

Mechanical and Aerospace Engineering

Undergraduate Student Handbook 2023/24

Faculty of Engineering

BEng Hons / MEng

- Aero-Mechanical Engineering
- Mechanical Engineering
- Mechanical Engineering with International Study

The contents of this Handbook are, as far as possible, up-to-date and accurate at the date of publication, though may be subject to revision. Changes and restrictions are made from time to time and the University reserves the right to add to, amend, or withdraw courses and facilities, to restrict student numbers and to make any other alterations as it may deem desirable and necessary. Changes are published by incorporation in the University Regulations.

It is the responsibility of each individual student to become familiar with University Regulations which apply to them, and in particular with any changes made to their programme during years of attendance:

<https://www.strath.ac.uk/studywithus/academicregulations/>

Note: “In the unlikely event of any conflict between the General Academic Regulations and other University publications, including Course Handbooks, the Regulations take precedence.”
(extract from University Regulations)

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Introduction

The aim of this Handbook is to provide a brief guide to some essential procedures to assist you during your studies at the University of Strathclyde. The Handbook contains practical information about the University, the Department and your programme of study and is an important reference document which will help you to ensure that your time here is organised efficiently and to maximum benefit.

The University of Strathclyde has existed in various forms in Glasgow since 1796 and received its Royal Charter in 1964. Our institution is recognised as one of the largest and most important in the field of engineering education and research in the UK. We are located in the centre of Glasgow - Scotland's commercial and industrial capital - with four faculties now in existence, Engineering, Humanities & Social Sciences, Science and the Strathclyde Business School.

The Faculty of Engineering comprises of eight departments, covering all major engineering areas: Architecture, Biomedical Engineering, Chemical & Process Engineering, Civil & Environmental Engineering; Design, Manufacture & Engineering Management; Electronic & Electrical Engineering; Mechanical & Aerospace Engineering and Naval Architecture, Ocean & Marine Engineering.

Welcome from MAE Director of Education

On behalf of all staff in the Department of Mechanical and Aerospace Engineering (MAE), I am thrilled to extend a very warm welcome to all of our new and continuing students.

Engineering is a fascinating, stimulating and rewarding career. Engineers are always in demand in a very wide range of roles and, given the current global challenges we face, never more so than now. Your engineering education at Strathclyde will stand you in the best possible stead and open doors in all sorts of organisations or indeed equip you to start one of your own. Modern life has been shaped by engineers and they are always at the forefront when new demands emerge. It is a wonderful time to be an engineer and study engineering, as we face the challenges of the coming decades.

For those of you who are new to the subject and to studying at university or fully on campus for the first time, you may find the learning environment rather different to previous studies at school or college. Adapting to studying in a university setting can, at the start, be almost as challenging as the technical content of the programme of study itself. I urge all students to think carefully about how you manage your time and to develop effective study methods. If you do and if you approach your studies with diligence, commitment and intelligence, you will build an excellent platform for success both in your studies at Strathclyde and in the fulfilling career that follows. Furthermore, with good time management and study technique, there should be ample time for you to enjoy everything that life at university has to offer and I encourage you to do just that!

This Handbook will provide you with guidance on the operation of the MAE department and is designed to assist you throughout the duration of your studies and to let you know how and where to seek help, should you need it. Also, your Adviser of Studies can help clarify regulations and academic requirements, help and advice on specific modules can be sought from individual Module Registrars and Lecturers, and your Personal Development Adviser can support with general problems, should you encounter any. Please let your Student Representatives know about any persistent issues, which they can convey to the Department through regular meetings of the Staff/Student Liaison Committee.

I hope you find your studies challenging, enjoyable and rewarding, and we look forward to getting to know you and to working with you. We hope you will have an enjoyable and successful time with us.

With very best regards,

Dr Emma Henderson
Director of Education

Student Charter

Departmental staff aim to:

- be responsible and responsive in all matters related to students
- respect individual students as partners in the learning process
- maximise learning opportunities
- minimise bureaucracy and ensure the transparency of procedures
- maintain a friendly and caring environment
- operate an efficient information system
- identify clearly the responsibilities of staff and students
- facilitate innovative developments where appropriate
- ensure equality of opportunity for all

Engineering Profession

All programmes in the Department are designed to lead to Chartered Engineer (CEng) status, in that they are accredited by one or more of the professional institutions in the Council of Engineering Institutions. It is your responsibility to exploit this benefit, although staff here will be pleased to help you with advice, form-filling and so on.

The paths to CEng registration are given in an Engineering Council publication – UK SPEC - which defines the initial education required and the subsequent stages of education, training and experience needed to achieve full membership. For those students who entered a programme in 2000 or later, the MEng streams provide the only direct route to Chartered Engineer status, without further academic study. BEng (Hons) fulfil the CEng requirements in part, but graduates of these programmes will require, under current Engineering Council rules, to complete a so-called 'Matching Section' of further study - equivalent to one year of full-time study, approximately.

In any event, you are strongly recommended to begin your own developing association with the professional body you choose by joining up now. It costs little (Student Membership is sometimes free for students on accredited courses). You will keep abreast of changes in UK SPEC and your time as a student will be credited to you when you eventually apply for full membership.

Employability (definition by Careers and Employability Group)

The Strathclyde graduate will be recognised as deeply knowledgeable and adaptable, demonstrating the skills, attributes and confidence to thrive in an evolving, often challenging world. To meet the needs of professions and career pathways, this will be achieved through the design of our curricula and the provision of opportunities for all students to engage in work related activities, entrepreneurial events and programmes and globally conscious initiatives throughout their studies.

Academic Year – Key Dates to Note

Up-to-date University academic Key Dates are listed at <https://www.strath.ac.uk/keydates/>. This webpage should be used to check the various important term dates.

Please note that the University is closed as outlined below - during closures, there is no admittance to most campus buildings and Departments/staff are unavailable (Security Services remain on site).

Semester 1

| Dates | |
|-------------------|--|
| University Closed | 25 September 2023 |
| University Closed | 23 December 2023 – 05 January 2023 (inclusive) |

Semester 2

| Dates | |
|-------------------|--------------------------------|
| University closed | 29 March 2024 and 1 April 2024 |
| University Closed | 06 May 2024 |

Summer

| Dates | |
|-------------------|-------------------------------|
| University Closed | 27 May 2024 |
| University Closed | 12 July 2024 and 15 July 2024 |

Academic Teaching (date commencing) and equivalent Timetabling System weeks are at:

[University Academic Weeks Calendar 2023-24](#)

Student Support Services

There is a wide range of support and information services around the University. Details are available from the central 'Strathlife' student webpages at <http://www.strath.ac.uk/studywithus/strathlife/>.

Information and various Student Business forms are also available on the main Student Lifecycle website at: <https://www.strath.ac.uk/professionalservices/studentlifecycle/>.

There is also the Students' Association - see <https://www.strathunion.com/>.

In this section of the Handbook, we also outline sources of support within the Department of MAE.

Academic Year Advisers

There is an Adviser of Studies for each year of your programme. The aim of the Adviser is to assist with counselling you on various aspects of your studies (in particular for academic queries/issues and to help in choosing any optional subjects to study), as well as providing support on personal matters.

There is also a Programmes Leader, who is responsible for the management of applicable programmes.

| | | |
|----------------------------------|------------------------------|--|
| Year 1 Adviser of Studies | Dr Gemma Houston | mae-y1-adviser@strath.ac.uk |
| Year 2 Adviser of Studies | Dr Jinglang Feng | mae-y2-adviser@strath.ac.uk |
| Year 3 Adviser of Studies | Dr Christie Maddock | mae-y3-adviser@strath.ac.uk |
| Year 4 Adviser of Studies | Dr Stephanie Ordonez Sanchez | mae-y4-adviser@strath.ac.uk |
| Year 5 Adviser of Studies | Dr Athanasios Toumpis | mae-y5-adviser@strath.ac.uk |

| | |
|-----------------------------------|--------------------|
| UG Student Affairs Manager | Dr Edmondo Minisci |
| PGT Programmes Leader | Dr Olga Ganilova |
| Director of Education | Dr Emma Henderson |

The above is subject to change; refer to your Pegasus record for up-to-date information.

People in the Department

Departmental academic staff are primarily based on Level 8 of the James Weir Building. All students must report to **MAE Reception room JW804** on arrival prior to meeting with staff.

Staff sometimes work from home - initial contact and meeting arrangements must be made via email.

PLEASE REFER TO THE UNIVERSITY'S [STAFF TELEPHONE DIRECTORY](#)

or [MAE STAFF SEARCH](#) WEBPAGE

FOR ALL DEPARTMENT STAFF NAMES AND CONTACT DETAILS.

| | |
|---------------------------------|--|
| Head of Department | Prof Bradley Wynne |
| Director of Education | Dr Emma Henderson |
| Departmental Safety Convener | Dr Fiona Sillars |
| Departmental Operations Manager | Mrs Marie Gray |
| UG Contact | mae-ug@strath.ac.uk |

Disability

A disability is generally defined as a physical or mental impairment which has a substantial and long-term adverse effect on a person's ability to carry out normal day-to-day activities. It covers physical disability, some medical conditions and mental illness.

