Aerospace Engineering

BEng Aeronautics & Astronautics

MEng Aeronautics & Astronautics
(including Aerodynamics; Airvehicle Systems Design; Computational Engineering and Design; Engineering Management; Materials and Structures; Semester Abroad; Semester in Industry; Spacecraft Engineering;)

Faculty of Engineering & Physical Sciences
School of Engineering

Programme Handbook for new and continuing students
Disclaimer
This information is issued on the condition that it does not form part of any contract between the University of Southampton and any student. The information given has been made as accurate as possible at the time of publication, but the University reserves the right to modify or alter, without any prior notice, any of the contents advertised. It should therefore be noted that it may not be possible to offer all modules or components of a programme in each academic session. This handbook is available in alternative formats on request.

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Welcome

We would like to extend you a very warm and personal welcome on your admission to the Faculty of Engineering & Physical Sciences and the School of Engineering. We hope that you will find your stay here in Southampton both productive and enjoyable. Productive because you will gain skills and expertise that will serve you well in your future career. Enjoyable because you will make new friends, try new experiences, and generally widen your intellectual, cultural and social horizons.

We offer a range of programmes across the engineering disciplines of aeronautics & astronautics, mechanical engineering, ship science; audiology and acoustics; and civil engineering. Each group in our School has long-established and significant national and international reputations in teaching and research, and joining together establishes one of the foremost academic centres of excellence for engineering world-wide.

The undergraduate degree programmes in Aerospace Engineering are offered at both BEng and MEng level. Each programme retains a long-established reputation for excellence and our programmes figured very highly in recent league tables of national newspapers. The high quality of the learning and teaching is reflected in the results of Institutional Audits and the National Student Survey.

As an undergraduate member of the School, you should benefit greatly from being exposed to an intellectually stimulating and challenging environment provided by academics and scholars of the highest calibre, many of whom are internationally-recognised experts in teaching and learning and in their field of research. In later years especially, you will be able to take modules and projects in subjects that are related to research being carried out within the research groups.

Your membership of our prestigious School has not been easily gained, as you have worked hard to achieve the required high entry grades. However, to maintain your membership we also expect you to continue working hard in order to succeed in your studies while you are at the University. It is our responsibility to provide you with the tools with which you are able to learn, in the form of both fundamental and state-of-the-art knowledge and experience in the discipline you have chosen to follow. Although the members of staff within the School will provide help and support for you during your time as a student, it is important that you appreciate that the responsibility for your learning is primarily your own. We trust that you will be willing to take on this responsibility with enthusiasm.

We attach particular importance to ensuring that you are motivated by both your programme and the individual modules you undertake. Each year, or “Part”, of your programme is designed to present you with new academic challenges. Part I mostly covers fundamental engineering topics that are common to each discipline; however even in Part I there is a module that is specific to Aeronautics & Astronautics.

Part II contains further Aeronautics & Astronautics topics as well as some more advanced general engineering subjects. It is the year in which the material taught in Part I is expanded and developed to provide the necessary foundation for the specialist subjects in Part III and, if undertaking the MEng, Part IV of your programme. You should also be aware that your academic performance from Part II onwards affects your overall degree classification. Students who succeed in Part II generally succeed in their overall degree. This will, however, require a successful transition from the structured, supervised learning in Part I to the more independent self-learning required in Parts III and IV.

During Part II, you will have to make important decisions about the study programme that you wish to follow in Parts III and IV. This will include the selection of Themes, the option modules within your chosen Theme and Individual Projects for Part III. Relevant information is normally provided before the Easter vacation during Part II. If you are staying on to complete Part IV of one of the MEng programmes, further selection of a Group Design Project and optional modules appropriate to your chosen theme will be necessary in Part III.

We hope you enjoy the experience of being at University and find your time as a student both stimulating and rewarding.

Dr Scott Walker
Director of Programmes Aeronautics & Astronautics
The information contained within your programme handbook is designed to provide key information applicable to you and your programme during the 2018/19 academic year. It will complement the University's Student Portal. You can access the Portal by logging on to SUSSED, using your user name and password, and clicking on the Students tab in the top navigation bar. It is important that you make use of these resources as they support the regulations relating to your obligations and that of the University while you are a student at the University of Southampton. It also provides helpful information on matters such as housing, finance, leisure, healthcare and support facilities.

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<thead>
<tr>
<th>Resource</th>
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<tr>
<td>School website</td>
<td><a href="http://www.soton.ac.uk/engineering">http://www.soton.ac.uk/engineering</a></td>
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<td>Faculty information</td>
<td><a href="https://www.southampton.ac.uk/about/departments/faculties/engineering-and-physical-sciences.page">https://www.southampton.ac.uk/about/departments/faculties/engineering-and-physical-sciences.page</a></td>
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<td>School staff information</td>
<td><a href="http://www.southampton.ac.uk/engineering/about/staff.page">http://www.southampton.ac.uk/engineering/about/staff.page</a></td>
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<tr>
<td>Programme and module descriptions</td>
<td>Descriptions relating to your programme can be found via the programme pages on the web, and on Blackboard. Your programme structure (i.e. which modules make up your programme) is available in your programme specification and via the on-line programme catalogue which is accessible via Banner Self Service. To find links to broad generic descriptions of the programmes and modules, follow links to your programme starting from the School web pages: <a href="http://www.southampton.ac.uk/engineering/index.page">http://www.southampton.ac.uk/engineering/index.page</a>?</td>
</tr>
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</table>

1. General Information

1.1 Your Student Office
Opening Hours: Monday to Friday 9.00am – 5.00pm
Location: Building 13, room 2045
Contact email: eng-studentoffice@soton.ac.uk (general enquiries)
              exfee@soton.ac.uk (assessment and exams enquiries)
Telephone: (external) 02380 594171, (internal) 24171

You should visit the Student Office for all general queries relating to the administration of your programme (including coursework submission and collection of feedback, module registration changes, special considerations requests, sickness self-certification forms, suspension and withdrawal requests).

There is also a Student Reception area for the School of Engineering students at the new Southampton Boldrewood Innovation Campus, building 177 but be aware this is not often manned at present.
https://www.southampton.ac.uk/visitus/campuses/bolderwood.html

1.2 How we keep in touch with you

Email
We will use your University email account to contact you when necessary. We will not use any other email accounts nor social networking sites. It is your responsibility to check your University email account regularly and you must not let your inbox exceed your storage limit. Notification that you are due to exceed your storage limit will be sent to your University email account and you should take immediate action as you will be unable to receive further emails once your storage limit has been exceeded.

Written Correspondence
Formal correspondence regarding your programme of study (e.g. suspension, transfer or withdrawal from programme, academic performance (including progression/referral information), issues of academic integrity, complaints and appeals) will be sent to your term-time (TT) or permanent (PM) address listed as active on your student record. You are responsible for advising the University if you change your permanent or term-time address. The University will not be held accountable if you do not receive important information because you failed to update your student record.

