early successes with mechanisms for problem solving and improvement, these have often foundered over time. This module provides a wide range of problem solving approaches, methods and techniques and examines their underpinning concepts, principles and theoretical backgrounds. It will enable you to investigate problems properly; and generate robust, effective solutions that are sustainable. The module also explores the nature of problems and solutions, and the management of problem solving and improvement.

NEW Strategic capabilities for technological innovation (T849)

Credits: 30 at PG level

Study weeks: 26

Assessment: 3 TMAs, 1 EMA

Start: 01 Nov 2016
register by 30 Sep 2016
01 May 2017
register by 31 Mar 2017

The need for ongoing technological innovation has become a strategic necessity for many organisations. Even in traditionally stable sectors the option of maintaining the status quo is seldom viable. This creates challenges for how organisations acquire and manage the resources and capabilities necessary for effective approaches to innovation; and create and maintain contexts that support strategic action. This online module draws on material from the resource-based view of organisations, and strategic and innovation management more generally, to produce a multi-layered, practical, approach to the development and management of technological innovation. It is suitable for anyone interested in developing or improving their skills and expertise in this area.

Team engineering (T885)

Credits: 30 at PG level

Study weeks: 32

Assessment: 4 TMAs, 1 EMA

Start: 09 Sep 2016
register by 12 Aug 2016
20 Jan 2017
register by 16 Dec 2016

Team engineering aims to develop the essential professional engineering skill of working with others. You'll work as part of a small project team, formed at the first weekend residential school. Projects will encompass a broad sweep of engineering, requiring cooperative development of the knowledge and skills needed to analyse an engineering system and produce a revised specification for that system. You'll work together in a team via email, telephone and virtual conferencing, under guidance from your tutor. Your team's results will be presented and assessed at the second residential weekend school and through submission of a written report.



Thinking strategically: systems tools for managing change (TU811)

Credits:	30 at PG level
Study weeks:	24
Assessment:	3 TMAs, 1 EMA
Start:	01 May 2016 <i>register by 31 Mar 2016</i> 01 May 2017 <i>register by 31 Mar 2017</i>

This module is about managing complex situations. Managing is ultimately about taking action where others involved may have contrasting understandings, motivations and interests, and where conflicts inevitably arise. You will develop your understanding of complex situations using robust tools from the traditions of systems practice to think strategically about change and uncertainty. The situations that you choose to work with in the module to develop your practice with systems tools can either derive from your existing, or aspiring, professional capacity or simply be of general interest to you.

This module will be available for the last time in May 2017.



Towards chartered status: professional development for engineers (T398)

Credits:	15 at OU level 3
Study weeks:	30
Assessment:	2 TMAs, 1 EMA
Start:	01 Oct 2016 <i>register by 08 Sep 2016</i>

This module is designed for those aiming for Chartered Engineer status, via corporate membership of one of the professional engineering institutions licensed by the Engineering Council. The module extends and assesses your reflective and key skills in the context of your continuing professional development, and includes an opportunity to rehearse the professional review requirements of the institution you've selected. It is a resource-based module, some resources provided and others for you to supply.

Although the module can be taken at any time before registering for *Team engineering* (T885), it is recommended for early in your postgraduate studies.

Modules

Research project (T802)

Credits: 60 at PG level

Study weeks: 52

Assessment: 4 TMAs, 1 EMA

Start: 01 Oct 2016
register by 31 Jul 2016
01 Feb 2017
register by 30 Nov 2016

This research module builds on your existing postgraduate diploma to enable you to complete your MSc. You'll design your own research proposal by identifying and developing a research problem relevant to your MSc. Your research will involve a literature review, original data collection, data analysis and the drawing of conclusion. You will then communicate the outcome of your research by writing up and submitting your dissertation. Support is available to you at every stage from the study materials, your supervisor and online forums.

Early registration is recommended as you will need to complete preparatory work before the module starts.