If you have or think you have a disability, you should disclose it as soon as possible to enable you to access any additional support that you may need. Information provided is treated as confidential and will not be shared without your consent. The University has a dedicated Disability and Wellbeing Team offering advice and assistance (refer to the 'Strathlife' webpage for details). If you believe you qualify for special assessment arrangements, you must visit the team without delay. **Requirements must be prepared several weeks prior to exams starting.**

Prof Cartmell matthew.cartmell@strath.ac.uk is the **MAE Personal Circumstances Adviser**, who can initially meet with students where complex personal circumstances arise during the teaching year. Dr Bilal Ahmad is MAE Departmental Disability Coordinator, who liaises with D&W/students as required.

Further details and additional contacts can be obtained from the Disability & Wellbeing Service webpages at <https://www.strath.ac.uk/professionalservices/disabilityandwellbeing/>.

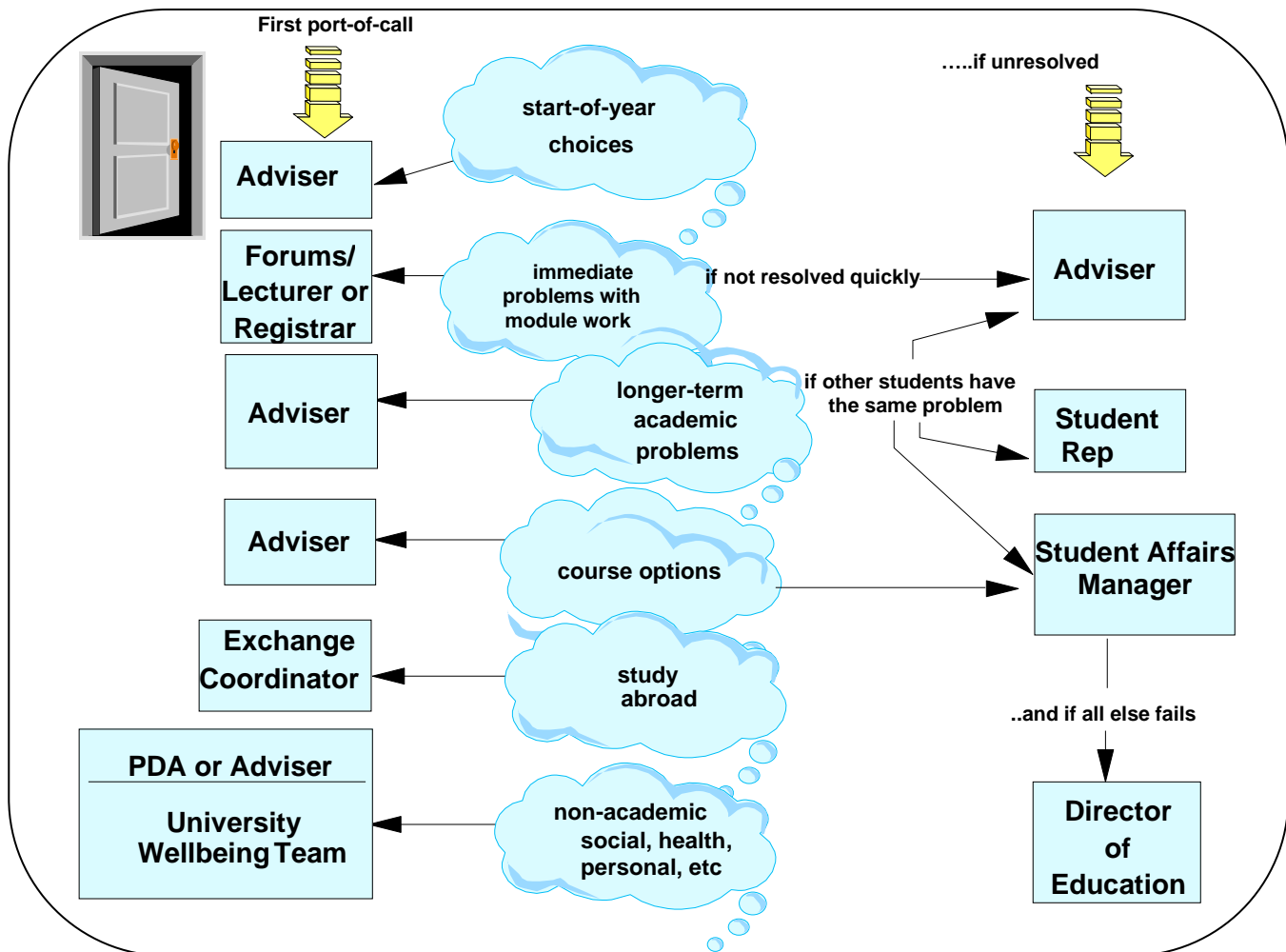
Staff-Student Liaison Committee (SSLC)

A Staff-Student Liaison Committee, which normally meets at least once per semester, provides a forum where academic problems may be raised by representatives. Students are encouraged to consider the benefits of becoming a 'Student Rep', further information on which can be found on the [Student Representation](#) webpage and from the USSA at <https://www.strathunion.com/voice/studentreps/>.

Departmental Student Reps are encouraged to run the SSLC, which normally comprises two Reps from each year, the Programmes Leader/Student Affairs Manager, Advisers of Studies and senior members of staff or others as appropriate.

When selected, the names of Reps are notified to all students. If there is an issue which is important to a large number of students and you believe it should be discussed by this Committee, you must inform the Student Rep so that it can be placed on the agenda for the next meeting. However, before the issue is brought to the meeting, it is ESSENTIAL that it has first gone through the proper 'Problems' channels which follow. Only if there has been no satisfactory resolution, should a problem be raised at SSLC.

Problems? – Where to go



Personal Development Planning / Mentors

A student Personal Development scheme exists, the objectives of which are to create an environment where students are able to discuss freely and in confidence any personal matters. Staff can provide advice either personally or, if the student is agreeable, through other specialist staff/teams. Few students encounter substantial difficulties, but for those who do, it is hoped this scheme will ensure academic welfare and encourage satisfactory progress with your studies. The success of PDP depends on the participation of both staff and students. Students are encouraged to see their PDA regularly, even where only to confirm that all is well.

We also run a student mentoring system, where senior students mentor new students. Mentors are expected to meet with their students regularly building an additional support network for new students and a community throughout the year groups within the department.

Useful Administrative & Other Information

MAE Reception (Central Services)

General student enquiries should be directed in the first instance to mae-ug@strath.ac.uk (academic queries must be sent to the relevant Adviser email address).

If necessary, students can drop into our departmental Central Services Reception, on Level 8 of the James Weir Building, room JW804. Opening hours for students, which are subject to change, are:

Monday – Friday: 1000-1230hrs and 1330-1600hrs

Access to Buildings

If you wish to access University premises out-with normal hours (generally 0800–1800hrs) it is important that you read Appendix 2 of this Handbook.

All queries or campus issues can be directed to the Security Services team, who are part of the University's Safety, Health and Wellbeing Directorate – see Security section at <https://www.strath.ac.uk/studywithus/ourcampus/whatsoncampus/> (building codes are listed at <https://www.strath.ac.uk/professionalservices/estates/roombooking/buildingcodes/>).

If you experience an issue with physical access getting around on campus, please email: physicalaccess@strath.ac.uk where a member of Estates staff will be able to assist.

Change of Address / Personal Details

Students are required to notify the University of **any change in term-time or permanent home addresses** without delay. Letters are sometimes posted to students, therefore it is vital that your current addresses on file are accurate and up-to-date. All relevant details must be updated via Pegasus – see <https://www.strath.ac.uk/professionalservices/studentlifecycle/personaldetails/>.

Email Accounts

You must check your '@uni.strath' email account on a regular basis, to ensure that you do not miss announcements or updates. Email accounts must always be used to send communications and should also be cleared regularly, as notifications cannot be received when an account has reached capacity.

Failure to read emails could impact on your studies if you miss an important message (online forums are not the sole means used by the University for issuing communications).

Graduation

Award Ceremonies, known as Congregations, are normally held in June/July and October/November. All students hoping to graduate or be presented must complete enrolment well in advance and pay the appropriate fee. Details of ceremonies and enrolment forms are usually available in March each year - see <http://www.strath.ac.uk/studywithus/graduation/>.

Note: Enrolment for graduation and fee payment does not constitute an explicit intention/request to exit a programme early. **The Department, via your Adviser of Studies, must also be informed.**

Jury Duty Exemption

Where required, a Jury Duty excusal letter can be requested by email to mae-ug@strath.ac.uk. The Citation Number and relevant Personal ID Number (as stated on documentation received from the Court) should be provided when emailing.

Myplace

The University's virtual learning environment (VLE) is called Myplace. All modules for which you are officially registered will automatically appear on Myplace. In addition, MAE students will see dedicated year pages and a General MAE UG page with some basic information.

Login using your Strathclyde student DS username and password. Details can be found at <https://www.strath.ac.uk/studywithus/strathlife/whatitslikestudyingatuniversity/myplace/>. You will find hints and tips as well as support via the link to the 'Student Support Section' - including how to submit an assignment electronically and an explanation of Turnitin.

Myplace delivers online resources and activities designed to enhance learning. The pages generally include assessments, online discussion, learning materials (e.g. lecture slides) and class news.

Please note that it will take a few days after registration for your classes to update through the University's systems, so that everything appears in Myplace. If you are not registered for a class and think that you should be, you should contact your Adviser of Studies urgently.

References

When companies ask for referees who can comment on academic progress as well as your general conduct, students should contact their individual Project Supervisor in the first instance, where applicable or can ask their Adviser of Studies. It is department practice to provide a reference directly to the employer and not to the student.

