### Course overview

**START DATE**
September 2020

**SUBJECT AREA**
Engineering

### Course Summary

This course is subject to validation.

The focus of technology related economy is drastically shifting towards autonomous mechatronic systems, automation and robotics, controlled remotely via smart technology. In 2019, automation and robotics/mechatronics engineers were the second most in-demand. The demand is also expected to grow rapidly in the next 10 years. This course provides you with analytics and scientific knowledge to design integrated electronics, controls, computers and moving parts. You’ll develop problem-solving expertise by creating practical solutions to problems that are directly relevant to industrial needs.

Our course has been carefully designed by experts in the field of mechanical engineering to help prepare students for professional practice in the world of interdisciplinary technology. You’ll have access to the very latest equipment and resources to carry out this work. All of which will prepare you for a wide range of future careers.

During your course, you’ll have regular contact with blue chip companies and industry leaders in the sector, who will host visits and work placements and provide regular guest speakers to come and speak at the University of East London.

**UCAS POINTS**
112

**COURSE OPTIONS**
Degree
Return to campus: dual delivery

In a Covid-secure environment, enjoy learning on our state-of-the-art campuses and flex between online delivery

Find out more

Placement
Optional placement year available

ENQUIRE

VISIT

Prof Fawad Inam, Head of Engineering and Computing (Fellow of Institute of Mechanical Engineers)

Global engineering including UK based companies are in desperate need for qualified technology specialist and problem solvers. As a chartered engineer and department lead, we have ensured that the curriculum is designed to integrate you into managing and further revolutionising Industry 4.0. The qualification with significant content on employability and professional skills will aid you to catalyse your professional career progression!

FEES AND FUNDING
**Tuition Fee Loan**
You can apply for a loan to cover the cost of your tuition fees, which will be paid directly to UEL. There are no up-front fees required. Repayment only starts after you finish your course and are earning over £25,000. If you haven’t finished repaying your loan after 30 years it will be automatically cancelled.
To apply visit [gov.uk/student-finance](https://www.gov.uk/student-finance)

**Maintenance Loan**
You can apply for a loan to help with living costs such as food, travel and accommodation. How much you can borrow depends on where you live and study, and whether you are currently on welfare benefits. The maximum loan you can apply for is £12,729.
To apply visit [gov.uk/student-finance](https://www.gov.uk/student-finance)

**Supplementary Grants**
The government also offer the following additional support:
- Parents’ Learning Allowance
- Adult Dependents’ Grant
- Childcare Grant
- Disabled Students’ Allowance
- All nursing and many allied health students on courses from September 2020 will receive a payment of at least £5,000 a year from the government.

For further information visit [gov.uk/student-finance](https://www.gov.uk/student-finance) or contact Student Finance England.

**UEL FUNDING**

We appreciate that finance is one of the key considerations when you are applying to university. That’s why alongside your Government loan, you can apply for scholarships to help towards your finances. We have invested over £2 million worth of scholarships to financially assist new students, starting in September 2019. If you are awarded a scholarship you don’t need to pay it back.

All students will receive:

- Ebooks

**Bursaries Schemes for which you can apply**

- Care Leaver and Foyer Bursary - up to £1,500
- Progression Bursary - up to £2,000
- Engagement Bursary - up to £2,000
- Hardship Bursary - up to £2,000
- Helena Kennedy Foundation - £1,500
- Going Global - awards range from £300 - £700

**Scholarships Schemes for which you can apply**

- Vice Chancellor Scholarship - up to £27,750 over three years
- Dean Scholarship - up to £13,500 over three years
- Civic Engagement Scholarship - £1,000
- EU Scholarship (EU Only) - £1,000
- ELSEF Scholarship - £1,000
- UTC Scholarship - £1,500
- Sports Scholarships - up to £6,000

**EXTERNAL FUNDING**

There are a number of external organisations that offer financial help to students. Please see the list below list to view additional support options. Alternatively, you can visit the Scholarship Search website.