Use of social networking sites
We understand that students are increasingly using social networking sites to interact with members of their student community. You should note that any behaviour that affects other members of the University community or members of the general public in ways which might damage the standing and reputation of the University may be subject to disciplinary action within the scope of the University's Regulations.
1.3 Confirmation of your status as a student and information on Transcripts and Certificates
The Student Office can provide you with a certificate to confirm your status as a student (e.g. for bank account opening purposes). Please ensure that you give at least 48 hours’ notice of your requirements (longer at peak times such as at enrolment or during the examination periods). Your award certificate will be produced using the legal name data you have provided within your student record. Please make any necessary amendments to your record immediately a change occurs to ensure that your certificate contains accurate information. Changes are made via Banner Self Service.

In accordance with policy, a scale of fees exists for the provision of certificates, transcripts and award certificates. Please see point 23 ‘Transcripts, Certificates and Award Letters’ within the Fees, Charges and Expenses section of the University Calendar for a list.

2. Supporting you through your studies
2.1 Supporting students with disabilities, mental health conditions or specific learning difficulties
Enabling Services provides a wide variety of support for students who have disabilities, mental health problems or specific learning difficulties. Its expert team can provide advice and support relating to your studies throughout your time here. Please see http://www.southampton.ac.uk/edusupport/index.page for further information and contact details.

Self-help books
A small collection of self-help books will be available on level 3 of the library, near the Academic Skills Book Collection. Topics include stress, anxiety, eating disorders, self-esteem and depression.

2.2 The role of your Personal Academic Tutor and other key academic staff
The University operates a tutor system to help support and advise students in their academic study. As a student, you can be expected to be allocated a Personal Academic Tutor. Your Personal Academic Tutor may or may not be one of the teaching staff you see in the course of your studies, but their role in this context is to provide advice and support to you throughout your study, and to help review your academic progress. You can expect to see your Personal Academic Tutor at key points through your University career and, if you need to, you can contact them more frequently. Sometimes, your Personal Academic Tutor may refer you to other areas for support. They may refer you to other areas for support. They may refer you to individual support services, or to your Student Office for information, or to a Senior Tutor.

The Senior Tutors are, Mrs Emma Mackenzie (ep@isvr@soton.ac.uk), Prof Marco Starink (M.J.Starink@soton.ac.uk), Dr Victoria Watson (V.K.Watson@soton.ac.uk), and Dr Jae-Wook Kim (J.W.Kim@soton.ac.uk). Also Dr Xize Niu (X.Niu@soton.ac.uk) who deals specifically with international students. The Senior Tutors will have a more specialised understanding of supporting students, and may support you if you have a particular problem. The Senior Tutor will also be able to offer general advice and information relating to further sources of assistance. You can also contact the Senior Tutor if you wish to change your allocated Personal Academic Tutor.

The University expects that you will engage with your Personal Academic Tutor, attend the scheduled meetings, respond to messages from your Personal Academic Tutor, and notify your Personal Academic Tutor (or Senior Tutor, if you prefer) if you are experiencing problems which are affecting your performance, attendance or progress in your studies. In particular, you should contact your Personal Academic Tutor if you feel your performance in any forthcoming examinations will be affected by ill health or other special considerations, and check with your Personal Academic Tutor if you plan to cite him/her as a referee for job applications.

2.3 Student buddyng and mentoring schemes
University of Southampton faculties and societies provide new undergraduate students with opportunities to liaise with current students who are able to offer advice and guidance based on their own experience as they adjust to living and learning at the University. Some of these opportunities are described as student buddyng, family or peer mentoring schemes.

Undergraduate buddy scheme for new Part one Students
Buddies are Part II, III or IV students who offer peer support to incoming Part I undergraduate students in the School of Engineering. The overall purpose of the buddy scheme is to help to facilitate the smooth transition of undergraduates to living and learning at Southampton. This support is provided both face to face and by online communication. Where appropriate, buddies will direct Undergraduates towards specific sources of advice, either in the School, Faculty or in the University. Buddies are allocated a specific group of Undergraduates to support and the norm is that Buddies are on the same Programme as Part I students. The School provides formal support and coordination for the scheme until mid-December.

2.4 What to do if you are ill
It is important that your doctor (as well as your Personal Academic Tutor) is immediately informed of any illness that is likely to affect your studies. If appropriate your GP may inform your Personal Academic Tutor that you are experiencing some health difficulties that may affect your academic performance. This will be done with your consent and you may wish the details of your illness to be withheld from your Personal Academic Tutor, although you should think carefully about this (your tutor will, in any case, respect your privacy). More information can be found in the General Regulations - Attendance and Completion of Programme Requirements.
2.5 External factors affecting your attendance or performance in your studies
We expect you to take responsibility for your studies to ensure that your full academic potential can be realised. However, sometimes difficulties can arise that can affect you.

If you are absent from an examination or other assessment or have other grounds for believing that your studies have been affected by external factors you must bring this to the attention of your Personal Academic Tutor or to the Student Office immediately. Whilst we recognise that students can sometimes be reluctant to discuss cultural, sensitive or personal issues, it is essential that you bring problems affecting you to our attention so that we can determine how best to help you.

Attendance at events and impact on assessment
Where a student wishes to prioritise another activity over attendance at a scheduled assessment the School Policy for Attendance at events and impact on assessment applies. A copy of the policy can be obtained from the Student Office.

For scheduled assessment worth 30% or less of the total module mark the student will receive no mitigation if they decide not to attend the assessment session.

For assessments worth >30% of the module mark it is the responsibility of the Director of Programmes to decide whether to permit mitigation and what form this mitigation should take.

It is expected that the number of single assessments that a student misses which fall within this category would be very small.

It is possible that mitigation will be allowed for events benefiting the University in terms of reputation, e.g. participation in international competitions; events the University may use as significant publicity opportunities; events benefiting the student in terms of employment e.g. internship interviews.

Mitigation will not be allowed for events such as holidays or to pursue hobbies.

In all cases, permission to miss the assessment must be requested by the student at least 10 working days prior to the original date of the assessment.

2.6 Special considerations
If you believe that illness or other circumstances have adversely affected your academic performance, this is known as Special Considerations. If you wish for these to be considered by the Board of Examiners you must complete a Special Considerations form. It is important that you submit this to your Student Office in a timely manner and prior to the Board of Examiners meetings and the release of marks. All claims must be substantiated by written documentary evidence, for example a medical certificate or GP/consultant letter, self-certification or a statement from your Personal Academic Tutor. The purpose of asking for supporting documentation is for you to be able to corroborate the facts of your submission.

All claims will be reviewed by the Special Considerations Board (SCB) which meets regularly throughout the year. The Student Office will contact you via your University email account to let you know once approval has been made.