Under the General Data Protection Regulation (GDPR), staff are not permitted to provide references without student consent. Reference requests will therefore be declined where students have not contacted and agreed this with the relevant member of staff prior to the request being received.

Student Complaints

Please refer to the below University website for the official complaints procedure (note: major issues should always be directed to your Adviser of Studies in the first instance).

<https://www.strath.ac.uk/contactus/complaintsprocedure/>

Student Lifecycle (Student Business / Graduations / Transcripts)

Student Lifecycle is part of Student Experience & Enhancement, with a Helpdesk located on Level 4 of the Learning and Teaching building (hours of opening normally Monday-Friday 1000 to 1600 hours).

Much of the information and forms you may require should be available from the Student Lifecycle webpages at <https://www.strath.ac.uk/professionalservices/studentexperience/studentlifecycle/>. For contact details, please refer to the 'Contact' link.

Changes to curriculum modules or programmes must be notified to Student Business by the Department through the academic Adviser of Studies (see earlier section of this Handbook for details).

Student Visas

Students granted a Student Visa have the responsibility to abide by its conditions. Engaging with your studies prevents any problems and protects your visa status. Students who hold a visa who are absent or need to briefly leave the Glasgow area at any time during their studies, **must first request permission from the Department before making any arrangements.**

UK Immigration Rules are very strict and the consequences of not adhering to these can include being suspended from your studies and/or reported to the Home Office.

Visa queries must be directed to the International Student Support Team – refer to their webpage <https://www.strath.ac.uk/studywithus/internationalstudents/whileyourehere/internationalstudentsupportteam>

Use of Computing Facilities and Resources

The University will not permit the use of its computer facilities and resources for access to, or transmission of, information which is considered by the University to be unacceptable; illegal; in breach of university policies, such as those on Equal Opportunities and Harassment; wasteful of resources or not commensurate with the provision of facilities for legitimate educational purposes.

Examples of such unacceptable use may include:

accessing/displaying pornographic material; stating defamatory opinions/views concerning individuals or organisations; accessing/displaying discriminatory material or material which encourages discrimination; engaging in games or chain e-mail; publishing information which is intended to misinform and thereby causes anxiety or inconvenience to another; unauthorised use of University logos, titles etc; spamming; corrupting or destroying another user's data; violating the privacy of other users; disrupting the work of others; using JANET (Joint Academic NETwork) in a way that denies service to others; misuse of networked resources such as the introduction of viruses.

The University actively monitors usage of the University computer facilities and resources which includes monitoring the access to, publication or receipt of, any Internet materials by any user.

IT details can be found via Information Services at <https://www.strath.ac.uk/professionalservices/is/>.

Copyright

Under UK Copyright laws, original works such as books, journal articles, images, music or films are protected by copyright. This means that they cannot be reproduced (copied), on paper or electronically, unless: covered by a licence, permitted by statutory exceptions or legal defences or where permission is given by the copyright holder. Remember that materials found on the Internet are equally protected by copyright even if there is no fee or password required to access them.

The University has a range of licences in place which permit students to make copies of extracts, for example one chapter or one article, from copyright works for the purpose of their studies and in other cases the law will often provide a defence. If you are unsure whether you can copy material, always check if there are Terms & Conditions or similar and follow them. With web-based materials, if in doubt, provide a link (URL) rather than copying the material. Never link to sites that you know contain 'pirated', infringing (or otherwise illegal) material. Further guidance is available (see link below).

It is important that students observe the terms and limits of licences and exceptions. Failure to do so may make you personally liable for copyright infringement, as well as cause; loss of access to materials such as eBooks, eJournals or databases, by your fellow students and the whole University. Dealing with copyright material inappropriately can be a disciplinary offence and a breach of University regulations.

It is important when copying other people's work, in print or on the internet, to do this fairly. This means that whilst copying for your research or your assignments is generally permissible, republishing copies on social media or the public web is likely to cause problems. You should only copy as much as you need for your work and should not reuse other people's work in a commercial context without checking if you need permission. Finally, always acknowledge your use of other people's work and cite them accordingly. This will help you stay legal as well as avoiding plagiarism.

The good news is that normally, you own copyright in material you produce such as a dissertation or project report and this too is protected by copyright.

If you have any questions or concerns, please visit the Information Governance and Compliance webpage <https://www.strath.ac.uk/professionalservices/is/compliance/>.

Academic Information

General Regulations for all courses are published by the University's Education Enhancement team at <https://www.strath.ac.uk/studywithus/academicregulations/>.

Policies and Procedures for students are published on the Student Experience and Enhancement Services (SEES) website <https://www.strath.ac.uk/sees/studentpolicies/>. Amongst others, these include:

| | | |
|--|----------------------------------|--|
| Absence and Voluntary Suspension | Personal Circumstances | Student Discipline |
| Academic Dishonesty | Academic Appeals | Assessment and Feedback |
| Compensation Scheme and Progress | Motivational Merit & Distinction | Honours Classification & Other Awards Rankings |
| Extensions to Coursework Submission | Late Submission of Coursework | Dignity & Respect (inc Equality & Diversity) |
| Student Guidance on the Use of Social Media and VLEs | Charging for Course Material | Student Representation |

All students must refer to relevant policies for full information, to be familiar with, remain aware of and consult each where required during their studies. Outlined below are some key points.

Academic Appeals

Appeals can only be made after you have been officially informed of a Board of Examiner outcome/decision and associated results via Pegasus. Included will be a link to indicate when and how to make an appeal and the final deadline. Appeals are assessed by a Faculty panel, although departments are asked for their response for consideration alongside the student submission. Any appeal must have significant grounds (for example, instead of an opinion that a mark should be higher). Discussion with your Adviser of Studies before making a formal appeal is advisable. Please refer to the University's Appeals policy before submitting an appeal directly to the Faculty Office – Engineering.

Academic Dishonesty

The University regards academic dishonesty as a serious offence. Allegations of academic dishonesty will be fairly assessed and appropriate action taken. An allegation that has been dismissed as a disciplinary offence may still incur an academic penalty for poor scholarship.

The University is aware that there are a variety of temptations for students to engage in academically doubtful or dishonest activities. Promoting a general climate of academic integrity within the student body is important.

Plagiarism and Collusion

Plagiarism is taking the work of others and presenting it as your own. Collusion is using the work of a fellow student, with his or her knowledge, and presenting it as your own.

You could be accused of plagiarism if you:

- hand in (as your own) work that was written by someone else
- copy out someone else's work and hand it in
- copy out sections of someone else's work and include it in your own submitted work without acknowledging it
- use someone else's work in any of the above ways with a few words changed

"Someone else" might be the writer of a journal article, textbook or website. It could be a fellow student, though you might then be accused of collusion. The "work" could be a full essay, paragraph or sentence i.e. copying (or altering in a minor way) a complete paragraph or sentence constitutes plagiarism.

You could be accused of collusion if:

- you and another student submit identical or almost identical work

Any work submitted for assessment, e.g. essays, laboratory reports, homework and tutorial assignments, must be solely the work of the individual student or group (if a group assignment is set).

If there is evidence of plagiarism or collusion, penalties will be imposed ranging from a reduction in marks, to resubmission of work, to University disciplinary action. Each case of plagiarism/collusion will be discussed by an adjudication panel who will recommend an appropriate course of action. Please see https://www.strath.ac.uk/media/ps/cs/gmap/plagiarism/plagiarism_student_booklet.pdf for the University's guidance on plagiarism. For any doubts as to what constitutes plagiarism, please read this document.

Assessment and Feedback

The Department fully subscribes to the University's approach to Assessment and Feedback outlined at <https://www.strath.ac.uk/professionalservices/staff/policies/academic/>.

Accordingly, assessment and feedback methods used by each module are explicitly stated in the associated Module Descriptor Form (MDF). Current MDFs can be found on the MAE student information webpage (see below 'Class Details - Modules and Timetables' section for link).

The Department also recognises that, in addition to constituting a formal response to assessment, feedback also incorporates informal communication between staff and students (either individually or collectively) that provides information on progress and performance. This implies a more bilateral process in which students are encouraged to seek feedback by actively engaging with staff as appropriate.

Compensation (update Sep22)

Compensation is a mechanism by which the Board of Examiners' can award credits for a module which has been narrowly failed i.e. even though a pass mark has not been achieved, a resit is not required. However, in September 2022, the Engineering Council introduced new rules around the use of compensation in all Engineering Council accredited programmes. In order to retain accreditation, for all students entering 1st year in September 2022 (and students who may be repeating 1st year in 22/23), the following limits will apply:

- 20-credits of compensation can be awarded in 1st year.
- 30-credits (maximum) of compensation (with no more than 20-credits in any one year) can then be awarded between years 2-5 of a BEng/BSc or MEng/MSci programme.

This means that the Faculty of Engineering has had to opt out of certain aspects of the University Compensation Policy. However, the new rules will only impact the amount of compensation which can be awarded: the threshold at which compensation can be awarded (and the eligibility criteria for awarding compensation) will remain in line with the existing University Policy.

In exam boards, compensation will be applied to modules as soon as modules are eligible. However, the Faculty's Academic Committee and Quality Assurance Committee has recognised that, going forward, students may wish to retain their 30-credit compensation allowance for later years of study (should they need it) and a process that will allow students in years 2-5 to undertake the resit (for credits only) to "win back" compensation is being developed. The "win back" process will not be required in 2022-23 but will be communicated to you before you begin your 2nd year of study.