Please note that the University of East London is not responsible for the content of these external sites and is not associated in any way with the funding schemes and their application processes.
This course is subject to vigorous academic scrutiny by the UES. As a graduate of our mechatronics programme, you will be able to apply your academic strengths to real-world situations. The programme is unique, as there is a strong emphasis on professional life and employability skills, embedded throughout all aspects of the programme. You will evaluate and critique recent data, literature and case studies as well. You will be delivered guest sessions by industry specialists (e.g. Atkins, Costain Skanska, Siemens, Laing O’Rourke, HS2 project etc.) to strengthen your knowledge of real-world applications.

Your academic team includes a dynamic mix of research-active industrial practitioners, renowned researchers, chartered engineers and will actively involve you in developing the specific design and professional skills required by professional engineers. You will participate in learning latest industry-standard software.

Your future career

The focus of technology related economy is drastically shifting towards autonomous mechatronic systems, automation and intelligent systems for Industry 4.0. As a graduate of our mechatronics programme, you will be able to analyse, design and manage sustainable, integrated and intelligent systems for Industry 4.0.

Offering a placement year as well, you will be based at the waterfront Docklands campus, a dynamic part of London within close proximity of the government and policy-making institutions and professional engineering companies. The programme is designed to educate you in how to apply your academic strengths to real-world situations.

The programme is unique, as there is a strong emphasis on professional life and employability skills, embedded throughout all aspects of the programme. You will evaluate and critique recent data, literature and case studies as well. You will be delivered guest sessions by industry specialists (e.g. Atkins, Costain Skanska, Siemens, Laing O’Rourke, HS2 project etc.) to strengthen your knowledge of real-world applications.

Your academic team includes a dynamic mix of research-active industrial practitioners, renowned researchers, chartered engineers and will actively involve you in developing the specific design and professional skills required by professional engineers. You will participate in learning latest industry-standard software.

All assessments are designed to ensure that our mechatronics engineering course equips you with all of the skills required to get you to where you want to be. You will be assessed by coursework, exams, presentations and projects. You will not be assessed on any written examinations at the end of the course.

This course offers the opportunity of year-long placement between years two and three. If you choose to take this option, you'll gain invaluable work experience in the industry. You may complete your placement in the autumn or spring of your third year. Our placement offers are highly sought after and we will help you with your job search.

You don't need to pay this up front. Tuition fees are subject to annual change. Fees for future years will be published in due course.
systems.

to meet the increasing demand (national and international) for mechatronics engineering professionals requiring technical skills in

specialists (e.g. Atkins, Costain Skanska, Siemens, Laing O'Rourke, HS2 project etc.) to strengthen your knowledge of real-world

mechatronics engineering practice and research. You will be setting your own hands-on and research–based learning where you

using technology and other diverse modes. Your learning journey will be further supported by using technology enhanced learning

into the engineering sector giving you a major competitive edge. Apart from the coursework and exams, you will be assessed by

All assessments are designed to ensure that our mechatronics engineering course equips you with all of the skills required to get

your degree programme. We offer a 5-week and an 11-week pre-sessional course.

If you do not meet the academic English language requirements for your course, you may be eligible to enrol onto a pre-

sessional English programme. The length of the course will depend on your current level of English and the requirements for

your degree programme. We offer a 5-week and an 11-week pre-sessional course. Find out more.

MATURE APPLICANTS AND THOSE WITHOUT FORMAL QUALIFICATIONS

As an inclusive university, we recognise that applicants who have been out of education for some time may not have the

formal qualifications usually required for entry to a course. We welcome applications from those who can demonstrate their

enthusiasm and commitment to study and have the relevant life/work experience that equips them to succeed on the course. We will assess this from the information provided in your application – in particular your personal statement - to help us decide on your eligibility for the course.

Please note that some courses require applicants to meet the entry requirements outlined on the course page. Our pre-entry Information Advice and Guidance Team are able to provide further advice on entry requirements and suitability for study.

ENGLISH LANGUAGE REQUIREMENTS

Overall IELTS 6.0 with a minimum of 6.0 in Writing and Speaking; minimum 5.5 in Reading and Listening (or recognised equivalent).

