

ENGINEERING AND DESIGN

Undergraduate Handbook 2018/2019

MEng Mechanical Engineering with
Robotics
and

MEng Mechanical Engineering with
Robotics
(with an industrial placement year)



MEng Mechanical Engineering with Robotics



Welcome to the MEng Mechanical Engineering with Robotics degree course and to its industrial placement variant. Robotics is playing more and more of an important role in society, from things we do at home to the way we move from one place to another. This MEng course is taught as part of our stimulating Mechanical Engineering degree and aims to enhance both your theoretical knowledge and practical skills in areas such as mechanisms of robots, control engineering, programming, embedded systems, industrial automation mechatronics, robotics applications, and autonomous vehicles.

Project work for the major dissertation may be undertaken in conjunction with active researchers working on robotics applications. It may take the form of practical work in the research labs or computational modelling, or indeed a combination of both. In the fourth year, a major group project is carried out with the collaboration of MEng students from other courses forming an interdisciplinary team to undertake a complex project. The combination of taught modules and project work provides an excellent platform to provide you with skills in the areas of mechanical engineering and in robotics.

I am available throughout your course to answer questions about how the degree is constructed, what is expected of you, and to deal with any whole course issues. We are continually improving the delivery of our courses, based on feedback from students, so make sure that you communicate ideas and comments either directly to me or through your student reps.

Course convenor

Dr Luis A. Ponce Cuspinera

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Aim and Contents

This handbook will give you some useful information about the Department of Engineering & Design at the University of Sussex – where to find things, who does what, who you can speak to about various issues. The information given here, and a lot more detail, can be found on the [Engineering and Informatics website: www.sussex.ac.uk/ei/internal/forstudents](http://www.sussex.ac.uk/ei/internal/forstudents).

You will find that you can access a lot of information about your courses and modules through [Sussex Direct](#) and also [Canvas](#), online systems designed to give you easy access to the information you will need as a student.

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Further information is provided in the Student Handbook published by the Student Services Division, and available online at <http://www.sussex.ac.uk/students/essentials/studenthandbook/>.

Another good source of general information and support resources for students can be found at: <http://www.sussex.ac.uk/students/support/>

SECTION ONE: Academic information

Term Dates – 2018-19

Arrivals weekend (new undergraduate students)	15 September 2018
Freshers' week (new undergraduate students)	17 September 2018
Autumn term	24 September to 14 December 2018
Christmas vacation	16 December 2017 to 7 January 2018
Private study period	7-9 January 2019
Mid-year assessment period	10-25 January 2019
Inter-session week	26 January to 3 February 2019
Spring term	4 February to 10 May 2019
Easter teaching break and spring vacation	13 April to 28 April 2019
Private study period	13-15 May 2019
Summer term (year-end assessment period)	16 May to 14 June 2019
Summer vacation	starts 15 June 2019
Summer vacation assessment period	19 August to 6 September 2019

Students should consult their assessment information on Sussex Direct. Please note that exams may be scheduled during evenings and on Saturdays and Bank Holidays. For future term dates and University closure days see: www.sussex.ac.uk/aboutus/keydates

Communication

We will need to communicate with you for various purposes. **Sussex email** is the main mode of communication within the University so it is very important that you check your **Sussex email account** – every day if at all possible. University emails will be sent automatically to this account and not to any other personal email accounts.

Official University communications are sometimes sent to you by post, so it is vital that you keep your term-time address contact details up to date on Sussex Direct. Paper-based communications are also sent via the student pigeonholes, so you will need to check yours regularly. The Engineering and Design undergraduate pigeonholes are located at the boundary between the Chichester 1 and Chichester 2 buildings on level 2 (on the 2nd floor, just off the photocopier room).

Please look at the noticeboards in the Engineering & Informatics School Office foyer area in Chichester 1 for information on examinations, student reps, student mentors, careers and placements, competitions etc.

Teaching faculty are encouraged to use an automated text messaging facility to issue emergency messages to class groups in cases of cancellation of classes, e.g. due to staff illness. This is another good reason for keeping your mobile phone details accurate on Sussex Direct.

What we expect from you

Being a student carries obligations as well as rights, especially at Sussex where there is so much emphasis placed on group teaching and project work.

Therefore, attendance at your taught sessions is a requirement and is not optional - this is monitored by the School. We expect all our students to attend at least 80% of their timetabled teaching sessions.

These include lectures, laboratory sessions, workshops and seminars where a register is taken. If you are unable to attend, you should let the tutor for the session know in advance, if possible. If you are away from teaching for more than 2-3 days (due to illness, for example), you should send an email to: enginf-attendance@sussex.ac.uk – please give details of your absence and expected return date. Any unexplained or persistent absences will be noticed and you may be required to attend a meeting of the School Student Progress Committee, who may then recommend that you be required to withdraw from the University, either temporarily or permanently.

Prepare for teaching sessions. Just turning up is obviously not enough. You need to have done any specified work in advance and be prepared for the session. This is particularly important for labs, where the time for practical work is limited and cannot be wasted in reading the lab script to find out what you should be doing.