The existing Policy will apply to students entering years 2-5 in September 2022 (including direct entrants) as normal.

Attendance / Absence and Personal Circumstances

Poor attendance makes a course more difficult and is often associated with poor performance.

All students are expected to be in attendance for activities during all Terms (as listed on the University's Key Dates webpage). This includes Welcome & Development Week, Consolidation & Development Week and all formal examination periods/diets.

The following procedures and regulations relating to absence through illness should be noted:-

- Students must sit all assessments/examinations unless prevented by illness, in which case a medical certificate must be produced as documentary evidence. Personal Circumstances must be notified to Student Business Engineering **within five working days** of the latest affected examination or date of submission of affected assessment - this includes scheduled assessments during the semester, such as presentations. Self-certification is not sufficient.
- Failure to attend due to being "unaware of the dates or times or submission deadlines" of assessments and missing an examination due to "misreading the timetable or oversleeping" are not valid reasons for non-attendance. An 'Absent' will be recorded in such situations (refer to the Personal Circumstances policy), which will impact on a student's degree classification.
- Students whose performance has been, or will be, affected by circumstances that are severe and outside their control must **inform the University as soon as they are aware of these circumstances** by recording them on Pegasus under 'Personal Circumstances' (clearly state the extent, duration and nature, plus how they impact on performance/attendance) and also by **submitting supporting documentary evidence to Student Business Engineering**. In addition, students must contact their Adviser of Studies as soon as possible to discuss adverse circumstances.

CIRCUMSTANCES THAT WILL NOT BE CONSIDERED

Personal Circumstances Boards (PCBs) meet prior to each Board of Examiners to consider whether intervention is required, based on the personal circumstances submitted. PCBs will disregard circumstances which a student could reasonably have avoided, where measures should have been taken to reduce their impact or where circumstances are no different from those facing a significant number of other students (which you are expected to cope with as part of a properly managed workload). Computer problems, failure of a single data source or lack of back-up are not valid mitigating circumstances and not acceptable grounds for discounting attempts or appealing.

Students who do not submit formal Personal Circumstances via Pegasus will not be considered by the PCB or subsequent Exam Board. **NO** notifications of circumstances will be accepted after the PCB has met and students cannot appeal where they fail to report their circumstances prior to Exam Boards.

Class Details - Modules and Timetables

Module Description Forms (MDFs) for all MAE classes can be found on the MAE Student Information webpage <http://www.strath.ac.uk/engineering/mechanicalaerospaceengineering/student-information/>. These contain the most up-to-date details for all syllabuses/assessments. General class enquiries should be directed to Module Registrars. Past exams papers can be found using the University's Library pages.

Timetables can be found via the University Timetabling page <http://www.strath.ac.uk/timetables>. Information on personalised student timetables can also be found via this webpage.

Note: Personalised timetables cannot always fully reflect all information. Students should also consult relevant module pages on Myplace for certain individual slot schedules.

Coursework

It is the responsibility of students to keep up to date with coursework and **ensure that all assignments are submitted prior to relevant deadlines**. If you miss a deadline without satisfactory reasons, you may find that your assessment for that module is heavily compromised. Only you can judge if losing marks might affect either your progress or final assessment.

Policy and Procedure on Extensions to Coursework

The University's Extensions policy is in place to support students and to help staff to monitor students' use of extensions for identifying those who may require extra support. Where circumstances negatively impact on studies, students can request an extension to a coursework deadline. **Extension requests should be made in advance of a submission date, via the Myplace online request facility.**

For the University's extensions policy, which provides guidance on requirements, see [here](#).

Policy and Procedure on Late Submission of Coursework

It should be noted that penalties will be incurred for late submissions. Coursework is deemed to be late when submitted after the published deadline without an agreed extension and in the absence of personal circumstances. Students should ensure that they are familiar with this policy, available [here](#).

For more detailed information on both Extensions to Coursework and Late Submissions, all students must read over the relevant links which can be found on the MAE Student Information webpage (link within preceding section above).

If you think you are unlikely to meet a coursework deadline due to medical issues or personal circumstances, you must apply for an extension without delay.

NOTE: Extensions and Late Submissions are NOT applicable to Projects.

Examinations

It is important to note that:

- students **MUST** remain available for exams during ALL exam diets and should therefore not arrange holidays within such periods. Published exam dates may change and therefore **you must not make arrangements to leave the area prior to the official end of 'Term', which includes examination periods.** No special arrangements will be made in such cases.
- students will normally have two attempts to pass classes during the course of the academic year. Those who fail to complete a class at the first attempt will be given one additional assessment opportunity before the next Board of Examiners. This will either be by coursework or examination, as outlined in the class Module Descriptor Form.
- those who are permitted to carry classes to subsequent years will be given the opportunity to resit during the following academic year. Students should note that failure to pass any compulsory class after four attempts maximum (where permitted) will result in withdrawal from the degree. For level 4 and 5 modules, only **ONE** resit is allowed (i.e. two attempts in total).

For further information, please check the University SEES Student Lifecycle webpage at <https://www.strath.ac.uk/professionalservices/exams/>.

NOTE: during the semester 2 exam period, level 4 and 5 modules are normally scheduled to take place early in the diet (though students must always be available throughout the full duration of all formal examination diets).

Exam Co-ordinators' details for all departments (inc MAE for module codes beginning "16" and "ME") are listed at <https://www.strath.ac.uk/professionalservices/disabilityandwellbeing/disabilitysupport/ddc/>.

Use of Calculators

It is recommended that students have a basic SCIENTIFIC calculator for use in examinations as, although calculators may normally be taken into an exam, they must not be used to store text/formulae nor be capable of communication (see 'Use of Electronic Devices' below). Invigilators may require calculators to be reset. Candidates are not permitted to share the use of calculators.

Use of Dictionaries

Regulations state that students whose native language is not English are permitted to use paper-based English/native language dictionaries in University examinations. These dictionaries will be subject to scrutiny by the Invigilator in charge of each examination. Electronic dictionaries are not permitted in University examinations. Regulations state that, unless instructions have been issued to the contrary, dictionaries shall not be used in language examinations.

Use of Electronic Devices

Electronic devices are not permitted during examinations (unless with prior written permission of the Department/School). Electronic devices include, but are not limited to: mobile phones, music players, tablets and smart watches. Candidates are not permitted to bring earphones into the examination room. **DEVICES CANNOT BE USED AS CALCULATORS DURING EXAMS.**

Pass mark

Normally the pass mark for each individual class is 50% for academic level 5 modules and 40% for all others, unless otherwise notified. It is important to note that students on Honours and Masters courses are expected to perform at a substantially higher level.

There are a number of reasons to set your sights higher than the above pass marks, not least the fact that marks appear on Academic Transcripts, copies of which are often sought by prospective employers.

In addition, results contribute to the grading of final award classifications, so it is important to secure the highest possible. In line with recommendations of accrediting institutions, the mechanism for calculating final marks is **based on first attempts**, so continued high performance will be rewarded.

Resit Attempts

If a student does not pass a particular examination then it is essential to resit at the next examination diet or available opportunity (to complete supplementary work to a satisfactory standard), so that the total credits required for the final degree can be accumulated. **All students must be available to attend examinations during exams diets on campus as necessary.**

Note: although Examination Boards normally allow two attempts (first attempt and one resit attempt) to gain credits for a specific module, such attempts must be at two consecutive offerings of the assessment. **For the purpose of determining final award classifications, marks obtained at the first attempt are used.**

Requests to sit exams off campus

All students must attend for examination at the University of Strathclyde on the dates and times scheduled, including mid-semester assessments (for example, class tests, presentations, etc).

Events such as holidays, family gatherings, or other personal appointments do not constitute exceptional reasons for exam purposes. In addition, sporting commitments will only be considered for students who are officially registered on the University's elite athlete Sports Scholars programme.

The following specific cases will **NOT** be considered by the Department:

- where a student wishes to leave the University during/prior to the end of an examination period
- where a student has a resit examination (all students must attend resits in Glasgow in person)

NOTE – arrangements to travel overseas should not be made until you know that you have passed all classes for the current academic year.

Students who decide to make travel arrangements (such as purchasing non-flexible/changeable tickets) prior to receiving official results at the end of the academic year, **must return to the University campus in Glasgow for the resit diet to attend examinations in person for any failed classes.**

Where critical and provisionally agreed in principle by the Exam Co-ordinator, requests to take an examination at a bona fide institution other than this University (normally a suitable overseas exchange institution or a British Council Office) should be formally made in writing to the relevant Exam Co-

ordinator. Only *EXCEPTIONALLY* will permission be given to sit an examination out-with the University.

Such a request must be made **no later than six weeks** prior to the start of an examination diet. If permission in principle is granted, you must thereafter arrange for written communication to be sent by an authorised person at the proposed off-campus site confirming that the institute agrees to act for the University of Strathclyde in this matter and giving a contact name, telephone number, e-mail and full postal address (post box addresses are not suitable). This formal written communication must reach the Department **no later than four weeks** prior to the start of the examination diet. Your request and the statement from the “authorised person” mentioned above are then sent to the University’s Director of Professional Services, from whom formal approval must be obtained. Examination papers **cannot** be issued to an alternative bona fide institution unless the above procedure has been followed.

Students will be liable for all expenses incurred and any fees charged by an overseas institution/site.