Full details of the University’s policy on Special Considerations can be found at: http://www.calendar.soton.ac.uk/sectionIV/special-considerations.html

2.7 Fitness to Study
This Fitness to Study policy applies to enable the University to respond appropriately to situations where visible signs of illness, mental health difficulties, psychological, personality or emotional disorders may have a profoundly disturbing impact on the functioning of an individual student and or the wellbeing of others around them. The University has a positive attitude towards those with impairments and is committed to maintaining students' wellbeing. The policy identifies the procedure and support available to both students and staff when a student becomes unwell and/or presents a risk to self and/or others.

2.8 Suspending your studies
Should you feel that you need to take some time out from your studies, known as suspending your studies, you should first discuss this with your Personal Academic Tutor. A Suspension Request form should be obtained, completed and returned to the Student Office. Please note that, if you wish, you can suspend your studies in order to undertake an internship or period of industrial training outside of normal vacation time.

2.9 Withdrawing from your programme
If you no longer wish to continue with your studies, a Withdrawal Notification form should be obtained, completed and returned to the Student Office. Further information can be found in the General Regulations - Transfer, Suspension, Withdrawal and Termination.

The Students' Union Advice Centre has developed a Guide for students.
3. Your safety
3.1 Health and Safety Policy
The Local Organisation and Arrangements Document can be found on the Health and Safety Resource which should be in your course list when you log on to Blackboard. This contains all the specific Faculty information concerning Health and Safety and working hours. Everyone is required to access the Local Organisation and Arrangements Document at their earliest opportunity.

3.2 Access to Buildings
The Local Organisation and Arrangements Document can be found on the Health and Safety Resource which should be in your course list when you log on to Blackboard. This contains all the specific Faculty information concerning access to buildings.

Please also refer to Appendix C for information pertaining to access to student learning facilities at Southampton Boldrewood Innovation Campus.

4. Your Academic Programme
4.1 The academic year and the programme structure
The structure and modular content provided within the programme specification is specific to your own programme. You can view the most up to date version of the programme specification by accessing the Unistats website or SUSSED.

The taught components of the programme are delivered in modular form and typically run over two semesters. The teaching weeks are followed by a two to three week examination period. The semesters overlap the traditional three term structure which still determines the pattern of vacations at Christmas and Easter.

For any given programme a module is either core, compulsory, or an option. The definitions of the first two are provided in the General Regulations - Regulations and Definitions Applying to Progression for all Credit-Bearing Programmes. Your student record will automatically record core and compulsory modules and these must be completed in accordance with the requirements applicable to your programme.

Transfer from Integrated Masters (MEng) to the Bachelor (BEng) programme is normally permitted up to the last working day in February in Part III. Students who transfer from an Integrated Masters (MEng) programme to a Bachelor programme will not normally be permitted to transfer back to the Integrated Masters programme.

Transfer from Bachelor (BEng) to the Integrated Masters (MEng) programme is normally permitted up to the end of the final term of the third year. Transfer is subject to fulfilling the criteria of the MEng programme and an interview with the student's academic tutor or the Director of Programmes.

Core, compulsory and option modules for all degree programmes are listed in the Programme Specifications. All pre-requisites and assessments are documented in the module specifications. Specifically, all Part I required assessments must be passed at the pass mark. Part I required assessments must be successfully completed and passed before Part II may be commenced.

The progression regulations are as given in the University Calendar, Section IV and should be read in conjunction with the regulations for the Faculty of Engineering and Physical Sciences found in Section VI.

4.2 Registration and amendment to optional modules
Most programmes will have a number of optional modules. If applicable you will need to select a certain number of option modules to complete your portfolio of modules and fulfil the credit points as required for the programme. The structure and modular content provided within the programme specification is specific to your own programme. You can view the most up to date version of the programme specification through the SUSSED portal, from within the student information section.

The most up to date description of the content is in the Programme Catalogue, which can be accessed via SUSSED using the Banner Self-service facility: https://studentrecords.soton.ac.uk/BNNRPROD/twbkwbis_P_WWWLogin

To find links to broad generic descriptions of the programmes and modules follow links to your programme starting from www.southampton.ac.uk/engineering/undergraduate/courses/aerospace_list.page

When choosing your options, you are strongly advised to ensure that you have a similar total number of modules in Semester 1 and Semester 2, to maintain a balanced work load throughout the year. Once you have registered your options, it is possible for you to make changes but there are restrictions. The substitution of modules is not allowed (i.e. you cannot take an extra module in Semester 2 to replace a Semester 1 module in which you failed to perform well).

You may request a change to your option module choice up to the end of Week 2 of each semester. You should complete a Change of Module form to specify your request (forms can be obtained from the Student Office). If your option module choices clash in your timetable, then you will need to amend your option choice accordingly by contacting the Student Office immediately.
You should regularly check your online student record for details of your registered modules. This is particularly important after you have made any changes and will help to maintain the accuracy of your student record. It will also save time and confusion during the examination period.

4.3 Attendance
The University attendance regulations details the University’s expectations relating to attendance. You should also note that within the School of Engineering, lab attendance is mandatory and will be monitored (Part 1 tutorials are also monitored). In addition, you should note that attendance and engagement with all assessment activities is mandatory and is monitored. The Student Office can provide the School policy for ‘Attendance at events and impact on assessment’ see 2.5 above.

4.4 Additional Costs
Students are responsible for meeting the cost of essential textbooks, and of producing such essays, assignments, laboratory reports and dissertations as are required to fulfil the academic requirements for each programme of study. General programme costs are located in the programme specification. Modules that are optionally available to select may also include information on module specific costs. In addition to this, students registered for this programme typically also have to pay for:

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<tr>
<th>Main Item</th>
<th>Sub-section</th>
<th>PROGRAMME SPECIFIC COSTS</th>
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<tbody>
<tr>
<td>Approved Calculators</td>
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<td>Candidates may use calculators in the examination room only as specified by the University and as permitted by the rubric of individual examination papers. The University approved models are Casio FX-570 and Casio FX-85GT Plus. These may be purchased from any source and no longer need to carry the University logo.</td>
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<tr>
<td>Stationery</td>
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<td>You will be expected to provide your own day-to-day stationary items, e.g. pens, pencils, notebooks, etc. Any specialist stationery items will be specified under the Additional Costs tab of the relevant module profile.</td>
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<tr>
<td>Textbooks</td>
<td></td>
<td>It will be useful to purchase Callister, cost circa £60, but a large number are available in the library. (FEEG1002) Where a module specifies core texts these should generally be available on the reserve list in the library. However due to demand, students may prefer to buy their own copies. These can be purchased from any source. Some modules suggest reading texts as optional background reading. The library may hold copies of such texts, or alternatively you may wish to purchase your own copies. Although not essential reading, you may benefit from the additional reading materials for the module.</td>
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<tr>
<td>Equipment and Materials</td>
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<td>Design equipment and materials: Standard construction/modelling materials will be provided where appropriate, unless otherwise specified in a module profile. For customisation of designs/models calling for material other than standard construction/ modelling materials, students will bear the costs of such alternatives.</td>
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<td></td>
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<td>Excavation equipment and materials:</td>
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<td>Field Equipment and Materials:</td>
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<td>Laboratory Equipment and Materials: Students are required to source and purchase their own batteries for the Odometry Exercise in week 6 and should</td>
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<td>Main Item</td>
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<td>PROGRAMME SPECIFIC COSTS</td>
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<td>be prepared to spend up to £50 per group of their own money. Receipts should be retained as expenditure may be subject to auditing. (FEEG2001)</td>
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<td></td>
<td></td>
<td>Students should be prepared to spend up to £100 per group of their own money in relation to the purchase of components for the Semester 2 Group Design Project. Receipts should be retained as expenditure may be subject to auditing (FEEG2001)</td>
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<tr>
<td>Clothing</td>
<td>Lab Coats</td>
<td>You will need to wear suitable clothing when attending fieldcourses, e.g. waterproofs, walking boots. You can purchase these from any source.</td>
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<tr>
<td>Clothing</td>
<td>Protective Clothing: Hard hat; safety boots; hi-viz vest/jackets; Fieldcourse clothing:</td>
<td>Students are responsible for the printing costs of their poster for the Poster Presentation Day. This may range from approximately £5 - £20. Students are expected to cover the costs associated with the printing and binding of reports and the printing of drawings and graphic presentations. These are typically expected to be of the order of £100 per group, also depending on the quality of printing and binding chosen. Note that funds from the project's budget cannot be used for this purpose. (FEEG6013 MEng only)</td>
</tr>
<tr>
<td>Printing and Photocopying Costs</td>
<td>Students are expected to purchase a laboratory note book in which to record laboratory observations which form part of the assessment. These can be purchased for £1.20 (thin softback) or £4.75 (thick hardback), depending on student choice. (FEEG6013 MEng Only)</td>
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<tr>
<td>Optional Visits (e.g. museums, galleries)</td>
<td>Some modules may include additional optional visits. You will normally be expected to cover the cost of travel and admission, unless otherwise specified in the module profile.</td>
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4.5 Exchanges / Placement programmes / Industrial Placement Year

In the MEng programme there are opportunities for students to undertake periods of study abroad at partner institutions, which may be in Europe or beyond. The usual format is to undertake a semester abroad in Part III of your programme (MEng only). You will receive more information about these opportunities in Part II.
In addition, we encourage students to undertake industrial placements (or internships). These can be carried out during the summer vacation, such internships or periods of industrial training are not formally part of your degree programme although will significantly enhance your employment prospects after graduating. We do not organise these internships for you (this is your responsibility), but we will alert you to opportunities that exist as we are informed of them by companies with whom we maintain links.

Alternatively, provided you have passed Part II of your degree programme, you may elect to transfer to the Industrial Placement Year programme. The Industrial Placement Year programme is a formal part of your degree and is assessed by a written report and presentation upon return to the University. The Industrial Placement Year will offer you an opportunity to apply the knowledge that you have developed during your studies in Parts I and II and gain experience of working within an engineering based organisation. These placements also will significantly enhance your employment prospects after graduating. For more information on the Industrial Placement Year Programme please refer to the handbook.

5. Teaching and Learning Skills

5.1 Time management
It is your responsibility to manage your time in order to ensure that you keep up to date with the material presented and with the requirements of the programme. Deadlines for work submission should be adhered to, otherwise marks will be deducted via the imposition of a late submission penalty. However, the framework of when lectures and classes occur and deadlines for submission of work will be made available to you well in advance, but if you are unclear about any aspect of your module you should talk this through with your Module Lead or Director of Programmes. This knowledge will allow you to plan your life based on how you know you work best. Effective use of your time will allow you to perform well on your course and to enjoy student life. One of the work-place skills you should aim to acquire at University is the ability to manage multiple priorities. If you have problems in this area please discuss them with your Personal Academic Tutor.

5.2 Lectures
A single lecture slot lasts 45 minutes. It is therefore vital that you arrive promptly in order to gain maximum benefit from the time. Each lecturer will present material either using handouts or will require you to make your own notes. Transcribing lectured material into a form that you find most useful is an important part of the learning process. You should ensure that you understand the material and, if you have difficulty in understanding or applying the knowledge, use recommended textbooks or the assistance of teaching staff during tutorials to gain understanding. It is your responsibility to develop your ability in a given subject. How well you have acquired that ability and the associated knowledge is gauged by the examination and coursework assessment process. Lectures are provided for your benefit and you should take full advantage by ensuring you attend all of the lectures in a given course module. If, for any reason, you are unable to attend, ensure that you get hold of a copy of the notes or handouts from your module lead.

5.3 Use of electronic recording devices or mobile phones in lectures or classes
Out of courtesy to staff and other students, please ensure that mobile phones are switched off in lectures and seminars. You are advised that lectures are the copyright property of the lecturer and permission to audio-record a lecture must be personally sought from the lecturer before proceeding.

If you wish to use a lap-top computer to take notes in a lecture, you should do so in a way that does not cause disruption to those sitting near you.
If you have a health condition for which additional support is needed, you may, following assessment by the University’s educational support services, make appropriate arrangements with staff for recording lectures.

5.4 Tutorials/supervisions
Group tutorials/supervisions are timetabled for some modules. These sessions are intended for you to develop your problem solving skills as well as for you to discuss further with an experienced member of staff any particular lecture material you are finding difficult to understand. It is essential that you come well prepared for these sessions. These sessions are one of the most effective ways of reinforcing the lecture material.

5.5 Labs
Labs are timetabled for some modules. You may be provided with a specific lab timetable which you should follow and ensure that you attend all labs, as these provide valuable learning and assessment activities and are a mandatory part of your course.

Please see further programme specific information on Laboratory requirements in the Appendix.

5.6 Independent or Self learning
Independent study or self-directed learning involves using libraries, data retrieval systems, internet, etc, or in a group working on coursework, reading the lecture material or reading around the subject. This should also develop your investigative and problem solving skills in furthering understanding of the subject, creating links with other modules - past and present - and providing a broadening of your educational experiences and knowledge base.

Self-learning is your personal responsibility and your commitment to the programme. It requires discipline, motivation and focussing on achieving individually set targets. It enables you to reach your full potential academically, develops your personal skills and helps establish a successful professional career.
5.7 Key skills
Key skills are those skills which can be applied to other disciplines and fields of work. Employers are increasingly seeking to employ individuals with well-developed key skills. More can be found on the Academic Skills pages of the library website.