Observe deadlines. Being able to organise your time and to plan ahead to meet deadlines is an important skill. So we insist that you meet deadlines for all formal assessments and penalties will be imposed for submissions that do not meet specified deadlines and for which there are no Exceptional Circumstances (formerly known as Mitigating Evidence).

Co-operate with your fellow students. You can learn a lot and help each other by sharing resources, such as reading material and notes. In many cases you will be working in pairs or teams and need to work co-operatively to achieve the objectives of the assignment. Students often set up their own study groups and revision groups and there are plenty of places for you to work together, including Labs 1 & 2 in Chichester 1 and the mezzanine space in John Clifford West.

Use the Library. Sussex has one of the best [University libraries](#) in the country, and it is especially good in its support for undergraduate teaching. To get the best from the Library, you should arrange to attend one of the tours on offer during Induction.

Use the resources on [Canvas](#) where you will find teaching materials and discussion forums.

School Policy on Unacceptable Behaviour

The University of Sussex is committed to creating a learning environment free of harassment, discrimination, victimisation or bullying, where every person is treated with dignity and respect. All students have the right to work and study in an environment which encourages harmonious relationships.

For further advice and University procedures in the event of prejudice, harassment or bullying, please visit our dedicated website page: <http://www.sussex.ac.uk/wellbeing/studentlife/harassment>

Conduct in the Future Technologies Labs. The school has provided a suite of state of the art computer labs. These labs are available for you to work in 24 hours a day, 7 days a week, provided they are not occupied at full capacity with students attending classes. Please note, the PCs in the labs are maintained by IT Services, and any problems should be reported to the IT Services helpdesk in Shawcross in the first instance. These are shared labs across the departments of Informatics, Engineering and Product Design, and to ensure harmony, you must abide by the following rules:

- You must respect other users.
- When teaching is taking place in the lab, the teacher and the students in these classes have priority. You must keep noise to a minimum, and you may be asked to move to a different part of the lab, or a different lab.
- The computer labs are maintained by the university's Information Technology Services (ITS), and you are responsible for reading and abiding by ITS rules about behaviour in the computer labs.
- University policy allows the lab machines to be used for personal computing projects, and we encourage the exploration of modern computing developments such as cryptocurrencies. However, the school views any use of university computing resources for direct financial reward, such as continuous BitCoin mining, as misconduct, and this will be processed through the appropriate disciplinary procedures.

Attendance Etiquette:

As a courtesy to your lecturer and fellow students, the School asks that you abide by the following guidance for attendance at all timetabled sessions:

- Arrive in good time for the start of the session. If you are unavoidably late please enter the room with minimum disturbance and do not interrupt the proceedings.
- Do not use mobile phones during sessions. They must be OFF, or on silent if you need to be contacted.
- Do not engage in private conversations during sessions.
- Do not pack-up and/or leave before the session AND questions are finished.

All of the above are very distracting for the lecturer and your fellow students and will affect the teaching experience.

- If you need to record lectures then you should inform the lecturer at the start of the module. Such recordings are for your own personal use and should not be circulated.
- As outlined above, attendance at timetabled sessions is compulsory and the best learning experience comes from being there as it happens. However, if you have a period of absence, try to catch up quickly. The materials (including lecture notes) posted on [Canvas](#) should help you do this.

Courses & Modules

Degree course syllabus information, including learning outcomes and curriculum details, and information about your modules, can be viewed via the Engineering Department web pages:

<http://www.sussex.ac.uk/ei/internal/coursesandmodules/engineeringdesign/ugcourses>

[Sussex Direct](#) is your personalised online gateway to University information. The system will help you track your marks and attendance and ensure that these are accurate. Behind the scenes, Sussex Direct helps your Academic Advisor, and Student Advisors, to support your studies.

You will find:

- Syllabus Information
- Module descriptions
- Assessment information
- Module evaluations

[Canvas](#) is the web resource used to support every module taught at the University. Both the Engineering and Design web pages and Sussex Direct link to Canvas. It is used by Module Convenors to upload teaching materials and it also contains tools to help you with your modules.

Options

Optional modules are chosen by all students (who have them in their degree course structure) in the Spring Term for the forthcoming academic year. You can consult the Course Convenor, your Academic Advisor and Module Convenors about the options on offer before making your selection. The School Office will contact you by email regarding your module option form.

Credit System

Degree courses at Sussex are modular, with each academic year being a largely 'self-contained' unit of study. Full-time students are expected to put in a 40-hour average working week over the academic year - a grand total of at least 1,200 study-hours per year. Sussex, like other Universities, uses a measure called "credit" which reflects this input of time. In the system used here, each academic year contains 120 credits, where a credit is equivalent to 10 hours of student effort. These credits are divided amongst the different modules. The majority of modules are worth 15 credits which equates to 150 hours of study for the duration of the module. This can include time spent on many relevant learning activities such as reading background material, preparing and writing assessments, attending lectures, labs, seminars and workshops and revising for exams.

These figures can only be a guide. Individual students come with different backgrounds and different strengths, and this will affect the amount of effort (and time) needed to cope with the various modules in your course. If you find yourself spending much more, or much less, time on a module than would be expected for the credit load, then you should talk to your Academic Advisor to make sure you are spending your time effectively.