The MSc professional project (T847)

Credits: 30 at PG level

Study weeks: 24

Assessment: 3 TMAs, 1 EMA

Start: 01 Nov 2016
register by 30 Sep 2016

This research-based module is your opportunity to investigate a topic of your choice in what is likely to be a professional employment-related setting. Acting as an informed investigator you will design, conduct, analyse and report on your chosen research project, applying relevant conceptual, theoretical and methodological material at all stages of your work. You will be expected to carry out your research in a rigorous fashion and to an appropriate academic standard. Spanning only six months, this module provides a challenging but valuable opportunity to engage in – and learn from – a research scenario of your choosing.

Practical information



How it works



Studied before?

Half of our Open degree students transfer credit from previous study, so your degree may be closer than you think.

Undergraduate study

To achieve your chosen qualification, you need to build up a set number of credits.



You gain credits by completing a series of modules. Credits vary by module.



You choose the modules you want to study, year by year. Depending on your qualification, some modules may be compulsory while others may be selected from a set of options.

Are there any entry requirements?

We believe that the grades you got at school aren't the only measure of ability, which is why you don't need any previous academic qualifications to study with us, but you do need:

- **A computer and reliable internet access** – they're an essential part of our study programmes. Depending on where you live and how much you earn, you could receive financial help to buy a computer.
- **A good grasp of the English language** – our modules are taught in English and you need to be a competent user of the English language to study at higher-education level. If you're not sure, help and guidance are available, go to www.openuniversity.co.uk/englishlanguage.

Decide what to study

We offer the following undergraduate qualifications:

- **Certificates of higher education (CertHE)**
- **Diplomas of higher education (DipHE)**
- **Foundation degrees**
- **Degrees** – a named degree in a specific subject or an Open degree.

Certificate of higher education (CertHE)

Equivalent to the first year of an honours degree, a certificate of higher education is perfect for rounding your knowledge in a particular skillset or area of study.

You'll need **120 credits** to complete a certificate.

Diploma of higher education (DipHE)

Our diplomas of higher education focus on a specific area of expertise. That may be a job, a profession or a particular subject. Equivalent to two-thirds of an honours degree, they'll help you expand your knowledge and improve your current skillset.

You'll need **240 credits** to complete a diploma.

Foundation degree

Foundation degrees focus on a particular job or profession, so you must be working or volunteering in a related work setting. They're the equivalent to two thirds of an honours degree – and most of these are also offered as diplomas of higher education for people living or working in Scotland.

You'll need **240 credits** to complete a foundation degree.

Postgraduate study

A degree in a named subject

An undergraduate or bachelors degree is widely recognised among employers as being confirmation you've achieved a significant level of expertise in a field of study. The modules you'll need to study will be mainly in your chosen subject.

Like all universities based in the UK, we'll 'grade' your degree into one of four classes: 1 (first – the highest level), 2:1 (upper second), 2:2 (lower second) or 3 (third).

You'll need **360 credits** to be awarded a degree with honours.

An Open degree

Our most popular degree lets you tailor a qualification to your needs and interests, with a wider range of module choice. You can combine modules from similar or different subjects to suit either your particular career or personal interests.

You'll need **360 credits** to be awarded an Open degree with honours.

Count your previous study

If you've studied at higher education level before, you may be able to count this study towards your OU qualification, reducing the cost and saving you time too. To find out how this works, go to www.openuniversity.co.uk/credit-transfer.



You achieve a postgraduate qualification at the OU by studying a series of modules.



Modules are our units of study. To work towards a qualification, you first need to choose and register on a module that counts towards that qualification.

With each module you successfully complete you'll earn a set number of credits which you build up to gain your qualification.

Decide what to study

We offer the following postgraduate qualifications:

- **Masters degree**
- **Postgraduate diploma**
- **Postgraduate certificate.**

You need **180 credits** to complete a masters degree, **120 credits** for a postgraduate diploma and **60 credits** for a postgraduate certificate.

Are there any entry requirements?

You will normally need to hold a UK bachelors degree, or equivalent qualification, to study at postgraduate level.

Specific entry requirements for each programme are given on our website, go to www.openuniversity.co.uk/pg.

As all of our teaching is in English, your spoken and written English must be of an adequate standard for postgraduate study. If English is not your first language, we recommend that you will need a minimum overall score of 6 and minimum score of 5.5 in each of the four components: reading, writing, speaking and listening under the International English Language Testing System (IELTS). Go to www.ielts.org for details.