5.8 Policy on referencing
The University expects that all students will familiarise themselves with the following website http://library.soton.ac.uk/sash/what-is-academic-integrity / Academic Integrity Guidance for Students.
There are additional resources available on Blackboard to support understanding on referencing and plagiarism. https://blackboard.soton.ac.uk/bbcswebdav/courses/SST-05-06/writing/understanding_plagiarism.html
https://blackboard.soton.ac.uk/bbcswebdav/courses/SST-05-06/writing/avoiding_plagiarism.html
https://blackboard.soton.ac.uk/bbcswebdav/courses/SST-05-06/writing/introduction_to_quoting_and_paraphrasing.html
https://blackboard.soton.ac.uk/bbcswebdav/courses/SST-05-06/writing/a_strategy_for_effective_paraphrasing_and_summarising.html

There is no particular policy on referencing, as you will need to learn to be flexible with your referencing style dependent upon the demands of your discipline. You may wish to familiarise yourself with Endnote, JabRef, Mendeley although it is not a specific requirement that you use any of these tools. If you have any doubts about whether you are adequately referencing your work you should seek guidance from your lecturer or Personal Academic Tutor.

5.9 Academic integrity
The University expects that all students will familiarise themselves with the Regulations Governing Academic Integrity, which include the Academic Integrity Statement.
The Students' Union Advice Centre has developed a Guide for Students / Academic Support.

5.10 Part I workshop practice
Throughout your programme you will come across terms and concepts that relate to basic manufacturing methods. Thus it is a requirement of your degree accrediting institution that undergraduates are provided with a practical grounding in manufacturing techniques. Such training, together with experience of advanced CAD/CAM, will be provided in Part I, usually in the week following the final exam period. In addition there will be some workshop training given at Southampton City College; this is currently scheduled to take place after the Semester 2 examination period. The workshop practice forms part of the Part I Design & Computing module (FEEG1001).

6. Assessment and Examinations
6.1 Coursework assessment and submission
A number of modules include coursework assignments as part of the overall assessment. Coursework can often occupy a large amount of time. It is worth noting that getting a few extra marks on an assignment may not justify the extra time spent. Conversely, students who forget or do not bother to hand in work can make it very difficult for themselves to achieve their full academic potential.

Normally, all coursework should be accompanied by a completed Coursework Submission/Feedback form and submitted to the Student Office by 4.00pm on the published submission deadline. If both paper-based and electronic submission is required, you should note that your submission will not be considered complete until both formats have been submitted. If other arrangements are in force for submission of a particular piece of coursework, this will be advised by your module lead.

6.2 Penalties for late coursework submission
When coursework is set a due date for submission will be specified and there will be associated penalties for handing in work late.

The University has a uniform policy for the late submission penalty for a piece of assessed work worth 10% or more of the final module mark.

Work submitted up to 5 days after the deadline should be marked as usual, including moderation or second marking, and feedback prepared and given to the student. The final agreed mark is then reduced by the factors in the following table.

<table>
<thead>
<tr>
<th>University Working Days late</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(final agreed mark) * 0.9</td>
</tr>
<tr>
<td>2</td>
<td>(final agreed mark) * 0.8</td>
</tr>
<tr>
<td>3</td>
<td>(final agreed mark) * 0.7</td>
</tr>
<tr>
<td>4</td>
<td>(final agreed mark) * 0.6</td>
</tr>
<tr>
<td>5</td>
<td>(final agreed mark) * 0.5</td>
</tr>
<tr>
<td>More than 5</td>
<td>Zero</td>
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</tbody>
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6.3 Coursework extensions
If you know there will be a valid reason why you cannot submit the work at the given date you must contact the Student Office as soon as possible. You should complete a Special Considerations form, which should provide adequate detail of the reasons why you are seeking an extension. Your completed form should be submitted to the Student Office who will arrange for your request to be reviewed and approved. The Student Office will contact you via your University email account to let you know once approval has been made. It is your responsibility to request an extension in a timely manner. See paragraphs 2.5 and 2.6 above.

6.4 Examination preparation (also see Appendix B)
You will know yourself how best you prepare for examinations. It is always worth remembering that the sooner you start your preparation the better and that one of the aims of each module is to help you prepare for the examination. Make sure that you have a complete set of notes; that you understand their content; that you can apply the material by solving the example sheet questions; and that you have practiced questions from past papers under examination time constraints. The University’s online archive of previously set examination papers is available to assist with your learning and preparation for forthcoming examinations.

Past Exam Papers are available via the library.

Remember that if you get into difficulty during your revision process on a particular subject ask someone to help you. This may be either one of the lecturers or teaching assistants on the module. For helpful hints on revision strategy and examination techniques, please refer to Appendix B.

6.5 Examinations
The dates of University examination periods are published annually on the exam timetables web page.

When students repeat modules externally, it may be impractical for them to undertake the normal assessment activities, for example assessed laboratory or group work. In such cases where external repeat is permitted, the Board of Examiners will provide an alternative but equivalent form of assessment which will meet the required learning outcomes.

6.6 Illegible exam scripts
If your examination script is considered illegible, the Illegible Examination Scripts Policy will be instigated. You will be asked to come in to dictate your script so that it can be transcribed. The cost of this work will be met by you. If your script is not transcribed then it will receive a mark of zero (0).

6.7 Coursework and examination feedback
Feedback comes in many forms and you must learn to recognise the merits of all of these. The Student Feedback Policy provides an overview of formal feedback. Formal feedback is well documented and the following paragraphs identify ones that you are officially entitled to. Informal feedback is just as important and comes in the form of individual chats with your Personal Academic Tutor, module leads or project supervisors, or group meetings with academics after a lecture or practical session. Also tests and quizzes on Blackboard, which are available for several modules, can provide valuable feedback on how you are progressing.

All coursework will be marked and returned to you, accompanied by feedback which will relate to the standard of your work and the reasons for the mark/grade given. You should note that all marks are considered provisional until they have been reviewed and confirmed by the Board of Examiners. This feedback will typically be returned within four weeks following your submission. Large assignments (e.g. your dissertation/project work) may take slightly longer to be returned. Bear in mind that if you hand in work late, your feedback may be delayed.

Where appropriate, for example with smaller problem solving exercises like calculations, the lecturer will decide if feedback should be given individually, or reported back to the whole group. You are, however always free to ask the lecturer personally how you are progressing.

6.8 Access to coursework/examination scripts
Students are entitled to view their examination scripts on request to the Student Office. You are only permitted to view an examination script to enable you to see how you can improve your future performance and no mark or other annotation on the script is negotiable or open to alteration. The absence of annotation on a script does not mean that it has not been marked.

6.9 Release of results
Students will be given, as a matter of course, the marks they obtain in each individual module of study after they have been ratified by the Board of Examiners. More information can be found in the Release of Marks procedure.

You should note that the official transcript of your marks would normally show the latest mark obtained in each subject with a note, where appropriate, that it was obtained at repeat or referral attempt.

6.10 Prizes
Each programme group has a number of prizes, which may include prizes for each Part, project prizes, and overall performance prizes. Details of new prizes will generally be announced by e-mail.
6.11 Final assessment
At the end of your programme, your overall performance will be assessed.

If you satisfy the academic standards necessary, the examination board will recommend you for award.