Timetabling

The University timetable is released in stages throughout the academic year. You can view your timetable on your **Study Pages** on [Sussex Direct](#). **Please check your timetable every week and make sure you are allocated to the right modules and that you have no timetable clashes.** You must attend the teaching session you have been timetabled for (this applies to grouped activities such as labs and workshops). Requests to change the teaching session you have been allocated to will be accommodated if possible, but please do not assume that this will be the case as in many cases teaching groups will already be full, leaving little scope for change.

Assessment: What You Need to Know

The essential source of all information about examination and assessment matters is the 'Undergraduate Examination Handbook' which will be issued online in the Autumn Term. Please refer to <http://www.sussex.ac.uk/adge/standards/examsandassessment>

In order to progress to the next stage of study, and to achieve an Honours degree at the end of your final year, you have to be awarded all of the credits at the end of each stage. Some courses are also subject to additional progression requirements and these are detailed, where applicable, in section 3.

Every module is assessed by one or more assignments, each of which is assigned a weighting. The total mark for the module is calculated by adding the weighted assignment marks. In order to be awarded the credits for that module, you have to achieve at least the pass mark, which is 40% for levels 3-6 (i.e. years 0-3) and 50% for level 7 (year 4) modules. **It is important to note that a number of your modules are also subject to additional pass criteria, see the section 'Course specific regulations' for details.**

A variety of assessment methods are used to develop and test different types of knowledge, skills and aptitudes. Coursework, which is described in detail for each module on Sussex Direct and Canvas, forms an integral part of assessment at all levels. This will include exercises as appropriate to the module and the skills that you are being expected to develop.

In addition the assessment in your degree course will be by unseen examinations, which vary in format, and include questions both on general knowledge of the subject and specific points. Final year examinations in particular focus more on your ability to use your knowledge of the subject, rather than simply testing your memory for facts.

For all modules, sample papers or past examination papers are available on our website.

Handing in assessed coursework ('submission')

The deadlines and instructions for submission of your assignments are given on Sussex Direct in your personal Assessment Deadlines & Exam Timetable. It is important that you are quite sure about where and when work must be handed in, in order to avoid late penalties (see below). All work submitted to the Engineering & Informatics School Office must have a Coursework Submission Cover Sheet attached - these are available from the foyer in front of the School Office in Chichester 1, and on the School of Engineering & Informatics website: www.sussex.ac.uk/ei/internal/forstudents/courseworksubmission.

All of your written submissions must be anonymous and identified only by your candidate number and degree course (not your name). Some assignments will be submitted electronically through Canvas, instead of on paper. In such cases, the module lecturer will provide instructions.

Late Submissions Policy

Late submission of assessments can have serious consequences for your academic success. You should therefore be familiar with the rules governing this. These are published each year in the 'Undergraduate Examination Handbook' linked at the head of this section.

Giving you feedback and returning work to you.

Subject to certain conditions, feedback on coursework and marks will be normally communicated to you within 15 working days of the submission date. Work submitted to the School Office will be returned to you via the coloured filing cabinets in the foyer outside the Engineering and Informatics School Office. The School Office will email you when your work is available to collect and it is your responsibility to pick it up and read any feedback comments. In some cases, such as where laboratory logbooks have been submitted, they will be returned by the tutor in a teaching group. Work that is submitted electronically will receive electronic feedback, via annotations on the scripts, on Canvas.

Feedback on your progress may take many forms and is not confined to the mark you receive. The module lecturer will explain to you how they intend to provide feedback to help you to improve. Examples of mechanisms include: individual comments on submitted scripts or cover sheets, individual comments on Sussex Direct, generic feedback to all of the class on Canvas or Sussex Direct and provision of model solutions in lectures and/or on Canvas. It is your responsibility to take note of, and integrate, all of this information. If you require additional feedback on a specific piece of work, you should contact the Module Convenor in the first instance.

Grades/Marks

You will get provisional grades/marks on your coursework as part of the feedback arrangement outlined above, and via Sussex Direct, but **PLEASE NOTE** that ALL MARKS ARE PROVISIONAL UNTIL THEY ARE RATIFIED BY AN EXAM BOARD. At the end of each academic year, after the meeting of the relevant Examination Board, details of your course results, including examination results, will be confirmed on Sussex Direct.

Information on Examination and Assessment Performance

You are encouraged to discuss your performance with your Academic Advisor, as you go through the year, and retrospectively at the beginning of the next academic year. A presentation of your results in a time-series, and by comparison with the performance of others on your courses, will be available to you via Sussex Direct to help that conversation.

Assessment marking criteria

Assessment marking criteria are short descriptions of the main features of different types of assessed work (e.g. lab report, presentation etc), which highlight the characteristics expected of a particular grade. You can therefore look at the assessment criteria and see what is expected, for example of a 1st class (70%+) report. For some types of assessment, e.g. problem sheets, multiple choice quizzes, the marking scheme will indicate how to pass and how to get a given level of mark.

Assessment marking criteria for submitted work are normally published on the module Canvas site and may also be provided in module documentation. If you cannot find the criteria for a given assignment, you should ask the Module Convenor in the first instance.