Section 2

UG Programmes, Educational Aims & Regulations

Educational Aims and the Learning Experience

Your aim in choosing your degree course is undoubtedly to graduate and qualify as a competent professional engineer. Our aim is to assist you in the best ways we can to achieve that goal. There are various elements of knowledge, skills, experience and understanding which are to be found in competent engineers and your course will give you the opportunity to acquire and develop these. By the end of your programme, we expect that you will:

- have a good working knowledge of the fundamentals of systems and processes which are generally recognised to be in the domain of mechanical engineering and its related subjects;
- be able to understand, model and predict the behaviour of engineering artefacts through the application of scientific and technological principles;
- have had a great deal of practice in creating new solutions, adapting old ones, and in using your acquired knowledge in materials, energy systems, manufacture and computer-aided design techniques;
- develop an understanding of financial, organisational and strategic aspects of engineering businesses;
- increase skills in communicating and working effectively with others – individually and in teams;
- practice formulating, monitoring and adjusting project plans in the light of changing circumstances;
- meet the Educational requirements for eventual registration as a Chartered Engineer (for MEng);
- embody the Strathclyde values to be a bold, ambitious, collaborative and people-oriented citizen with full understanding of your ethical and moral responsibilities.

We also expect you to develop many new capabilities which are not simply concerned with engineering technology; in fact we will be disappointed if your outlook does not change radically during your course. In particular, we expect that you will:

- continue to develop the capacity you already have to learn about many things - a good engineer can do anything;
- increase your skills in communicating and working effectively with others - engineers work in teams and lead teams;
- develop your career towards becoming a professional engineer – we expect that you will transition towards this path in the senior years of the programme and tune your approach to study accordingly;
- grow to understand your place as an engineer in a complex and fascinating professional community - the world is your oyster.

UG Programmes

General Regulations for all courses are published by the University's Education Enhancement team at <https://www.strath.ac.uk/studywithus/academicregulations/>.

Information contained in this section of our Handbook must be read in conjunction with the appropriate Undergraduate or Graduate Diploma Regulations.

Students must familiarise themselves with all University regulations/procedures and refer to these or the relevant official policy when required.

Core Curriculum

The Department of Mechanical & Aerospace Engineering courses are organised through a number of principal themes depending on which course is undertaken e.g. Materials, Engineering Manufacture and Design, Mathematics and Computer-Aided Engineering, Engineering Science and Applications, Professional Management Studies.

For example, fundamental topics which underpin the practice of mechanical engineering develop through the themes of Mechanical Engineering Science and Applications. Mathematics and Computer-Aided Engineering studies provide competence in the use of modern, analytical IT tools; appreciation of Materials, Manufacture and Design complements the base of fundamentals. More specialised topics relating to the degree in Aero-Mechanical Engineering have an increasing presence after the second year. The individual topics are progressively integrated over the duration of the courses, Engineering Design being the unifying theme in the third year. In the fourth year, the skills, knowledge and understanding developed earlier are brought to bear on a practical project. Specialised studies, in particular Engineering subjects and a Computer-Aided Engineering class based on industrial software, round off the final years of the course.

Engineering is pursued within a Business climate and the theme of Professional and Management Studies is an essential ingredient of preparing to operate as a competent engineer.

4/5 Year Structure

The MEng programme provides the opportunity for students of above-average ability to enhance their studies in alternative ways. For example, there are Masters level classes in a wide variety of Engineering topics but it may also be possible to take classes from the extensive portfolio offered by the Strathclyde Business School (popular classes include Accounting and Financial Management).

The main reason for most students to pursue the 5 year MEng option is to complete the educational requirements for Chartered Engineer status before graduating and therefore to avoid the need to return for further study at a later stage. The option to graduate after four years with a BEng Honours award is open to all students and many employers traditionally take on such graduates with a view to further in-house training which may also provide a route to Chartered status. However, current experience is that such employers look for a good class of degree and evidence of a well-rounded portfolio of achievement.

Transfer between Courses

The Department operates a policy which allows students to delay final degree choices until their career aspirations have been determined. Normally such transfers can be delayed until the start of the third year of the course.

It is normally possible to transfer from the BEng course to the more demanding MEng stream. To transfer to (and remain on) the MEng stream, students must achieve a credit weighted average (CWA) of 60% or above for their curriculum in an academic year. Any student who may wish to request the opportunity to be considered for transfer within MAE and has completed all appropriate compulsory modules in earlier years should seek advice from their academic Year Adviser of Studies and then apply by completing the relevant form issued by the Department around March each year.

Such students should note that in addition to meeting the progress Regulations, transfers require the approval of the Board of Examiners. This approval will readily be granted provided that a student has achieved the necessary 60% or above CWA for the academic year. Conversely, students registered on the MEng courses will be required to transfer to the BEng stream if their performance is not at the required standard (i.e. those with a CWA of less than 60%). Further advice on all such transfers may be sought from your academic Adviser or the Course Director.

Note that it is also possible to change between some of the major discipline areas such as Mechanical Engineering and Mechanical Engineering with International Study (transfers onto Aero programmes are **not** possible). Such major changes are usually only possible in the earlier years of the courses, subject to the related course being available. Changes at the end of first year usually present few problems - although are conditional on satisfactory progress. Major changes of direction become progressively less viable if delayed (e.g. with Financial Management requires students to take AG151 in year2).

All potential changes to classes/courses must first be agreed by the Department. Please contact your academic Year Adviser.

For transfers to an alternative department outwith MAE, the University's Internal Transfer Form must be completed and submitted by the student to the new department to which they are applying - see <https://www.strath.ac.uk/professionalservices/studentlifecycle/transfer-exchange/>.

Regulations - Guidance Notes

Students should consult the Regulations governing their course on a regular basis (refer to the link under the 'UG Programmes' title on the preceding page). Regulations set out the framework for your studies and specify the criteria for your progression through the course. The language is carefully chosen to cover all eventualities and may need some interpretation or clarification. The following notes do not stand in place of the Regulations but are merely intended to explain the terms used or the thinking behind the text.

The Department of Mechanical & Aerospace Engineering undergraduate degree programmes run in two main streams: 4-year BEng Honours and 5-year MEng. MEng programmes differ from BEng Honours in terms of depth of study, required Learning Outcomes and project work. Corresponding MEng and BEng programmes (e.g. Mechanical Engineering, Aero-Mechanical Engineering) have common classes in Years 1-3. The pass mark for individual classes is normally 40%.

Registration/Curriculum Choice

Please note that it is your responsibility to ensure that you are registered correctly each year. If you take a class but have not registered officially for that class you will not be awarded the credits. Conversely, if you register for a class then do not take it, you will be recorded as having failed unless you delete the class from your record before the curriculum change deadline.

1. Standard curriculum for full time undergraduate students is **120 credits per academic session**.
2. Compulsory classes cannot be substituted.
3. Where additional optional classes are taken, the overall mark will be based on performance in ALL classes attempted.

Progress

Progress on the BEng stream is based on accumulation of sufficient credits as defined in course regulations. Progress on the MEng stream requires satisfaction of the minimum credit requirement plus the additional condition of a Course Weighted Average (CWA) mark of **60% minimum**. MEng students with a CWA below 60% are transferred to the corresponding BEng stream by the Board of Examiners, provided all other progress requirements have been satisfied. Year 4 MEng students who do not meet the MEng progress requirements in full are transferred to the corresponding BEng degree programme and graduate immediately.

In Year 5, MEng students will carry out a 40 credit group design project involving interdisciplinary activities and, in some cases, industrial inputs. The group project and level 5 modules making up the student's 120 credit year 5 curriculum deliver specific Masters level Learning Outcomes not covered in year 1-4 classes.

Degree Classifications

Final marks for Engineering degree programmes are normally calculated using a combination of the Credit Weighted Average of 3rd and 4th years (for BEng Degrees) or 3rd, 4th and 5th years (for MEng Degrees). The Faculty of Engineering algorithm for calculating degree classifications is as follows:

| | 3 rd year | 4 th year | 5 th year |
|-----------------|----------------------|----------------------|----------------------|
| Honours Degrees | 30% | 70% | n/a |
| MEng Degrees | 20% | 40% | 40% |

Board of Examiners (key points to note)

There are two types of Examination Board which meet at the end of each academic session: the Honours Board and the General Board.

The Honours Board of Examiners review the performance of all year 4 and 5 students. A decision is made at the Board on the class of degree to be awarded to each graduating student or progress decision for y4 MEng students. Following the Board meeting, results and decisions are issued to individual students via PEGASUS.

The MEng degree may be awarded 'with Distinction' or 'with Merit'.

Students can graduate from the BEng degree with one of five classifications:

- First Class Honours
- Second Class Honours (Upper Division)
- Second Class Honours (Lower Division)
- Third Class Honours
- Pass

The General Board of Examiners considers the performance of all students other than those in years 4 and 5. The General Board meets after the Honours Board and once again after the resit diet, to analyse student performance in all degree assessments. The General Board makes one of the following decisions:

Pass - clear passes with no re-sits; should proceed to the next year of study.

Withdraw - student is withdrawn from the course.

Re-sit (June Board only) - student must undertake re-sit assessments normally by August, after which a decision will be made on possible progress to the next year of study.

Overseas Semester(s) (June Board only) - student has taken part in overseas exchange and some marks are not yet available.

May Proceed (September Board only) - may proceed to the next year of the course but must take further re-sits in certain failed classes.