7.0 Staff/Student Liaison: getting your voice heard

7.1 Module Survey
The School aims to consult with and to provide opportunities for all students and staff to make their views known. You are encouraged to offer your comments/suggestions to members of staff and feedback is requested for each module undertaken. Module Survey forms can be completed online and details of how to do this will be communicated to you during the academic year.

Module Survey outputs are considered by Education Boards and by School Programmes Committee, where your nominated student representative has the opportunity to discuss specific issues raised and actions taken.

7.2 Module Reports
Your feedback to module surveys will be reflected upon by the module leader and will be included in the Module Report. Modules reports are available via SUSSED under the ‘programme specific information’ tab.

7.3 Staff Student Liaison Committees
Staff-Student liaison committees have representatives from across each programme. These committees have the role of monitoring the organisation and management of the student programmes, to note any difficulties that students may be encountering, and to take advice about ways of improving the programmes.

7.4 Student Representation
Through the Students’ Union you will be invited to elect your representatives (Academic Presidents, Academic Vice-Presidents and Course Representatives) who co-ordinate the student voice on School committees to enable your voice to be heard.

More information on the Students’ Union officers and their roles is available on the Students’ Union Representation webpages.

8. Careers and Employability
The Careers and Employability Service provides support to students at all levels of study and has a range of opportunities on offer. We provide drop-in advice, 1:1 guidance, workshops, skills sessions, Careers Fairs and employer led events to support your career planning as well as the following opportunities:

8.1 Excel Southampton Internships
The Excel Southampton Internship Programme offers 4-12 weeks paid internships which enhance your CV, expand your network and open graduate recruitment opportunities.

8.2 Business Innovation Programme
The Business Innovation Programme provides an opportunity to develop your business acumen, team working and problem-solving skills by working on an 8 week project put forward by local businesses or not-for-profit organisations.

8.3 Volunteering Bank
Volunteering is a great way to help you gain many of the skills employers are looking for, build your network and develop yourself in new ways. Opportunities may vary in duration and the type of role advertised.

8.4 Enterprise
Whether you want to develop your own start-up or make a real difference from within an existing organisation, enterprise skills are essential to working life and highly valued by employers. The University of Southampton’s Student Enterprise Team support all students in developing their enterprising and entrepreneurial skills. Click here to find out more about opportunities and support.

8.5 Career Readiness Test
Developed especially for University of Southampton students and graduates, our Career Readiness Test will give you an insight into your career planning. Research shows that students who are more self-aware and clear on their career strengths feel more confident in their ability to succeed in the future. The test is for everyone. Take the test to:
  - Understand where to start
  - Reflect on your strengths and areas for development
  - Recognise what makes students most employable
  - Structure your thinking
  - Identify priorities for action

Just go to https://www.southampton.ac.uk/careers and click on the Graduate Capital Model to find out more.
8.6 Employability events within the School/Faculty
The Careers and Employability Service work closely with departments and Faculties to provide targeted careers support within and alongside your curriculum. Activities and opportunities may appear within the timetable, or be advertised within your School/Faculty. Examples include lectures and workshops, online learning options, and events featuring alumni/employers. There are often opportunities to connect with organisations that offer themed events focussed on employability. Some companies offer projects linked to dissertations or specific research.

You will be enrolled on the Faculty wide Blackboard, “FEPS Student Employability”. This site is used to let you know about specific events, jobs and study opportunities which are particularly targeting students from your subject. It also includes a folder of job search resources and an employer database which you can search by subject.

Careers staff linked to your subject will attend Staff Student Liaison meetings, so you can make suggestions via your student representative for additional careers and employability activities.

8.7 Professional Accreditation
Please use the following link for the professional accreditation offered for your Programme. http://www.southampton.ac.uk/engineering/undergraduate/study/accreditation.page

9. Further study opportunities
Perhaps you are considering postgraduate study. There is a wide range of programmes leading to various qualifications available to you, and selecting the appropriate programme may not be easy. The first thing to realise is that you need to make a well informed decision and therefore the key is to obtain all the information you need.

The Faculty always aims to retain its best and brightest students for research. However when collecting information about postgraduate studies, you should cast your net wide. You need to select an area that interests you – a difficult task in itself because you will also seek an area that has good employment prospects. There is also the choice between taught postgraduate programmes leading towards a Master of Science (MSc) and/or research postgraduate degrees (MPhil or PhD).

Further details on the programmes offered by the Faculty of Engineering and Physical Sciences can be found on the Faculty's website.

10. Regulatory Issues
We hope that you will be satisfied with your experience during your time as a student at the University of Southampton but we do recognise that, on occasion, things can go wrong. If you have a concern about any aspect of your experience at the University we encourage you to raise it as soon as the concern arises. It is always better to let us know that you feel there is a problem as soon as possible so that the matter may be resolved quickly. You may alternatively wish to consult with your student academic president if it is an issue in common with other students. Please be reassured that you will not suffer any disadvantage or recrimination as a result of raising a genuine concern, complaint or appeal.

10.1 Academic appeals
Provided you have grounds, you may appeal against any academic decision made by the University. There are some exceptions and you should note you cannot appeal against a decision that has been made in the proper exercise of academic judgment. The Regulations Governing Academic Appeals by Students outlines the regulations and procedure that should be followed should you wish to make an academic appeal.

The Students’ Union Advice Centre has developed a Guide to Academic Appeals / Academic Support.

10.2 Student complaints
The Regulations Governing Student Complaints sets out the process that should be followed should you wish to raise a complaint about a matter relating to either the facilities and services provided by the University, its academic programmes, and the conduct of University staff, and which has materially affected you.

10.3 Dignity at work and study
The University’s Dignity at Work and Study Policy applies to the conduct of staff and students, in the context of their University work or study, or which otherwise affects the working, learning or social environment of the University. Fair criticism of staff or student performance or conduct will not be considered to be bullying or harassment provided that those involved are treated with dignity, courtesy and respect. Any allegation of harassment, bullying or victimisation will be treated seriously, regardless of the seniority of those involved, and anyone found to have behaved unacceptably may be the subject of disciplinary action up to and including dismissal or expulsion.

10.4 Student Discipline
As members of the University community, all students are expected to conduct themselves with due regard for its good name and reputation and are required to comply with the University’s Regulations at all times. Any allegation of misconduct will be considered within the Student Discipline Regulations in accordance with the evidence and circumstances presented. Information for students on discipline is available from the Student Services website.

11. Training, Sponsorship and Employment
It is never too early to devote thought to your future career direction, although when you start your degree, the decisions may seem years away. However, time will pass quickly, and you will be in a better position to pursue
your future ambitions if you have a career focus to your studies. The Careers and Employability service will be able to help guide you in career choice.

Engineering offers a challenging and rewarding career. Employment opportunities are available in a wide range of areas; virtually any industrial organisation will employ engineers, and the education you have received also opens up other routes such as research, teaching, the armed forces or the financial service industries. Other graduates decide to continue their studies by entering postgraduate instructional/research programmes at Southampton and other universities. Past experience confirms that Southampton graduates are in a very competitive position when seeking career opportunities.