Health and Safety

You must familiarise yourself with the Health and Safety information which can be found on the School webpage here: <http://www.sussex.ac.uk/ei/internal/general/healthsafety>

Academic Misconduct

Plagiarism, Collusion, Cheating in Unseen Exams

Don't do it! We take all forms of academic misconduct very seriously and have systems in place to detect when it happens. Misconduct penalties will be applied if you are found in breach of the rules. Many students commit academic misconduct without fully understanding why they have done something wrong. To counteract this, a website has been developed to offer guidance and advice to students and staff about issues relating to collusion and plagiarism:

<http://www.sussex.ac.uk/adqe/standards/academicmisconduct>

It is important that you understand what constitutes collusion and plagiarism so that you can avoid them. The full University rules on academic misconduct are set out in the Undergraduate Examination and Assessment Regulations Handbook.

Study Abroad

[Sussex Abroad](#) offers University of Sussex students the opportunity to spend part of their degree abroad at one of our university partner institutions in countries all around the globe.

For more information please refer to the link to the International and Study Abroad Office webpages above: <http://www.sussex.ac.uk/students/support/studyabroad/>.

Industrial Placement Year

The Department offers all students the opportunity to apply for an Industrial Placement, to be undertaken as part of their degree course. Some students will already be registered on the 'with an industrial placement year' version of the course, but the opportunity is available to all.

The placement would normally take place after year 2 although MEng students may wish to take it after year 3. Students will be invited to opt for this at Induction (for new students) and again at the start of years 2 and 3. In order to take up the opportunity, you have to commit to attending a programme of Placement Preparation, run jointly by the Department and the Careers and Employability Centre, and to make a number of placement applications. The placement is assessed, but does not count towards your degree classification. If you are successful in securing a placement, and pass the assessment, you will have "...with Industrial Placement year" added to your degree title. For more information, see the Placements pages on the Careers and Employability Centre website at <http://www.sussex.ac.uk/careers/gettingexperience/placements>

Beyond your degree

Careers

Don't leave it too late. You should start thinking about your career early on, and then plan for it. You may want to think about what else you could do while you are here which will strengthen your CV and maybe give you an edge in getting the job you want.

[The Careers and Employability Centre](#) is located in The Library or go to: <http://www.sussex.ac.uk/careers/> They can help you to:

- Explore career options.
- Build your skills.
- Develop your employability.
- Gain the experience employers look for.
- Find a placement, either during a vacation or as a year out.
- Construct your own webfolio to encompass all of your University experience and enhance your CV.

Opportunities specifically aimed at students in our School are also often highlighted on the School's Facebook page (linked from the website at <http://www.sussex.ac.uk/ei/internal/>)

Volunteering

There are many opportunities available in a wide variety of locally based organisations and community projects, as well as for the Students' Union. If you are interested in volunteering please email Project V at projectv@sussex.ac.uk or see the Students' Union website at: <http://www.sussexstudent.com/volunteering>.

Being a Student Ambassador. Our current students are the University's best ambassadors and there are several central University offices which take on current students every year to be involved in paid recruitment work, both on campus and via external visits to schools and colleges. This sometimes has a particular focus on talking about university life to young people from disadvantaged backgrounds. If this sounds like something you would be interested in, look out for these opportunities, which are usually advertised via [student web pages](#).

Become a student rep or student mentor

There are many ways to help out your fellow students and enhance your own experience and CV. See the information about the student representative scheme in Section Two, or contact the School Office if you are interested in becoming a mentor.

Get involved in the Students' Union (USSU). There are plenty of opportunities to get involved in clubs, societies and the political processes of USSU. Visit the website: <http://www.sussexstudent.com/>

School of Engineering and Informatics based Societies:



We are an active society of students from the school of Informatics, Design and Engineering. We meet twice a month - locations announced on our Facebook page.

The society aims to enhance the experience of students from the School, both undergraduate and postgraduate by:

- Providing social opportunities for students to meet each other and learn about each other's subject areas;
- Providing opportunities to visit relevant companies, organisations and events;
- Hearing from various speakers at our social events including lecturers and industry professionals.

Get involved to take part to group projects, trips and activities on and off-campus!



This society has been set up to act as a chapter of Robogals www.robogals.org. This is a multi-national, student run organisation in which the committee, and student volunteers, aim to promote female participation in engineering by conducting fun workshops for local students.

<https://en-gb.facebook.com/robogalssussex/>

The aim of this society is to engage Brighton and Hove based pupils into science and engineering. The current female participation in Engineering, throughout the country, is around 11%, and Sussex's own statistics don't fare too well. We want to promote engineering as a discipline that is as much for females as males. We will do so by engaging volunteers across all disciplines to get involved in our fun workshops, which are run for local schools to engage in.



HackSussex would like to welcome you to a society about building computer based projects. Whether you like developing apps, building websites, constructing databases or just plain programming, we are the society for you. Our primary goal is to build a community of like-minded individuals who all have one thing in common, and that is creativity on the computing front. We're open to novices and experts alike and we hope to drive forward a collective knowledge base here at Sussex. <https://hacksussex.co.uk/>

We're generally referred to as "Hackers", but before you jump to conclusions, we're the code builders not code destroyers. We come together to construct cool programs and build interesting code for fun or with purpose and we'd like you to join us, get involved and start building both projects you like and a community you can count on.