Contact our Student Recruitment Team on **+44 (0)300 303 5303** if you would like advice about whether your qualifications and experience provide a suitable basis for study at postgraduate level.

Count your previous study

If you've studied at higher education level before, you may be able to count this study towards your OU qualification, reducing the cost and saving you time too.

To find out how this works, go to www.openuniversity.co.uk/credit-transfer.

Plan your time

Most OU students study part time. Exactly how long it takes depends on how many credits you achieve each year, and which qualification you're working towards.

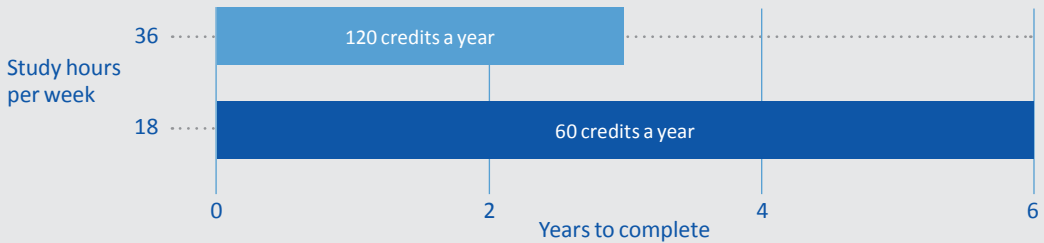
If you're thinking of studying full time, you'll need to plan your studies carefully as it involves studying more than one module at a time – we don't recommend you take on more than two modules simultaneously. You'll also need to bear in mind that, depending on your chosen qualification, the required modules may not all be

available within your study year or may not be studied together for academic reasons. If this is the case, you won't be able to study full time.

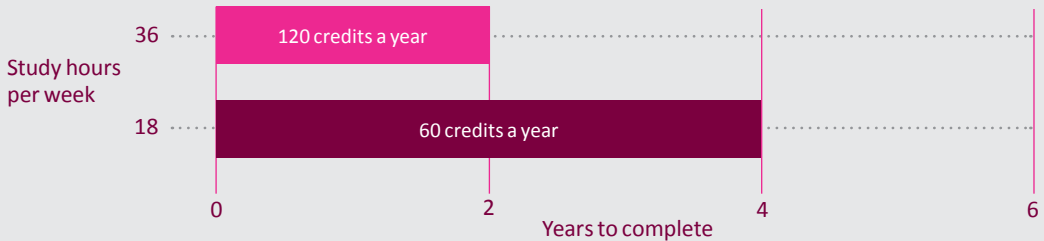
The tables below give some examples of how long it will take to complete a qualification.

Undergraduate qualifications

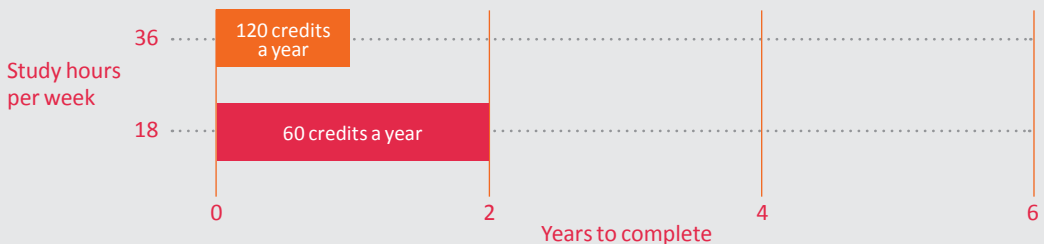
Degree (360 credits)



Foundation degree/Diploma of higher education (240 credits)



Certificate of higher education (120 credits)



Studying at a rate of 30 credits a year will require nine hours study per week. It will take double the time of studying 60 credits a year to complete your qualification.