If you do not meet the academic English language requirements for your course, you may be eligible to enrol onto a pre-

sessional English programme. The length of the course will depend on your current level of English and the requirements for

your degree programme. We offer a 5-week and an 11-week pre-sessional course. Find out more.
WHAT YOU’LL LEARN

The focus of technology related economy is drastically shifting towards autonomous mechatronic systems, automation and robotics, controlled remotely via smart technology. The mechatronics programme combines principles from mechanics, electronics, control, automation and robotics to design, manufacture and test smart and cognitive systems and devices, which utilise a combination of these disciplines. Students on this key undergraduate programme will gain this knowledge of engineering processes and systems, product design, digital electronics and integration of these technologies. This will also enable them to create their own mechatronic systems that are smart and cognitive, developing them from imagination through to reality. The general aim is to provide a programme of study for mechatronics engineers of sufficient width and depth to meet the demands of their profession. A specific aim of the programme is to promote an active interest in engineering and to encourage students to respond to changes and developments within automation, mechanical systems, robotics and related wider engineering sector.

WHAT YOU’LL STUDY AND WHEN

Over the course of three to four years, you will be taught wide variety of modules. You will be actively involved in developing the specific design and professional skills required by professional engineers and will tackle numerous design problems to develop your professional skills along with analytical, technical and industrial decision-making abilities.

If you are on the sandwich placement programme, the placement year initiates after the completion of the second year.

YEAR 1

- Mental Wealth: Professional Life
- Engineering Materials
- Engineering Principles
- Applied Mathematics & Computing
- Thermofluids
- Engineering Principles

YEAR 2

- Mental Wealth: Professional Life
- Quality Engineering
- Dynamics and Control
- Applied Electronics
- Digital Communications & Telecommunication Networks
- Advanced Mathematics and Modelling

OPTIONAL PLACEMENT

This course offers the opportunity of year-long placement between years two and three. If you choose to take this option, you'll spend your third year on a placement with a relevant company or organisation, adding valuable practical experience to your growing academic knowledge. The extra placement year means it will take four years to complete your studies, instead of...
YEAR 3

- Capstone project
- Mental Wealth: Professional Life
- Turbomachinery and Energy Systems
- Advanced Manufacturing Technology
- Systems Integration
- Design of Mechatronics Systems

How you'll be assessed

All assessments are designed to ensure that our mechatronics engineering course equips you with all of the skills required to get into the engineering sector giving you a major competitive edge. Apart from the coursework and exams, you will be assessed by using technology and other diverse modes. Your learning journey will be further supported by using technology enhanced learning as you will also participate in learning latest industry-standard software.

HOW YOU'LL LEARN

Your academic team includes a dynamic mix of research-active industrial practitioners, renowned researchers, chartered professionals and technologists, whose combined knowledge ensures you leave with a comprehensive understanding of mechatronics engineering practice and research. You will be setting your own hands-on and research-based learning where you will evaluate and critique recent data, literature and case studies as well. You will be delivered guest sessions by industry specialists (e.g. Atkins, Costain Skanska, Siemens, Laing O'Rourke, HS2 project etc.) to strengthen your knowledge of real-world issues and how they link to the concepts, theories, principles and hands-on practical elements taught during the course.

YOUR FUTURE CAREER

Engineering is a growth industry and currently there is a shortage of quality engineers in the UK. Our mechatronics engineering programme is unique, as there is a strong emphasis on professional life and employability skills, embedded throughout all aspects of your technical course focusing on your enhanced key skills such as communication, digital proficiency, intelligence (like emotional and social) and teamwork.

Offering a placement year as well, you will be based at the waterfront Docklands campus, a dynamic part of London within close proximity of the government and policy-making institutions and professional engineering companies. The programme is designed to meet the increasing demand (national and international) for mechatronics engineering professionals requiring technical skills in sustainable, integrated and intelligent systems for Industry 4.0. As a graduate of our mechatronics programme, you will be able design, build, operate and manage successfully the sophisticated and complex interfaces characterising existing and new systems.