We aim to help encourage girls in nearby schools to study STEM subjects. We organise talks from elite engineering firms such as ARUP, GE, Dyson, Rolls Royce, etc. and encourage them to hire more Sussex students. We have sessions with PhD students every fortnight to explain difficult topics to students in a more casual, and potentially easier to understand, way. eine@societies.sussexstudent.com

General aim: improving career prospects for Engineering students and helping the community.

SECTION TWO: General advice and other information

Where to get advice and support

The School Office

The Engineering and Informatics School Office is the first point of contact for general enquiries. The office staff will probably be able to give you an answer or, if not, point you in the right direction. You will soon get to know them.

Location: Ground Floor, Front of Chichester 1 Building, Room C1-002
Open: Monday - Friday 09:00 – 17:00
Tel: 01273 678048 or 01273 678195
Email: enquiries@enginf.sussex.ac.uk

Your Academic Advisor

Your Academic Advisor is one of the teaching faculty and we try to ensure that you keep the same person for all the time you are here. The role of the Academic Advisor is to oversee your general academic progress and development through your studies. You will meet your Academic Advisor at Induction, and fortnightly throughout your first year. You can also make an appointment to see your Academic Advisor if you have any academic queries throughout your time at Sussex. Your Academic Advisor's details (including their student consultation times) can be found on your study pages of [Sussex Direct](#). You may at any time request to be allocated a different Academic Advisor – in particular one of the same gender. If you would like to change advisor please contact the Head of Department.

Your Course Convenor

Each degree course is overseen by a Course Convenor who deals with issues concerning the whole course. Queries about your progress and any particular problems you may have should be directed initially to your Academic Advisor. However, if you wish to raise a broader issue about the whole degree course, then please discuss it with your Course Convenor. They are also here, along with your Academic Advisor, to offer advice and information on careers associated with your chosen degree.

Module Convenors

Each individual module has a member of faculty who acts as the Convenor. It is their job to ensure that everything about the module – the teaching, the module documentation, supporting teaching materials, etc. – runs smoothly. If you have a problem with a module you should contact the Module Convenor. Their details (including their student consultation times) can be found on your study pages of [Sussex Direct](#). Consultation times are also published in the faculty profiles on the web.

Module Tutors

Modules which include practical work, problem classes or seminars are also often delivered by a team which includes Associate Tutors. These are usually research postgraduates who are paid by the Department to support the teaching. Being closer to you in age, and familiar with the types of problems you encounter, they can be a very helpful resource. You must remember that they are also studying for their PhDs, so check their consultation times, or ask when it is convenient to see them, and do not expect them to be available outside of those times.

Some other useful contacts:

Director of Student Experience

Within the School, one member of faculty has the responsibility of overseeing and co-ordinating those aspects of student life which are part of the academic life of the School in general. This is currently **Dr Paul Newbury** (contact details below). He works with Student Representatives and Heads of Department to improve communication between students and faculty. You are welcome to contact him with any concerns you have about these matters. In addition, Dr Newbury has responsibility for monitoring student attendance, but he hopes that he will not need to contact any of you about this! Although Dr Newbury has a formal role with respect to Exceptional Circumstances claims, he cannot talk to you about specific issues, but is happy to try to give general advice where he can. You should go to the Student Life Centre (see below) if you need to discuss specific issues.

Dr Paul Newbury
E: P.Newbury@sussex.ac.uk
T: +44 (0)1273 872615

Director of Teaching & Learning - (to be contacted if you wish to change your course)

Dr Sharon Wood
E: S.Wood@sussex.ac.uk
T: +44 (0)1273 678195

School Administrator

Marc Williams
E: M.Williams@sussex.ac.uk
T: +44 (0)1273 678361

Student Life Centre

The Student Life Centre provides information, advice and guidance on a broad range of subjects. Based on the ground floor at the front of Bramber House, there are a number of ways to access the service. You can come to our information desk, which is open from 9.00 am to 5.00 pm Monday to Friday, call us on 01273 876767 or email studentlifecentre@sussex.ac.uk. You can also make an appointment through Sussex Direct by clicking on your 'Study' tab and then on Student Life and Student Life Centre. We also offer drop-in sessions at core hours every day if you ever have urgent welfare concerns. The Student Life Centre offers you a supportive space to discuss your situation and to help you consider ways forward.

We can assist with:

- personal and welfare concerns affecting study progress or well-being;
- funding, money advice and budgeting support as well as information about financial resources
- sources of help to improve academic performance – identifying obstacles to learning
- progression, intermission and withdrawal processes - discussion and support;
- referrals to other professional services on and off campus;
- drop-ins for free condoms, drug and alcohol counselling and LGBT support.

If you don't know who to talk to or who to ask – start at the Student Life Centre. Seek help early and remember that we are here for YOU.

Because we are also a proactive service you may be contacted directly by the Student Life Centre if we hear that you might be in difficulty so we can support you. This may be, for example, in response to concern from your School about your attendance, participation or engagement with your course.

For more information go to:

www.sussex.ac.uk/studentlifecentre/.