As part of your professional development, we encourage you to obtain industrial experience and training before, during and after your university programme. This will usually also count towards the industrial experience required by the Engineering Council for Chartered Engineer status.

All students are encouraged to undertake industrial periods in the long vacations before third and/or fourth years. As well as the experience, you get paid, and this substantially increases your chances of finding a job rapidly. For those students who are sponsored, this will often be with their sponsor.

If you are interested in a longer period, it is possible to take a year out of the programme; for the School of Engineering this will be through the Industrial Placement Year programmes. Please see section 4.5 for more information.

Finding temporary or permanent employment is your individual responsibility, but we can provide much assistance. We maintain contacts with many companies seeking students. The Employability Officers, Dr Atul Bhaskar (A.Bhaskar@soton.ac.uk) and Dr Dinesh Koralage Kahanda Koralage (Dinesh.Kahanda-Koralage@soton.ac.uk) maintain a list of company contacts and opportunities for placements. Please contact them for up-to-date information. A significant number of students obtain formal sponsorship from a company before or during the programme. We can help you to find such positions.

Also, the University’s Careers and Employability service provides a comprehensive professional service, which includes both temporary and permanent posts. You should make contact with them to discuss initial ideas early in your programme (during Part I), and then call on them from time to time thereafter.

The experiences of some past graduates are given on our website at http://www.southampton.ac.uk/engineering/undergraduate/our_students.page.
Appendix - Programme Specific Information

A1 Introduction to Aeronautics & Astronautics

Aeronautics and astronautics is having an increasingly significant impact on modern life. Over the next decade expenditure within the global aerospace market is expected to be greater than $2000 billion, with a major contribution coming from the UK, presently the world’s third largest buyer and seller of aerospace products.

At Southampton the Aeronautics & Astronautics engineering degree is recognised as being of the highest quality and we expect to provide you with the key knowledge and skills required to enter the aerospace industry. The Southampton area has long been associated with this industry. Aeronautics has been taught at Southampton since the 1930s, with the foundation of the Department of Aeronautical Engineering in 1951. Rapidly expanding interests in space technology and astronautics research led to the renaming of the Department in 1958 to the Department of Aeronautics and Astronautics. In 1999 this was incorporated into the School of Engineering Sciences and in 2011 aligned with the Faculty of Engineering and Physical Sciences following the University’s academic restructure.

Aerospace teaching and research within the School encompasses all aspects of aeronautics and astronautics. This includes the areas of aerodynamics, structures, propulsion, aerospace materials, aerospace systems and spacecraft engineering. All are brought together in the subject of aerospace design.

A2 Philosophy and aims of the Aeronautics & Astronautics programmes

The Aeronautics and Astronautics programmes provide a flexible structure that allows you to choose a specialist theme in addition to core aspects of aeronautics and astronautics. Parts I and II provide the fundamental knowledge as well as the skills and understanding necessary for using information technology in an engineering context. As you progress through the programme you will find an increasing emphasis on aerospace-specific subjects. Aerospace design and related work permeates the programme and ensures that you will be able to apply your theoretical understanding to real design problems that you might later encounter in industry.

The Aeronautics & Astronautics programmes consist of four parts (I through IV) each of which is taught over one year. Parts I and II are common to all programmes.

Part I is used to establish a firm foundation in engineering principles, and this is enhanced with studies specifically directed towards aerospace applications and operations. Part II builds on this foundation, by introducing core aerospace subjects such as aerodynamics, propulsion and mechanics of flight. You will also undertake your first module in Astronautics in Part II. Part III and Part IV are determined by the choices you make at the end of Part II. These two years of the degree programmes are designed to accommodate your particular interests, by allowing a choice from an extensive range of aerospace and related module options. This diversity is complemented by mandatory, multidisciplinary modules (such as Introduction to Aircraft Design) in Part III. In Part III you will also undertake an Individual Project which allows you to carry out an in-depth investigation on a specialised topic using analytical and/or experimental methods. In addition, a major part of the Part IV is the Group Design Project, which is carried out in small groups. Progression to Part IV is dependent on satisfactory performance at Part II and Part III. If you choose to leave the MEng programme at the end of Part III, you can graduate with a BEng degree. The final degree awarded at the end of Part IV is the MEng. The MEng degree is designed to give a broader coverage of fundamental engineering subjects within the context of Aeronautics & Astronautics.

A feature of the BEng and MEng Aeronautics & Astronautics programmes is the opportunity provided for you to tailor your studies to fulfil your own individual aspirations. Many students focus their degree studies on one specific aspect of aeronautics and astronautics, by careful selection of a topic-related set of options. Themes are chosen at the end of Part II. Current themes are:

Aerodynamics
Airvehicle Systems and Design
Computational Engineering and Design
Engineering Management
Materials and Structures
Semester Abroad
Semester in Industry
Spacecraft Engineering

A2.1 BEng Aeronautics & Astronautics

This three-year programme covers all the traditional core subjects of aeronautics and astronautics. As with the MEng programme, there is an increasing emphasis on discipline-specific subjects as you progress through the programme. The programme includes an Individual Project in Part III. It does however offer a more restricted choice of options in Part III than the MEng programmes, and does not include a Group Design Project nor any specialist themes.

NB: this programme has been accredited by the Royal Aeronautical Society and Institute of Mechanical Engineers as partially fulfilling the educational requirements to become a Chartered Engineer (CEng). In order satisfy the educational requirements for CEng, graduates of the BEng are required to undertake additional educational training to Masters level by taking an approved course of study.
A2.2 MEng Aeronautics & Astronautics
The first three years of the MEng programme are common with the BEng programme. However in Part IV the MEng programme offers you the opportunity to study a more extensive range of aerospace topics in greater depth than at BEng level. In addition, you will take part in a substantial Group Design Project. The MEng programme covers all the material needed currently to satisfy the academic requirements to become a Chartered Engineer. It is aimed at those who wish to pursue technically demanding careers in aerospace-related industries (including project management), or in research. Design, system studies and project activities are an integral part of the programme and are used throughout to emphasise the strong multi-disciplinary nature of aerospace engineering. You can select a theme in the third and fourth years, giving the option to focus on particular aerospace topics or to follow an interdisciplinary approach that is aimed at giving students a greater breadth of knowledge of professional engineering in industry.

A2.3 MEng Aeronautics & Astronautics/Aerodynamics
On this programme you will learn about the design and integration of wings and propulsion systems for aerospace. You will gain an appreciation of the capabilities and limitations of current aerodynamic prediction and measurement techniques. The programme provides excellent preparation for aerodynamics research.

A2.4 MEng Aeronautics & Astronautics/Airvehicle Systems and Design
This programme focuses on aeronautical topics with a particular emphasis on helicopters and fixed wing aircraft, engine design and avionics. Using a complete vehicle systems approach, you will also learn about modern design, search and optimization techniques.