Explore the different career options you can pursue with this degree and see the median salaries of the sector on our Career Coach portal.
BEng (Hons)  
Biomedical Engineering  
READ MORE →

BSc (Hons)  
Civil Engineering  
READ MORE →

Tuition fees are subject to annual change. Fees for future years will be published in due course.

You don't need to pay this up front.
Programme is unique, as there is a strong emphasis on professional life and employability skills, embedded throughout all aspects of the curriculum. You will be assessed by coursework, exams, and practical evaluations, ensuring you develop a comprehensive skillset.

Over the course of three to four years, you will be taught a wide variety of modules. You will be exposed to a variety of disciplines, including engineering processes and systems, product design, digital electronics, thermofluids, and manufacturing. These will equip you with the knowledge to design and develop smart and cognitive systems and devices, which utilise a combination of these disciplines.

Apart from the coursework and exams, you will be assessed by practical evaluations, including participation in learning latest industry-standard software. This hands-on approach will prepare you for the demands of the engineering sector, giving you a major competitive edge.

If you are on the sandwich placement programme, the placement year initiates after the completion of the second year. During this year, you will work alongside professional engineers and will tackle numerous design problems to develop your professional skills along the way. This experience will not only enhance your employability but also provide you with valuable industry insight.

By the end of your studies, you will have gained knowledge of engineering processes and systems, product design, digital electronics, thermofluids, and manufacturing. You will be able to design and develop smart and cognitive systems and devices, which utilise a combination of these disciplines.

The general aim is to provide a programme of study for mechatronics engineers of sufficient width and depth to meet the demands of their profession. A specific aim of the programme is to promote an active interest in engineering and to encourage enthusiasm and commitment to study and have the relevant life/work experience that equips them to succeed on the course.

Global engineering, including UK-based companies, are in desperate need for qualified technology specialists and problem solvers. Mechanical Engineers (MEng) and Civil Engineers (BEng) are in high demand around the world due to the growing need for infrastructure development and technological innovation. The demand for skills such as design, manufacturing, and project management is increasing, and this programme prepares you to meet these demands.

If you meet the entry requirements, you will be eligible to apply for the programme. You will have the opportunity to work with professionals in the field, gain practical experience, and develop a strong network of contacts. The programme also offers the option of a sandwich placement year, which will provide you with valuable industry experience.

For those who do not meet the academic English language requirements for their course, you may be eligible to enrol onto a pre-sessional course. If you do not meet the academic entry requirements for your course, you may be eligible to enrol onto a pre-entry course.

Please note that some courses require applicants to meet the entry requirements outlined on the course page. Our pre-entry application advice service can provide further advice on entry requirements and suitability for study. Alternatively, you can visit the University of East London website for more information.

For further information, visit the University of East London website.
This course is subject to meeting the University’s general academic requirements. Please visit the International Office website for the most up-to-date information on qualification requirements.

ENGLISH LANGUAGE REQUIREMENTS

YEAR 1

YEAR 2

OPTIONAL PLACEMENT

YEAR 3

EXPLORE APPLY TO UEL

Tuition fees

Degree

APPLY TO UEL

The focus of technology related economy is drastically shifting towards autonomous mechatronic systems, automation and sustainable, integrated and intelligent systems for Industry 4.0. As a graduate of our mechatronics programme, you will be able to set your own hands-on and research–based learning where you will participate in learning latest industry-standard software.

The mechatronics engineering practice and research. You will be able to work with professionals and technologists, whose combined knowledge ensures you leave with a comprehensive understanding of the engineering sector.

International engineering including UK based companies are in desperate need for qualified technology specialists and problem solvers. If you are on the sandwich placement programme, the placement year initiates after the second year of study. The placement year initiates after the second year of study. It will provide you with a unique opportunity to learn about the professional world and gain experience in the industry.

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Engineering Management with Foundation Year

BEng (Hons)

READ MORE →

General Engineering

BEng (Hons)

READ MORE →
Mechanical Engineering (Integrated Master's)
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Course Summary
This course is subject to validation.