Making your voice heard

We want you to tell us about your experience of studying at the University so that we can improve it and that of students following along from you. Here's how you can do this:

Suggestion boxes

There are suggestion boxes in key locations around the School. School Office staff check the boxes weekly and forward the suggestions to an appropriate member of staff for comment and action if appropriate. Progress and final outcomes are reported back to the originator, and a selection of these are advertised next to the boxes.

Student Representatives

The Student Representative Scheme is run jointly by the Students' Union (USSU) and the University. Student Reps provide an essential link between students, the School, the University and the Students' Union. Because Reps are themselves students, fellow students are happy to seek assistance from them when they have concerns or opinions about their education and experience at the University. Being a Student Rep gives an opportunity to learn and practice new life skills that can improve your employability.

There is a Student Rep for each level of study. Elections are held at the beginning of the Autumn Term. Full details of the scheme are online at <http://www.sussexstudent.com/student-reps/> including how to become a Rep yourself and the electoral process.

Measuring the quality of your overall experience:

In your final year, you are asked to respond to the National Student Survey (NSS), which asks about your overall academic experience at Sussex. The NSS is a UK-wide survey measuring student satisfaction in a common way across different institutions, and is run independently of the University. It is important since it helps future students in making their choices, and it gives universities additional feedback for improving what we do. In addition, the results contribute to a number of the national league tables of universities. For taking part in the Survey you can claim a reward, the details of which will be advised at a later date.

Frequently Asked Questions

What do I need to provide and pay for to support my studies?

You should aim to start your studies with a basic set of equipment and materials, including notebooks and other stationery, and one or more memory sticks to back up your work.

Look at the reading lists in advance and consider whether you wish to buy any of the textbooks. Note that the Library will stock the editions specified but, for many introductory texts, older editions which can be found cheaper second-hand will still be helpful.

Many students find it useful to bring their own laptop, notebook, computer or smartphone, but we do not assume you have any of these. There are many PCs around campus accessible 24 hours a day.

All engineering students must purchase a bound logbook in which to record their experimental work. These are typically A4 size and suitable logbooks can be purchased for about £3 from the University Bookshop (in the Library building) or from the Union shop.

Engineering students should also purchase a few basic tools to support their laboratory and project work. A recommended set includes: a 2.5" screwdriver, wire strippers, side cutter pliers and 6" long nose pliers. Electrical and electronic engineering students may also want to buy their own soldering iron and soldering iron stand for home use, but these are provided in the teaching laboratories.

You will need to budget for printing your work, and note that a number of assignments require two copies to be submitted. As a guide, a 6-page A4 report, printed single sided and black and white, would cost 30p at current University printing prices. A 12-page A3 portfolio, printed single sided and in colour, would cost £12.00.

Finally, a few assignments require you to submit a CD or memory stick of data or computer programs and some final year project students choose to submit an appendix of data on CD or memory stick.

Where can I find lecture or seminar notes?

These can be found on [Canvas](#). To access these sites you will need to use your normal University log-in and password.

Where can I get a letter that confirms that I am a student?

Undergraduate students can request a 'To Whom It May Concern' letter, on University letter-headed paper from the Engineering & Informatics School Office. This letter can be used by you to confirm your status as a student of the University of Sussex to landlords, government agencies, foreign governments, or any other organisation or person requiring proof beyond that of your student card. **At least 24 hours' notice is required for this service**, and it can take longer at busy times.

Where can I get a Council Tax Exemption letter?

Council Tax Exemption letters are NOT provided by the School Office. Letters can be requested via an online form at: <http://www.sussex.ac.uk/ssro/counciltax/>. Please note that the regulations vary depending on where you are currently living.

Where can I find my candidate number? Why do I need it?

On your Study pages on [Sussex Direct](#): click to view your candidate number. This number is also shown on your University ID card. You will need both your candidate number and ID card for submitting work to the School Office and when you sit exams.

What should I do if I lose my University ID card?

If you lose your card, or if you suspect it has been stolen, you should immediately report the loss to the Library: library.membership@sussex.ac.uk. The Library will prevent your card being used by anyone else, but you are responsible for any borrowings undertaken up to the time when the card is reported lost.

To obtain a replacement card, which you will need to do if you want to benefit from University services, you must go to the [Print Unit](#), located in the **York House undercroft**. Access is via the York House car park, off Norwich House Road (not via York House main reception). Normal opening times for the ID card service

are: 9.30am-12.30pm and 2.30-4.30pm, Monday-Friday. Revised opening times apply during exam paper production periods. Lost or damaged ID cards will be charged at £10.00 per card, payable in cash or by credit/debit card. **Please note that the payment cannot be taken from your student account.** If your card has been stolen and you can provide a Crime Reference number from the police in support of this, you will not be charged for a new card.

When and where do I hand in my work?

You will find instructions for coursework submission on Sussex Direct in your Assessment Deadlines & Exam Timetable. All work submitted to the Engineering & Informatics School Office must have a cover sheet attached. You can download a cover sheet from the School's website at:

<http://www.sussex.ac.uk/ei/internal/forstudents/courseworksubmission>, or collect one from the foyer in front of the School office.

How can I print my work?