Do Not Proceed (September Board only) - student has not satisfied the requirements for progress to the next year of the course and will be required to enter academic suspension. A student may take re-sit assessments in the coming academic session.

Re-attend - student has not satisfied the requirements for progress to the next year of their course. Students are required to re-attend the current year (for which the standard tuition fee will be charged) before a further decision will be made by the Board regarding progress.

Transfer - student will be transferred to another course. This can be qualified by a decision of **Transfer and Suspend** or **Transfer and Resit**.

In addition to making one of the aforementioned decisions, the Board may also decide to either:

i **caution** a student whose performance has been poor. The student is informed that their poor performance gives cause for concern and they must consult with their Year Adviser of Studies.

or

ii **warn** a student that they have almost exhausted their attempts at a class and will have only one further opportunity to obtain a pass.

A student may be transferred from the MEng to BEng Hons stream or from the BEng Hons to BEng Pass stream **if not performing at a high enough level.**

Unusual circumstances can dictate that a student receive a 'Special Letter/Notification', outlining his/her academic position as determined by the Board of Examiners.

Students who do not pass all compulsory classes after exhausting their maximum attempts must be withdrawn, though some may be eligible to transfer to the BEng Engineering Studies pass degree.

The University's webpages providing general information on Board results and FAQs can be found at <https://www.strath.ac.uk/professionalservices/exams/examboardsandresultsfaq/>.

Faculty Compensation Scheme

The Faculty operates a Compensation Scheme which is designed to assist Boards of Examiners to take decisions about student progress at the end of each of the first, second and third years of undergraduate study and also fourth year of an integrated Masters degree. Fail marks in the range 30-39% may be eligible for compensation under the scheme and converted to a pass provided the weighted credit average across a student's prescribed curriculum is 45% or higher. Up to 20 credits throughout all years of the programme may be compensated in this way. The scheme can be applied only to a student's first attempts, therefore compensation is normally used by the June Board only when results from semester 1 and semester 2 degree assessments are considered.

External Examiners

Prof Duncan Shepherd (Professor of Biomedical Engineering), from the University of Birmingham is currently External Examiner for:

Mechanical Engineering - inc with International Study/Financial Management/Materials Engineering

Dr Nick Croft (Senior Lecturer), from Engineering Central, Swansea University is currently External Examiner for:

Aero-Mechanical Engineering
Mechanical Engineering with Aeronautics

Students must not contact External Examiners with queries against an academic decision.

You need to contact the Department for feedback or submit an Appeal at the appropriate time as per the Personal Circumstances and University's Academic Appeals Procedures.

General Information

Study Abroad

The Department encourages all suitably qualified students to consider the benefits which foreign study brings to the learning experience. Students who wish to participate in exchange are ambassadors for both the Department and the University, so it is IMPERATIVE that prior permission, in principle, to pursue study overseas is obtained from the Department's Outgoing Exchange Coordinator, Dr Andrew McLaren.

Normally this will be covered by the Outgoing Exchange Coordinator's signature on the Learning Agreement which has to be completed by all students wishing to study overseas. Only once results are known will this permission be ratified as explained below.

Students enrolled on courses which require foreign study as part of the degree award requirements should be aware that such study can only proceed where the student has reached an appropriate standard and has a reasonable expectation of benefiting from the experience; if this poses a difficulty, it is possible to change to another related course where foreign study is not obligatory.

For those participating in an exchange programme, attention is drawn especially to the following:

- (a) FEES: Do not forget to apply for (or pay) your fees for the subsequent academic year. Note that students taking part in one of our student exchange programmes do not pay fees to the overseas institution, these are covered under the exchange arrangements.
- (b) While the Department encourages students to participate in overseas exchange studies in their third year (and additionally in fifth year), it is important in the case of second year students that, prior to embarking on an exchange programme, the following objectives must be met:
 - all year 1 and year 2 classes have been passed
 - it is advisable that you are achieving a credit weighted average of 60%. While it is possible to go abroad with a lower level of performance, this may not be in your best interests.

Note that the requirement to pass all modules from the previous year is because it is not possible to arrange re-sit examinations for students studying abroad. It is therefore not possible to carry modules while taking part in the exchange programme.

While agreement to participate in an exchange programme may be given in principle before the end of the academic year, it is imperative that the student concerned has this agreement ratified **in writing** by Dr McLaren, as soon as their examination results are known. **Without this ratification no student from the Department of Mechanical & Aerospace Engineering will be considered to have the necessary permission to embark on an exchange programme.**

Where can I study abroad?

Opportunities exist to study at one of the Departments European partner universities, but also at institutions in the USA, Canada, Singapore, Hong Kong and Australia.

What does the scheme involve?

The scheme provides a wonderful opportunity for students to spend part of their degree course at a university in another country. This study elsewhere counts as a normal part of the degree curriculum. The various schemes have therefore been designed to ensure complementarity with studies which the student would otherwise have taken if they had remained at Strathclyde. Where language permits, students can attend lectures in an overseas university. Alternatively, for those with less well-developed language skills, project work may be undertaken in the host University in collaboration with a supervisor who speaks English. Credits are awarded for overseas study just as they would be at Strathclyde and are normally awarded at the September Examination Board once transcripts

have been received from the partner institution. Since performance in third year of the course contributes to the class of Honours/MEng, for this purpose, each student will be awarded an overall mark for their period of foreign study which will be agreed between the ERASMUS Coordinator and the Adviser of Studies.

The minimum length of an exchange is three months, and the maximum is a full academic year.

Is language not a difficulty?

Proficiency in another language is a requirement to study modules in some European countries. For this purpose, students may be able to select language electives as part of their curriculum in first and second year. However, partner institutions in many countries offer modules taught in English

During the period of the exchange itself, language tuition is normally provided by the host university, where appropriate. This may include basic classes in languages such as Danish and Swedish. If you think you may be interested in participating in a European exchange programme you should ask your Year Adviser about the elective classes on offer from the Language Learning Centre.

Note that it is each student's responsibility to research the modules available in order to plan their period of exchange. This includes determining whether modules will be taught in English or the language of the host country. In the latter case, each student is responsible for ensuring that they have the language skills necessary to learn *and* be assessed in the host language, where required.

What are the benefits for me?

While the exchanges usually mean hard work when you are there, they can also be enormous fun. Strathclyde students have taken the opportunity to travel, to spend time with students from their host university and sometimes to obtain relevant vacation employment abroad.

When can I go?

Students currently in year 2 may apply spend all or part of their year 3 abroad. What you do abroad is agreed beforehand, and may be a combination of lectures, labs and project work, depending upon the courses on offer and your facility with languages. All MEng students are expected to consider going abroad at some stage during their course. This is an important element in their personal development.

There is much to be said for starting your time abroad in semester 1 if possible, as you can go early to check out the social scene, lecture schedules, etc, before classes start. Studying abroad for the whole year is most beneficial, but a single semester exchange is also a valuable experience.

It is also possible to spend one semester of year 5 overseas, conducting a group project with other Strathclyde students.

How Do I Find Out More?

Almost all you need to know about study abroad can be found at <https://www.strath.ac.uk/studywithus/studyabroad/goingabroad/>. This gives links to our partner institutions and features case studies from students who have participated.

Information sessions are run by the Recruitment and International Office (RIO) in the first semester each year. These will be advertised and it is important to attend the sessions to find out what opportunities exist and for an explanation of the application process and deadlines (which will be applied rigorously).

Further information on exchange arrangements is available from the Department's Outgoing Exchange Coordinator Dr Andrew McLaren andrew.mclaren@strath.ac.uk.

Other details also at <https://www.strath.ac.uk/professionalservices/careers/global/studyabroad/>.

MAESA

MAESA is the Mechanical & Aerospace Engineering Students Association. Run by students for students undertaking our courses, it is comprised of undergraduates across all 5 years. If looking for a way to be part of the MAE community outside of your studies, then get involved with the committee as a volunteer.

Being part of MAESA allows students to build on existing skills, develop new ones, gain experiences and meet new people. As a student group, MAESA rely on your involvement in events. If unable to be involved directly, you can still support the group - suggestions or new ideas can be sent to maesa-society@strath.ac.uk.

Sponsorship

Student sponsorship can be reasonably common within the Faculty of Engineering (<https://www.strath.ac.uk/engineering/>). The advantage is that a company may supplement a student's income and offer employment during the summer vacation. There may also be the possibility of graduate employment on completion of studies.

Students in 1st, 2nd or 3rd year may find it worthwhile to spend some time identifying companies willing to offer sponsorship. Look out for those that operate a sponsorship scheme – check the notices in the Careers Library or newspapers. If unsure whether a particular company operates a sponsorship scheme, write to their Human Resources Manager requesting information.

Appendix 1

Departmental Occupational Health and Safety Arrangements

Emergency / First Aid telephone numbers (internal) - **Extension 2222** (or 3333)

Emergency telephone number 9 (external connection) then 999 for Fire / Police / Ambulance

1. Safety Organisation

Health and safety within the Department is organised in accordance with the University Safety Code (Section 6.6 of the University Calendar) which should be studied by all members of staff. All members of staff will be issued with a copy of these Regulations and are required to sign a declaration stating that the Regulations have been read and understood. Supervisory staff should ensure that the attention of students is drawn to the provisions of the Safety Code and Departmental Safety Regulations.

The Head of the Department has ultimate responsibility for all health and safety matters.

Health and safety management is undertaken by the [Departmental Safety Convener](#).