Engineering qualifications

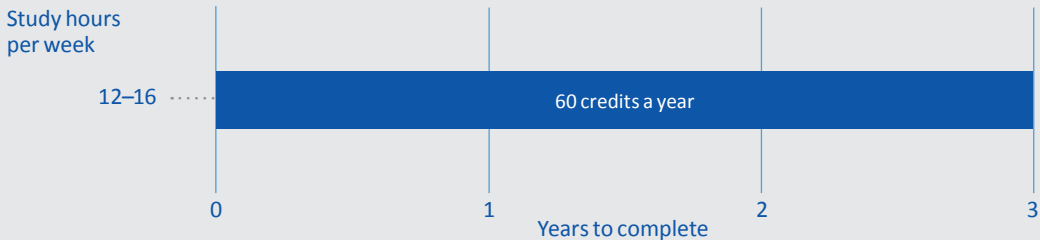
Our engineering qualifications are only available for part-time study. Note, it will take a minimum of eight years to complete the 480-credit integrated masters degree MEng (M04).

“That’s what’s so great about the OU – it’s made to measure, it’s bespoke, it fits around you and your individual needs.”

Hazel Krolow, studied with the OU

Postgraduate qualifications

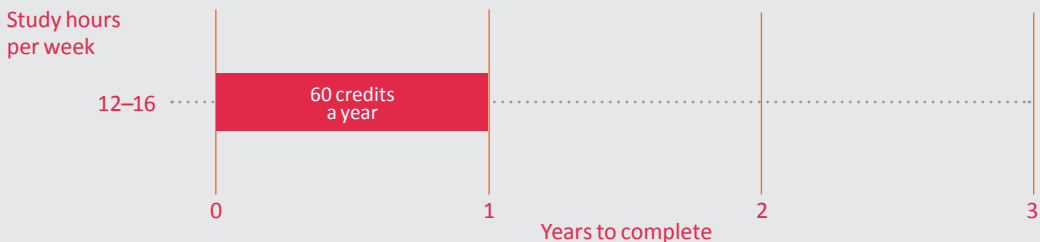
Masters degree (180 credits)



Postgraduate diploma (120 credits)



Postgraduate certificate (60 credits)



For students studying undergraduate qualifications

Deciding which qualification you'll study is the first step. Then it's time to work out how you'll go about funding your studies. We work hard to keep the costs low without compromising the quality of our teaching, meaning you get value for money. We'll do our best to help you find a way of paying that suits your circumstances.

Access modules

You may qualify for a free Access module

It's our aim to do everything we can to help people who'd like to take their education further. We start by offering you the opportunity to study a free Access module if you meet the following eligibility criteria:

- you are resident in the UK or have a BFPO address outside the UK (excludes Channel Islands and Isle of Man)
- you are studying the module as an additional preparatory stage towards an OU qualification (this doesn't apply if you are resident in Scotland)
- you have a household income (or a personal income if you live in Scotland) of £25,000 or less, or are receiving qualifying benefits
- you have not completed any more than one year on a full-time undergraduate programme at NQF level 4/SCQF level 7 or above, or completed 30 credits or more of OU study.

If you don't qualify for a free Access module

The cost of an Access module varies depending on where you live:

- if you live in England, the Channel Islands or the Isle of Man the fee is £696.
- if you live in Northern Ireland, Scotland or Wales the fee is £233.

You can pay up front by debit/credit card or by bank transfer, or you could spread the cost of your studies with an Open University Student Budget Account (OUSBA), see page 66 for more information.

If you're studying the Access module as an additional preparatory stage towards an OU qualification, and you live in England or Wales, you may like to think about covering the costs with a student loan, see page 66.

Understanding the OU's fees

If you're ready to study for a qualification such as a degree in a named subject or an Open degree, you can use the guide below to get an idea of the costs involved. You'll pay on a module-by-module basis, so you don't need to worry about paying for it all up front.

Living in England

Credits each year	Cost per year ¹
30 credits	£1393
60 credits	£2786
120 credits	£5572

¹ 16/17 prices; fees normally increase annually in line with inflation and the University's strategic approach to fees.

At today's prices, the total cost of a 360-credit honours degree would be £16,716.

Living in Northern Ireland, Scotland or Wales

Credits each year	Cost per year ¹
30 credits	£466–£589
60 credits	£893–£1065
120 credits	£1786–£2130

¹ 16/17 prices; fees normally increase annually in line with inflation and the University's strategic approach to fees.

Please note that fees for professionally relevant programmes of study (e.g. law) may be significantly higher than the ranges quoted.

At today's prices, the typical cost of a 360-credit honours degree would be between £5358 and £6390.