The University provides a large number of networked printers which you can access using your log in (username and password). Details of how to do this, along with the printing charges, are given on the IT Services web pages at <http://www.sussex.ac.uk/its/services/clusterrooms/clusterprinting>. Please allow enough time to print your work prior to hand-in deadlines to avoid late penalties.

Where can I bind my work?

The majority of coursework does NOT need to be bound, but you do need to bind your final year project. Self-service facilities for comb and thermal binding are normally available at the Engineering & Informatics School Office, except on a few very busy hand-in days. There is a small charge (£1) for the plastic covers and/or comb binders.

The Main University Library offers self-service comb binding and the [Print Unit](#) offers a thermal binding service (normal turnaround time for binding jobs is 24 hours). There are also a number of companies in the Brighton area that offer binding services.

Where do I collect my marked work from?

The School Office will email you when your work is available to collect. It will usually be available for collection from the feedback filing cabinets located in the foyer area in front of the Engineering & Informatics School Office. The filing cabinets are arranged by department and year of study; your feedback will be filed in candidate number order.

What happens if I submit my work late?

Work submitted after the published deadline is penalised unless you have acceptable Exceptional Circumstances claim (see below). See the previous section 'Assessment: What you need to know' (Late Submissions Policy, page 8).

What happens if I miss an assessment deadline or submit my work late for medical reasons/exceptional circumstances?

If you have exceptional circumstances beyond your control which you would like to be taken into account, you can submit an exceptional circumstances claim. If you would like to discuss your circumstances before submitting your claim you should visit the **Student Life Centre** and speak to a Student Advisor. Claims are submitted through your Sussex Direct pages. Detailed instructions on how to submit a claim are available at: <http://www.sussex.ac.uk/studentlifecentre/circumstances>.

How do I find out if my exceptional circumstances claim has been accepted?

Decisions will be fed back to you via Sussex Direct, and those decisions are also passed on to the Exam Boards which consider your year-to-year progression and your final classification.

If you are required to provide more evidence, you will be emailed and you will be told when/where to submit additional documentation.

If the claim is rejected, you will be informed by email and given information about the appeals process. Appeals can only be made after the Exam Board has met.

Where can I get an official transcript of my marks?

All finalists who have completed their degree will receive a single copy of their transcript with their undergraduate degree certificate. If you have not yet completed your degree the School office can provide you with an unofficial academic record at the end of the academic year. This lists the results of completed modules but NOT individual coursework marks. The School Office requires at least 24 hours' notice for this service.

Who do I ask for reference letters for jobs, etc.?

Your Academic Advisor is the best person to go to for a reference, as they will have had regular contact with you throughout your University career. You can also use your final year project supervisor as a referee. Requests for references are not usually refused, but it is polite to ask the proposed referee before sending in the request.

SECTION THREE: Course specific information

Course aims and outcomes

Course aims

The aim of this course is to produce engineering graduates who are equipped for success and leadership potential in graduate careers which require expertise in mechanical engineering such as in the energy, automotive, transport, marine, construction and aerospace industries. It aims to engender the ability to integrate knowledge and understanding of mathematics, science, computer-based methods, design, the economic, social and environmental context, and engineering practice to solve a substantial range of engineering problems, some of a complex nature. Much of this ability is acquired through individual and interdisciplinary group projects which benefit from industrial involvement. Design is an essential component and spans specification, conceptual development, design embodiment, final design, manufacture, marketing and sales. A distinctive characteristic of the course is the general engineering focus of the first year, which aims to provide a solid foundation of engineering knowledge to equip the graduate for work in multidisciplinary teams.

Learning outcomes

These are based on the UK-SPEC outcomes required of all accredited Engineering degrees.

Graduates of this course will have shown that they are able to:

- Demonstrate a comprehensive understanding of the scientific principles of mechanical and related engineering disciplines with emphasis in robotics.
- Demonstrate a comprehensive knowledge and understanding of mathematical and computer models relevant to the mechanical and related engineering disciplines with emphasis in robotics, and an appreciation of their limitations.
- Demonstrate an understanding of concepts from a range of areas including some outside engineering, and the ability to apply them effectively in engineering projects.
- Demonstrate an awareness of developing technologies related to mechanical engineering and robotics.
- Use fundamental knowledge to investigate new and emerging technologies.
- Extract data pertinent to an unfamiliar problem, and apply its solution using computer based engineering tools when appropriate.
- Apply mathematical and computer-based models for solving problems in engineering, and the ability to assess the limitations of particular cases.
- Demonstrate understanding of, and the ability to apply, a systems approach to engineering problems.
- Demonstrate the knowledge and understanding to investigate and define a problem and identify constraints, including environmental and sustainability limitations, health and safety and risk assessment issues.
- Demonstrate wide knowledge and comprehensive understanding of design processes and methodologies and the ability to apply and adapt them in unfamiliar situations.
- Demonstrate understanding of customer and user needs and the importance of considerations such as aesthetics.
- Identify and manage cost drivers.
- Generate an innovative design for products, systems, components or processes to fulfil new needs.
- Demonstrate the knowledge, understanding and skills to ensure fitness for purpose of a design including production, operation, maintenance and disposal.
- Manage the design process and evaluate outcomes.
- Demonstrate knowledge and understanding of the commercial and economic context of engineering processes.
- Make general evaluations of commercial risks through some understanding of the basis of such risks.
- Demonstrate extensive knowledge and understanding of management and business practices, and their limitations, and how these may be applied appropriately to strategic and tactical issues.
- Demonstrate understanding of the requirement for engineering activities to promote sustainable development.
- Demonstrate awareness of the framework of relevant legal requirements governing engineering activities, including personnel, health, safety, and risk (including environmental risk) issues.
- Demonstrate understanding of the need for a high level of professional and ethical conduct in engineering.