An Area Safety Committee has been formed to monitor health and safety issues within specific areas. The identities of current post-holders and their areas of responsibility can be obtained from Central Services or from the Departmental Safety Convener.

General information on any health and safety matter should be directed to the Departmental Safety Convener in the first instance.

The University's Safety Services Unit can be contacted on Ext 2726.

2. Departmental Safety Committee

A Departmental Safety Committee has been appointed consisting of at least three persons representative of the main groups of staff working in each area and include, where appropriate, at least one student. The Departmental Safety Convener convenes the meetings of the Departmental Safety Committee and acts on its behalf as necessary.

3. Fire

In the event of a General Fire Alarm the procedure is set out in the Fire Regulations posted at every floor of the James Weir Building and any other building you may occupy. Read these carefully and check from time to time for any changes which may be made.

- Fire drills will be held at least once per semester.
- Know the meaning of the audible fire alarms.
- Know every escape route in the building.
- Exit by a different route at each drill.
- Note locations of fire extinguishers - all are clearly marked.

In the event of a fire being discovered:-

- Leave the room, close the door and raise the alarm by activating the nearest "break-glass" fire alarm call point and informing the security wardens (Ext 2222 or 3333).

- If it is safe to do so, use an appropriate fire extinguisher to attack the fire. Do not use water where electrical equipment or flammable liquids are involved.
- In the case of laboratory fires, if it is safe to do so, switch off all electrical and fuel supplies to the equipment involved or, if necessary, to the entire laboratory.
- Do not store combustible materials on or near electric heaters.
- Do not accumulate waste material.
- Keep litter bins covered.
- Keep fire exits clear of obstructions

4. Accident or Illness

Emergency Telephone Numbers - Extension 2222 or 3333

- If possible give immediate assistance to the patient. General First-Aid Guidance notes are contained in all First-Aid boxes. A First Aid box may be found in all of the Departmental Laboratories.
- Get help of colleagues.
- Telephone 2222 or 3333 giving own name and department, exact location (building, floor, room number) and nature of incident.
- Say if a doctor is required.
- Do not move the patient from reported position (unless obviously necessary to avoid further injury) until the arrival of the ambulance services.
- The patient should be accompanied to the hospital by a colleague.

5. Reporting of Accidents and Dangerous Occurrences

All accidents and dangerous occurrences, however apparently trivial, should be reported to the member of staff in charge or to the technician in charge of the laboratory. The [Departmental Safety Convener](#) should also be informed.

An official Accident or Occurrence Report Form S.1 should be completed for all accidents and dangerous occurrences and sent to the University Safety Officer via the [Departmental Safety Convener](#). Should an incident result in hospital attendance, the Safety Office should be informed by phone as soon as possible.

6. COSHH

Under the Control of Substances Hazardous to Health Regulations 1988 (COSHH), it is incumbent upon anyone involved in the use of hazardous materials to ensure that a safe working practice is agreed upon. No work is permitted until a [RISK ASSESSMENT](#) and [COSHH](#) form has been completed. Copies of each assessment must be lodged with the Safety Convener.

All staff and relevant students should be acquainted with the Regulations.

Copies of the approved Guidance handbook on COSHH may be obtained from the Safety Convener or the University Safety Office.

Failure to comply with the Regulations may result in that area of activity being shut down BY LAW.

7. Hazardous Operations

Work should not proceed unless a Risk Assessment has been issued and signed.

Suitable protective clothing must be worn for all potentially dangerous operations (e.g. grinding/welding) supplies of which are available from the technician in charge of the laboratory.

All areas in which special hazards exist (e.g. lasers) are clearly marked and entry to these regions is restricted to those personnel having permission to work in them. Refer to the Protection of Eyes Regulations 1974.

All hazardous materials and glassware should only be transported or carried in properly designed safety containers. Winchesters should be carried only in proper holders, not in the hand. Passenger lifts should not be used unless special precautions are taken.

8. Permits to Work

All persons, other than trained workshop staff, who wish to use machine tools, hand held tools or welding equipment, etc must have a Permit to Work signed by the Head of Department or his appointed Deputy and an appropriate Academic Supervisor. Permits will only be granted to persons who can show evidence of satisfactory training and relevant experience. Permit holders must liaise with the Laboratory Superintendent before using any equipment. Permit application forms can be obtained from the Departmental Safety Convener.

9. General Laboratory/Workshop Procedure

- Protective clothing and safety glasses must be worn at all times.
- Coat racks or lockers are provided and should be used for outdoor clothing (coats, scarves, etc.).
- Food and drink is not permitted in laboratories or workshops.
- Always use machine guards where provided.
- Clean tools and machines after use and deposit all scrap material in the bins provided.
- Keep litter bins covered.
- Observe and obey No Smoking signs.
- Observe and obey all warning signs.
- Horseplay is forbidden.
- When operating equipment in the laboratories, at least two people should be present. One of these should be a technician or a member of the academic staff. Where working alone is essential, the completion of a Risk Assessment must be performed and endorsed by the Laboratory Superintendent or Academic Supervisor prior to the commencement of such work.
- Avoid loose clothing, long hair and badly fitting footwear.
- Keep all chemicals in suitable storage (see under COSHH).
- Switch off all gas cylinders, water, gas and other taps when not in use.
- Keep labs and workshops tidy.
- Keep floors clean and free of oil and grease deposits.
- Do not obstruct passages, doorways or other thoroughfares.
- Keep clear of overhead lifting-gear.

- Lifting tackle should only be used by trained personnel under the overall supervision of the technician in charge and in accordance with appropriate regulations. Replace all guard rails which may have been removed to facilitate the movement of equipment.
- Do not overload electrical power points.
- Trip hazards, such as trailing cables must not run across working areas.

9.1 Office Areas

- Office areas should be kept clean and tidy and free of trailing electrical cables.
- Cables should be inspected regularly and replaced if the insulation shows signs of wear.
- Materials should not be stored on top of filing cabinets or cupboards particularly near eye level.
- Filing cabinets should be filled from the bottom to ensure stability and drawers kept closed.
- Solvents should only be used in well ventilated areas and kept clear of heat sources.

10. Access to Buildings outwith Normal Hours

See Access to University Premises (Appendix 2).

11. Supervision of Postgraduate and Project Students

Supervisors should establish a mode of working with their students such that the supervisor is aware of and agrees to, each element of work, that safe working practices are agreed and where appropriate set down on paper and that regular, active, supervision is established.

12. Visitors to Laboratories

Visitors to the laboratories who are not accompanied by a member of staff should report to the relevant Laboratory Superintendent.

Maintenance staff should report to the relevant Laboratory Superintendent before commencing work in any laboratory area.

Children under the age of 14 are not normally permitted to enter laboratories or workshops. (See Appendix 2 of this Handbook).

13. Electricity at Work Regulations 1989

All offices, storerooms, workshops and laboratories, of whatever kind, within the Department must comply with these Regulations.

It should be noted that the University's Estates Management Department is responsible for all electrical services in the University, e.g. isolators, sockets and other such fixed equipment and no one may break into the electrical system for any reason without the authorisation of the University Electrical Engineer. Persons involved in the use of, and/or responsible for the use of electrical equipment, must read the Regulations and the University's own handbook entitled "Local Rules for Electrical Safety" (November 1991), a copy of which may be obtained from the Departmental Safety Convener. Work on 'live' equipment is prohibited unless in the most exceptional circumstances; before any such work is undertaken permission in writing must be granted by the Departmental Safety Convener.

14. General Electrical Safety

Open-bar electric fires and non-automatic kettles are not allowed in the University.

Multi-way distribution boards with 13 amp shuttered outlets may be used from a socket provided the total load does not exceed 13 amps and they are designed to BS1363. Adaptors are not permitted.

Plugs must be fitted by, and new equipment inspected by, a competent person, before being taken into service, normally by arrangement with the relevant Laboratory Superintendent. A record of the equipment must be kept (see 15 below). The Departmental Safety Convener may approve members of staff bringing in their own personal electrical equipment (except those banned items shown above), however, such items must also be included in the Departmental inventory of electrical equipment and appropriately inspected and tested (see 15 below).

All staff have individual responsibility to report obviously faulty equipment, e.g. broken plug tops, damaged cables, etc. to their supervisor or directly to the relevant Laboratory Superintendent. Equipment thought to be defective should not be used and must be reported immediately to the relevant Laboratory Superintendent. Such equipment should be removed from service until compliance with Section 15 is established. Users of equipment should regularly inspect for damage to casings, cables and plugs etc. and for loose screws.

Where specific hazards exist in laboratory/workshop areas they will be clearly marked at the direction of the relevant Laboratory Superintendent.

All persons wishing to use new or existing equipment in laboratory areas must liaise with the relevant Laboratory Superintendent before commencing work.

15. Inspection and Testing of Electrical Apparatus

All electrical apparatus is required to be inspected and tested at certain intervals. Portable electrical equipment should not be used unless it possesses an approved PAT label.

All fixed installations are the responsibility of the University Electrical Engineer.

All other equipment which can be plugged into a socket, including extension cables, etc. (and can also include battery operated equipment) is the responsibility of the Head of Department.

The Regulations require records to be kept of the maintenance, inspection and testing of all equipment in some detail for the duration of its working life. These records will be maintained centrally by the Departmental Safety Convener. Advice should be sought from the relevant Laboratory Superintendent prior to the introduction of any new electrical equipment.