**ENGLISH LANGUAGE REQUIREMENTS**

**YEAR 1**

**YEAR 2**

**OPTIONAL PLACEMENT**

**YEAR 3**

EXPLORE APPLY TO UEL

Tuition fees are subject to annual change. Fees for future years will be published in due course.

Spaces Available.

**WHAT YOU'LL STUDY AND WHEN**

**HOW YOU'LL LEARN**

**RELATED COURSES**

**CONTACT US**

**EXTERNAL FUNDING**

**COUNTRY**

**READ MORE**

The School of Architecture Computing and Engineering at the University of East London has a long and credible history of producing qualified engineers.

**WHAT YOU'LL STUDY AND WHEN**

**HOW YOU'LL LEARN**

**RELATED COURSES**

**CONTACT US**

**EXTERNAL FUNDING**

**COUNTRY**

**READ MORE**

BEng (Hons)

Mechanical Engineering (with Foundation year)

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BEng (Hons)

Mechatronics and Computer Systems Engineering

READ MORE →
BEng (Hons)
Product Design Engineering
READ MORE →

BEng (Hons)
Railway Engineering
READ MORE →

School of Architecture Computing and Engineering
The School of Architecture Computing and Engineering at the University of East London has a long and credible history of leading the way in Psychology education, professional training and research.
READ MORE →
This course is subject to validation. Tuition fees are subject to annual change. Fees for future years will be published in due course.

**ENTRY REQUIREMENTS**

**QUALIFICATIONS**

- A levels: Maths and Physics at Grade B, Chemistry or Biology at Grade C.
- BTEC National Diploma: Merit pass in two relevant contexts (including Maths or Physics).
- International Baccalaureate: Diploma with 27 points including a minimum of 15 points at Higher Level and must include at least one point in Mathematics.

**ENGLISH LANGUAGE REQUIREMENTS**

- IELTS: Overall 6.0 with a minimum of 5.5 in Writing and Speaking.
- TOEFL: 79 overall with at least 17 in Speaking.
- PTE: Overall 59 with at least 55 in Writing and Speaking.

**YEAR 1**

- Introduction to mechatronics engineering:
  - Basic principles of physics and mathematics.
  - Design and analysis of mechanical systems.
- Electrical and electronic principles.
- Computer-aided design (CAD).
- Introduction to programming.

**YEAR 2**

- Mechatronic systems design:
  - Advanced control systems.
  - Robotics and automation.
- Advanced programming and simulation.
- Project work:
  - Design and implementation of mechatronic systems.
  - Case studies.

**YEAR 3**

- Advanced mechatronics and robotics:
  - Advanced control systems.
  - Automation and robotics.
- Professional skills:
  - Effective communication.
  - Teamwork.
- Final project:
  - Design and implementation of a mechatronic system.
  - Presentation.

**Optional Placement**

- Students are encouraged to take an optional placement year to gain practical experience in the industry.
- Students will work in a professional engineering company, gaining valuable experience in the field.
- Placement opportunities are available in various sectors including aerospace, automotive, and manufacturing.

**YOUR FUTURE CAREER**

- Mechatronics engineers are in high demand due to the increasing importance of automation and robotics in industries.
- Graduates of this programme will be well-equipped to meet the demand for mechatronics engineering professionals with technical skills.
- Opportunities exist in a wide range of industries including aerospace, automotive, manufacturing, and healthcare.

**STUDENT EXPERIENCE**

- The course is designed to provide a balance between theoretical knowledge and practical skills.
- Students benefit from access to state-of-the-art facilities and equipment.
- Regular guest lectures and industry networking events are held to enhance student experience.
- Students have the opportunity to form study groups and participate in a range of extracurricular activities.

**FURTHER INFORMATION**

- For more detailed information, please visit the official website of the University of East London.
- Contact the Admissions Office for any specific queries or to arrange a campus visit.

**Tuition Fees**

- Tuition fees are subject to annual change. Fees for future years will be published in due course.
- For the most current information, please visit the official website or contact the Admissions Office.