- Demonstrate a thorough understanding of current practice and its limitations and some appreciation of likely new developments
- Demonstrate mechanical workshop and laboratory skills.
- Demonstrate extensive knowledge and understanding of a wide range of engineering materials and components
- Demonstrate understanding of contexts in which engineering knowledge can be applied (e.g. operations and management, technology, development, etc).
- Research and use technical literature and other information sources.
- Demonstrate awareness of the nature of intellectual property and contractual issues.
- Demonstrate understanding of appropriate codes of practice and industry standards.
- Demonstrate awareness of quality issues.
- Work with technical uncertainty.
- Apply engineering techniques taking account of a range of commercial and industrial constraints.
- Demonstrate an understanding of different roles within a team, and the ability to exercise leadership
- Demonstrate high level transferable skills in oral and written communication; the effective use of general IT facilities and information retrieval; the ability to monitor and adjust a personal programme of work on an ongoing basis; and to learn independently.

Course specific regulations

Higher progression thresholds

In order to progress from each stage (year) on an MEng course you must achieve 120 credits and the following stage means:

Stage 1 to stage 2 – 40%
 Stage 2 to stage 3 – 55%
 Stage 3 to final stage – 55%

Accreditation status of the course

We are currently seeking accreditation for your degree award from the Institution of Mechanical Engineers (IMechE) on behalf of the Engineering Council for the purposes of fully meeting the academic requirement for registration as Chartered Engineer, provided you achieve the following:

- An MEng Honours award.

The implications of major project failure

In order to secure the learning outcomes, resits of the final year MEng Group Project are not normally available. In the event of failure, with no acceptable mitigation to allow a further sit, the School Progression and Assessment Board may consider other retrieval options.

The implications of accreditation rules on condonement

The University regulations allow Progression and Assessment Boards the discretion to condone failure of a module in the final stage, under specific circumstances (Examination and Assessment Handbook section 1.3.4). However, because of Professional Statutory Body (PSB) accreditation rules, our School Board cannot apply this discretion to your course. The following regulation therefore applies in this case:

Where MEng finalists are awarded a Sussex Honours degree as a result of being given condoned credits, the exit award will be named MSci (Hons) Engineering. This award will not be accredited by the PSBs. In the case of MEng finalists, if they meet the requirements of a BEng award without requiring condoned credit, they will be given the option of taking this accredited award instead of the unaccredited MSci.

The implications of accreditation rules on compensation

The Engineering Council regulations require that compensation can be applied to no more than 15 credits of the degree each year. Since individual modules on the degree are 15 credits, this requirement mandates that only one module of the degree can be compensated per year if an accredited degree is to be awarded.

Threshold regulations for passing modules

Due to accrediting body requirements, modules owned by Engineering and Design are subject to threshold regulations to pass the module, in addition to the overall module pass mark (Examination and Assessment Handbook Appendix 6).

For all such modules at levels 4-6 a mark of 35% is to be achieved on all module components weighted $\geq 30\%$.

For all such modules at level 7 a mark of 45% to be achieved on all module components weighted $\geq 30\%$.

Compensation will not be applied where these criteria are not met.

In practice, this applies to all modules which are assessed by both unseen examination and coursework. Where one of these components is weighted less than 30%, then the threshold requirement only applies to the other component. Examples are given below by way of illustration:

- H3052 Engineering Thermodynamics – assessed 75% by unseen exam and 25% by coursework. In addition to a minimum mark of 40% overall, a minimum mark of 35% required in the exam, no minimum in the coursework.
- H6098 Electrical Circuits and Devices - assessed 70% by unseen exam and 30% by coursework. In addition to a minimum mark of 40% overall, a minimum mark of 35% required in both the exam and in the coursework.
- H6074 Visual Communication – assessed 100% by coursework. No threshold requirement because a minimum mark of 40% overall in the coursework is required to pass the module.
- 863H1 Marketing Analysis and Financial Strategic Management (level 7) – assessed 60% by coursework and 40% by unseen exam. In addition to a minimum mark of 50% overall; a minimum mark of 45% required in both the exam and in the coursework.

Where an overall pass mark for the module has not been achieved, but the threshold requirement for one of the components (coursework or unseen exam) has been met, a resit will be given for the failed component. The resit mark will be conflated with the mark obtained for the passed component achieved at the first attempt, for a capped mark (40 for levels 4-6; 50 for level 7).

Where the pass mark for the module has been achieved, but not the threshold requirement in one of the components (coursework or unseen exam), a resit will be given for the failed component. The mark achieved on the resit will be capped and conflated with the uncapped mark achieved for the passed component achieved at the first attempt.