16. Control of Noise at Work Regulations 2005

Loud noise at work can damage hearing therefore, measures have to be put in place to prevent or reduce risks from exposure to noise at work. It can also be a safety hazard at work, interfering with communication and making warnings harder to hear.

The Regulations require the employer to assess the risks to your employees from noise at work; take action to reduce the noise exposure that produces those risks; provide your employees with hearing protection if you cannot reduce the noise exposure enough by using other methods; make sure the legal limits on noise exposure are not exceeded; provide your employees with information, instruction and training; carry out health surveillance where there is a risk to health.

The Noise at Work Regulations 1989 have been revised and the new 2005 updated legislation comes into force on 6th April 2006 (with the exception of the music and entertainment sectors where the Regulations come into force on 6th April 2008).

1. The new Regulations require employers to take specific action at certain action values (previously called action levels). These relate to:

□ the levels of noise employees are exposed to averaged over a working day or week (e.g. use of weekly exposure would be appropriate in situations where noise exposures varied markedly from day to day e.g. gardening staff using power tools on two days of the week); and,

□ the maximum noise (peak sound pressure – noises due to impacts e.g. hammering, pneumatic impact tools) to which employees are exposed in a working day.

Noise levels are measured in decibels (dB) and the following new values are:

a. **Lower exposure action values:**

- daily or weekly exposure of **80dB** (previously 85dB);
- peak sound pressure of **135dB**.

b. **Upper exposure action values:**

- daily or weekly exposure of **85dB**;
- peak sound pressure of **137dB**.

Exposure limit values: (these are levels of noise exposure which must not be exceeded) daily or weekly exposure of **87dB**, peak sound pressure of **140dB**. These exposure limit values take account of any reduction in exposure provided by hearing protection ie personal protective equipment.

2. There is a new specific requirement to provide **health surveillance** where there is a risk to health.

Hearing protection must now be made available where there is exposure above the new lower exposure action value (80dB).

Hearing protection must be worn and a programme of control measures (see below) implemented where there is exposure above the new upper exposure action value (85dB).

Noise assessments will require to be reviewed to take into account the changes in the action levels. (See below).

Health surveillance must be provided for all individuals, staff or students where there is a risk to health from exposure to noise e.g. employees who are likely to be regularly exposed above the upper exposure action values, or are at risk for any reason, e.g. they already suffer from hearing loss or are particularly sensitive to damage. More information on health surveillance is available from the University's Occupational Health Service. If you have any concerns regarding occupational noise induced hearing loss or tinnitus (ringing or buzzing in the ears) please contact the Occupational Health Service on extension (JA) 4824 or email occupationalhealth@strath.ac.uk

The implementation of these Regulations can be quite complex and advice should be obtained from the Safety Officer by anyone affected by them.

17. **Buildings and Equipment**

Building structural faults should be brought to the attention of the University's Estates Management Department.

The safety and installation of electrical equipment and the clearance of electrical faults up to the normal 13 Amp socket outlets are the responsibility of the University's Electrical Engineer who is based in Estates Management.

18. **Radiation Hazards**

Radiation Hazards are the responsibility of the Area Radiation Protection Supervisors. The identities and locations of current post-holders can be obtained from your Departmental Safety Convener.

19. **Compressed Gas Safety**

Only persons within the Department who have been specifically trained may transport, attach or detach gas cylinders from equipment. These persons will follow the University Guidance on Compressed Gas Safety.

Appendix 2

Access to University Premises Policy

John Anderson Campus

1.0 Introduction

The following policy is aimed at controlling access to buildings belonging to, or occupied by, the University, in order to balance the need for access with considerations for the general and personal safety of users, the security of property, and economic considerations relating to energy and security staff costs.

2.0 Normal Hours of Access

From Monday to Friday the hours of 08.00 -18.00 are classed as the standard hours of access for University buildings. At all other times, including Saturdays, Sundays, Public holidays and Christmas / New Year have buildings will be closed and separate arrangements must be made by contacting Security Services. Appendix A outlines the access hours for buildings within the University on an individual building basis.

- Security staff are on duty 24 hours a day, 7 days a week. If you wish to contact a member of the Security team you should ring ext. 3333 from an internal phone or 0141 548 3333 from an external phone. 2222 is the Emergency number

During the normal opening hours **all University staff, partner organisations and students must carry staff identification badges.** Staff and students must be prepared to produce identification, if requested.

External access can be achieved without restriction between 08.00hrs and 18.00hrs.

3.0 Out with normal hours:

All University staff including partner organisations, have rights of access to their own departmental accommodation including communal accommodation out with normal hours subject to them informing Security Control (and having permissions from their departmental areas) of their intention to remain within or gain access to a building.

- Estates Services may enter in emergency circumstances. Routine operational activity will be arranged in advance with Security by a senior departmental lead.
- Information Services, routine operational activity will be arranged in advance with Security by a senior departmental lead.
- Safety, Health and Wellbeing- Routine operational activity will be arranged in advance with Security by a senior departmental lead.
- Postgraduate and undergraduate students can apply for essential (study based) [out of hours access](#) to buildings via the online request to their Head of Department via the dedicated [SharePoint Intranet](#) site (red card system, Appendix 'B'). The application will only be approved where the relevant departmental H&S arrangements have been met. Thereafter a red card will be issued and must be produced along with their University identification badge.

- Department Occupational Health and Safety Management Arrangements must make adequate provision for the health and safety of all persons using departmental premises out with normal hours of access. It is the responsibility of the Head of Department to ensure that visitors granted such access are fully aware of all appropriate University/Departmental Safety Regulations and Procedures, including evacuation procedures.
- Organisations who partner with the University may not have DS login credentials. This can be achieved by application to departmental IT support for a [limited DS account](#). An approved application will then result in the issuing of a red card.

4.0 Temporary Rights of Access for Visitors

Individuals may be granted temporary access by a **letter of authorisation** from Head of Department, a copy of which will be lodged with Security Control and a time bound staff identification card issued. All other aspects of this policy will apply to visitors.

5.0 Children

Children are permitted to enter what may be termed 'low risk' areas i.e. where the hazards present are similar to a domestic environment. Examples include office accommodation, catering and sports and recreation facilities of the University during the normal hours of access 0800 – 1800 hrs. Access to University premises is only permitted if accompanied by a parent or guardian providing **constant** supervision. This duty cannot be delegated to another person. This form of access should not be interpreted as permitting children access on a regular basis for the purpose of childcare.

For any other purpose this shall be subject to Risk Assessment.

6.0 Pet Animals

With the exception of assistance dogs, pet animals are not permitted in University buildings.

Normal Hours of Opening for University buildings. All times are Monday to Friday, unless otherwise stated.

| | |
|------------------------------|---|
| Sports Centre | 09.00-22.00 (Sat 09.00-17.00, Sun 13.00-17.00) |
| Royal College | 08.00-18.00 (Access to RC out of hours is via JW entrance) |
| James Weir | 08.00-22.00 |
| Thomas Graham | 08.00-18.00 |
| Henry Dyer | 08.00-18.00 |
| Stenhouse wing | 08.00-18.00 |
| Cathedral wing | 08.00-18.00 |
| Duncan wing | 08.00-18.00 |
| Curran Building | 08.00-22.00 |
| University Library | 07.00-00.00 (Weekends 0900 – 2100, Exams open 24/7) |
| Hamnet Wing | 08.00-18.00 |
| Robertson wing | 08.00-18.00 |
| The Wolfson | 08.00-18.00 |
| John Anderson | 08.00-18.00 (open to 2200 to facilitate classes) |
| Learning and teaching | 08.00-18.00 (open to facilitate classes 1800 to 2200 if required) |
| Technology Innovation Centre | 08.00-18.00 |
| Graham Hills | 08.00-22.00 (to facilitate classes, 50 George St closes at 1800) |
| Livingstone Tower | 08.00-22.00 |
| McCance Building | 08.00-22.00 |
| Collins / Senate | 08.00-18.00 |
| St James Road | 08.00-18.00 |
| Lord Hope | 08.00-18.00 (Sat 0800 – 1800 on swipe) |

* Term time is October-December, January-April and April-June

Request for out of hours access to the MAE Laboratories in the James Weir Building

Please complete the following information and attach a copy to your out of hours access request email, which should be sent to mae-safety@strath.ac.uk in the first instance.

- Is the out of hours access being requested to allow the continuation of practical work (covered by your scheme of work) involving chemicals or hazardous equipment? YES/NO (*delete as appropriate*)

If you are unclear if the above statement applies to you, please check your Risk Assessment. Both you and your supervisor need to be clear that any out of hours activities do not pose a risk to Health & Safety.

| | |
|---------------------------|--|
| Request access to Lab no. | |
| Student Name | |
| Supervisor | |
| Date | |

For all persons requesting access to MAE Laboratories

It is understood that I can only work when I have a partner who is prepared to remain in the building until my activity has been completed. The onus is on me to ensure that this person has been identified prior to 6pm on weekdays and 6pm on a Friday for weekend work.

The programme of work to be conducted will be discussed in advance and approved by my supervisor or his nominee prior to its commencement.

Signature

Supervisor

I request that the above-named be provided with permission to work out of hours. Where the researcher has requested access to continue practical work the programme will have been approved in advance. I understand that I have a duty of care to the researchers under my direction working out of hours.

Signature

The department will not be held responsible for any accident or incident which occurs should you deviate from the above. Should you be found within the building working alone, out of hours, your permission to work out of hours will be withdrawn with immediate effect.