Living outside the UK

If you're living outside the UK, the fees will be the same as those for students living in England.

Additional costs

There may be extra costs on top of our tuition fees, such as travel to tutorials, set books and internet access.



“The tutor was great – supportive, clever and challenging – and the materials were superb.”

Josephine Brew, studied with the OU

Ways to pay

We offer various ways to pay for your study.

Student finance

Living in England or Wales

Student Finance England and Student Finance Wales offer student loans to fund study.

Irrespective of how old you are or how much you earn, a student loan may be the best way to pay for your studies if you live in England or Wales. It's the most popular way to pay, and you only start paying it back when your salary exceeds the income threshold, currently £21,000.

Example repayment amounts:

Income each year before tax	Monthly repayment
Up to £21,000	£0
£22,000	£7
£25,000	£30
£30,000	£67

To qualify for a loan, you'll need to be studying at least one OU module, worth 30 credits.

If you get a student loan:

- You'll have nothing to pay for up to four years.
- Repayments will be based on what you earn, not what you owe.
- Payments will be deducted automatically from your salary.
- You can pay off the loan early without any penalties.
- If, for any reason, there's a balance outstanding after 30 years – it'll be written off.

Living in Northern Ireland or Scotland

If you live in Northern Ireland you may be eligible for a Fee Grant of up to £1230 to help towards the cost of your module fees. The amount you get depends on how much you earn and how many credits you're studying.

If you live in Scotland and your personal income is £25,000 or less, or you're on certain benefits, you could qualify for a Part-Time Fee Grant to cover 100% of your course fees. It isn't a loan – you won't need to pay it back.

Study support or discretionary funds

You may be eligible for means tested funding. It's for study related costs such as travel, childcare and internet access.

Self-funded studies

We make it easy to pay for your studies straight away with a credit or debit card, or via a bank transfer.

Or you could pay for your studies with an Open University Student Budget Account (OUSBA), see opposite for more information.

Open University Student Budget Accounts Ltd (OUSBA)

OUSBA offers a helpful way to budget for your qualification over a longer period of time, especially if you're studying alongside a career, or have a young family.

Pay by instalments – OUSBA can work out your OU fee and pay it, on your behalf, to the OU. OUSBA then spreads the fee and the interest payable over up to one year, letting you pay back your fees monthly.

Register first, pay later – OUSBA can pay your full module fee direct to the OU. You then repay OUSBA interest-free, in full, just before your module starts. 0% APR representative.

You must be at least 18 years of age and credit is subject to your financial circumstances and status.

Employer sponsorship

When you're better qualified, you're a more valuable employee. So it's always worth talking to your employer, to find out if the company or organisation would be willing to sponsor you.

MORE ONLINE



To find out more about paying for your studies, go to www.openuniversity.co.uk/ug-fees

Or call an OU adviser on **+44 (0)300 303 5303**

For students studying postgraduate qualifications

You pay for your postgraduate studies module by module. The module fee you pay is dependent on what you study and where you live.

To find out the fee for your chosen module, go to www.openuniversity.co.uk/pg.

Self-funded studies

We make it easy to pay for your studies straight away with a credit or debit card, or via a bank transfer.

Or you could pay for your studies with an Open University Student Budget Account (OUSBA), see below for more information.

[Open University Student Budget Accounts Ltd \(OUSBA\)](#)

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Employer sponsorship

When you're better qualified, you're a more valuable employee. So it's always worth talking to your employer, to find out if the company or organisation would be willing to sponsor you.

Looking at other funding options

If you are an OU graduate with an honours degree, support may be available from the Crowther Fund. The Crowther Fund is intended to help OU graduates build upon their OU degrees, either by formal study or research or by generally broadening their experience through a period of voluntary work. The fund doesn't take account of financial circumstances. The application closing date is 28 February each year.



MORE ONLINE



To find out more about paying for your studies, go to www.openuniversity.co.uk/pg-fees

Or call an OU adviser on **+44 (0)300 303 5303**

Other useful information

Studying outside the UK

Wherever you are in the world, you may be able to study directly with the OU.

For information on available qualifications, your study experience, and what the OU can offer you, go to www.openuniversity.edu or call **+44 (0)300 303 0266**.

Equality and diversity

We're committed to creating an inclusive university community, where everyone is treated with dignity and respect. We will challenge inequality, and anticipate and respond positively to different needs so that everyone can achieve their potential.

More information is available on our Equality and Diversity website, go to: www.openuniversity.co.uk/equality.

Students under the age of 16

Very exceptionally, we consider applications from particularly gifted students under the age of 16. If you'd like to make an application, please contact us directly on: **+44 (0)300 303 5303**.

Data protection

We record your personal information when you contact us and use this to manage registration, study, examination and other services. When you register, we'll tell you more about how we process and use your personal information.

Calls may be recorded to help us improve what we do for you.

Contacting us in writing

If you need to contact us in writing, you can use the following address:

**The Student Recruitment Team
The Open University
PO Box 197
Milton Keynes
MK7 6BJ
United Kingdom**

Students with additional needs

When you register to study with us, we'll ask you whether you have a disability, health condition, mental-health disability or specific learning difficulty (such as dyslexia) that might affect your studies or examinations. If you do, we'll direct you to more detailed information about the services we offer.

Disabled Students' Allowance (DSA) – UK students only

Disabled Students' Allowances help with study costs that result directly from your disability or specific learning difficulty. Allowances are not means-tested and may go towards specialist equipment (such as an adapted computer), non-medical study support (for example, a sign-language interpreter; a note-taker or a dyslexia support worker) or other related expenses. You can also apply for help with study-related travel costs that directly result from your disability.

Eligibility and allowances depend on where you live and what you're studying. If you are eligible for a DSA the University will only provide study support that cannot be provided by the allowance.

For information and advice about all services for students with disabilities, speak to an OU adviser on **+44 (0)300 303 5303** or go to www.openuniversity.co.uk/disability.

Other ways to read this prospectus

You may find it easier to access information from our website at www.openuniversity.co.uk.

We can supply this prospectus as a PDF and in other formats. Please call **+44 (0)300 303 5303**, or email us from our website at www.openuniversity.co.uk/contact.



Ordering other prospectuses

You can go to www.openuniversity.co.uk/prospectus to download or order one of our other prospectuses.

Access Module Certificates

Introductory modules to build your confidence

Open qualifications

Build a qualification that's unique to you

Other subject-specific prospectuses

- Arts and Humanities Prospectus
- Business and Management Prospectus
- Computing and IT Prospectus
- Education, Childhood and Youth Prospectus
- Environment and Development Prospectus
- Health and Social Care Prospectus
- Languages Prospectus
- Law Prospectus
- Mathematics and Statistics Prospectus
- Psychology and Counselling Prospectus
- Science Prospectus
- Social Sciences Prospectus

MORE ONLINE



While you're online, you'll see that we have a huge range of taster modules available. OpenLearn is available to everyone, it's free of charge, and gives you a good idea of what higher education is like in almost every subject.

www.open.edu/openlearn

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Follow us on [Twitter](#)

Connect on [LinkedIn](#)
Watch us on [YouTube](#)



Contact us

In England, Scotland, Wales, the Channel Islands, the Isle of Man and BFPO addresses outside the UK

- Go to www.openuniversity.co.uk
- Call our Student Recruitment Team on **+44 (0)300 303 5303**

Lines are open (UK time):
Monday to Friday 08:00 to 20:00
Saturday 09:00 to 17:00

Calls are charged at the UK local rate when calling from a UK mobile phone or landline.

- Email us from our website at www.openuniversity.co.uk/contact

In Northern Ireland

- Go to www.openuniversity.co.uk
- Call our Belfast office on **028 9032 3722**
- Email us at northernireland@open.ac.uk

In the Republic of Ireland

- Go to www.openuniversity.edu
- Call our Enquiry and Advice Centre in Dublin on **(01)6785399** or our Belfast office on **+44 (0)28 9032 3722**
- Email us at ireland@open.ac.uk

All other countries

- Go to www.openuniversity.edu
- Call us on **+44 (0)300 303 0266**

I siaradwyr Cymraeg

Os ydych yn siarad Cymraeg a byddai'n well gennych drafod eich anghenion astudio drwy gyfrwng y Gymraeg, cysylltwch â:

Y Brifysgol Agored yng Nghymru,
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