A2.5 MEng Aeronautics & Astronautics/Computational Engineering and Design
This theme is designed to cover both advanced computational methods for solving structural and fluid dynamical problems and also automated search and optimisation methods for system design and reliability prediction.

A2.6 MEng Aeronautics & Astronautics/Engineering Management
This programme is designed to enable professional engineers to progress quickly into key management positions in the aerospace industry. On this programme, you will develop the technical skills to understand, design and manufacture new products and the expertise to manage the process, people and finances.

A2.7 MEng Aeronautics & Astronautics/Materials and Structures
A degree theme focussing on advanced material properties including composites and also computational methods to estimate the strength and durability of components used in aerospace and spacecraft design.

A2.8 MEng Aeronautics & Astronautics/ Semester Abroad Theme
This theme offers you an opportunity to spend a semester in continental Europe (for example: ESTACA, France or Delft, the Netherlands) or the USA (for example: Penn State University) in Part III. It will immerse you in a different culture and allow you to mix with colleagues with different backgrounds. The overseas section of the programme is taught in English. This removes the need for intensive language tuition before studying abroad. While we encourage you to use the many facilities available on campus to improve your language skills, this is not a formal requirement of the theme.

Some exchanges take place in semester 1 of Part III, whilst others takes place in semester 2. A programme of study must be agreed with the Exchanges Coordinator before you go on exchange. Your Individual Project must be completed in the Part III semester spent at Southampton, although it is possible that you will also undertake further project-based activities whilst on exchange.

Under the agreement we have with our exchange partners, you will continue to pay fees to the University of Southampton whilst you are on exchange; no additional fees are levied by the overseas exchange partner institutions.

Upon completion of this theme, you will have gained experience of living and studying in a different country as well as studying engineering to a high standard both individually and in a team.

Please note that places on the study abroad programmes are limited in number and are usually assigned on the basis of your academic performance in Parts I and II.

A2.9 MEng Aeronautics & Astronautics/Semester in Industry
An opportunity to undertake an extended industrially relevant project of six months duration with an industrial and an academic supervisor whilst simultaneously undertaking two modules via distance learning to ensure a sufficient taught course component during this time.

A2.10 MEng Aeronautics & Astronautics/Spacecraft Engineering
This programme is aimed at students who may be interested in pursuing a career in the spacecraft industry. In Parts III and IV elements of the aircraft design content of the Aeronautics & Astronautics programme are retained, but the emphasis is more on the overall system design of spacecraft. Therefore this programme offers great flexibility for graduates in terms of future career options within the aerospace industry.

A3 Programme content
MEng/BEng Part I
All modules in Part I are core i.e. all required assessments must be taken and passed at the required pass mark.
MEng/BEng Part II
All modules in Part II are compulsory.

MEng/BEng Parts III and MEng Part IV
Parts III and IV comprise mainly a mixture of compulsory taught modules (chosen by theme) and individual and group projects. Additionally there are some optional modules that you have selected in the previous academic year.

Transfer between themes after the start of Part III is not normally possible, except if you are able to successfully complete the required modules that are part of the Theme to which you wish to transfer.

For MEng students, continuation to Part IV is dependent on satisfactory performance in Part III. An MEng student can elect to exit the programme at the end of Part III and graduate with the appropriate BEng degree class for their performance.

A4 Practical classes, laboratory work and other coursework
In Parts I and II and selected Part III/IV modules you will undertake laboratory work, practical class-based work and other coursework in addition to attending lectures. The principal objectives of these activities are to:

i. illustrate and enhance the appreciation of the lecture material;
ii. provide experience of the use of specialised test equipment, instrumentation and facilities;
iii. provide appreciation of the philosophy of measurement and associated experimental error;
iv. provide practical experience of computing, engineering design and drawing;
v. provide an opportunity for team activity;
vi. develop skills in communication, critical analysis, decision making and working in a group.

In the main, such coursework consists of two or three exercises per module. However, some modules are assessed wholly by coursework, which may comprise essays, assignments, projects, etc. For all modules, the contribution of coursework to the final mark is given in the module profiles and/or through Blackboard.

A5 Flight test course (Aeronautics & Astronautics programmes only)
In Part II Aeronautics & Astronautics students are required to attend a Flight Test Course, usually in the Week 29 or 30, although sometimes early in the summer vacation period, depending on the availability of the flying laboratory aircraft. This includes briefing sessions and flights from Southampton Airport.

A6 Project Work
It is essential that you consult your project supervisor(s) on a regular (e.g. weekly) basis to discuss progress of work. The arrangement for this should be discussed at the start of the project and incorporated into the project plan.

Research involving human participants must always be subjected to ethical scrutiny, to ensure it is carried out in a way that reduces the risk of harm to the participants and increases the potential for benefit. Such benefit may mean, for example, the advancement of knowledge, or the educational benefit of a student. In 2005 the University adopted the Research Governance Framework; according to its recommendations, all research that involves any human participation must have a Research Sponsor. In the case of undergraduate students, the project supervisor can act as the Research Sponsor. If your project work does involve human participation then you must ensure that your project supervisor completes a questionnaire indicating whether they have any ethical concerns about the project and whether it needs to go to the Ethics Committee for consideration.

A6.1 Individual Project
Rules governing Individual Projects and their assessment, along with important information and advice about completing an Individual Project are in the “Individual Project: Guidance for Students” document available on Blackboard.

Late submissions of project reports (interim and final) are subject to penalties described in section 6.2. The project is a core module therefore a pass mark (40%) must be obtained in the Individual Project in order for a degree to be awarded.

(all students except Semester Abroad theme)
You are required to carry out an Individual Project in Part III. Individual Projects have a value of 30 CATS credit points and run through two semesters. The process of Individual Project selection is carried out in Semester 2 of Part II. Following the allocation of projects and the completion of the literature survey, you must:

i. submit a preliminary project plan. (Semester 1, weeks 1-3); you will be informed of when this will take place by email;
ii. submit an interim project report to be assessed by your supervisor and a second examiner (end of week 9);
iii. submit a final project report to be assessed by your supervisor and a second examiner (Semester 2, in week 10);
iv. attend a student poster presentation day in beginning of June where you present your project on a poster to at least 2 examiners.
Guidance to students, including the calendar of events can be located from Blackboard and is stored under FEEG3003.

A6.2 Individual Project (students on the Semester Abroad theme)

Because you will be studying abroad in Semester 1 or 2 of Part III it is necessary for you to complete your Individual Project in one semester whilst at Southampton. You should already have checked with your project supervisor that your project is capable of being completed in one semester (the nature of some projects – particularly those that are experimental – is such that this is not always possible). Assuming this is the case, because you have less taught modules at Southampton than the “regular” students there should be ample time for you to complete your project in one semester. However, it is imperative that you plan your work carefully and make an early start.

The assessment of the project is identical to that for other students. Thus we require you to make a preliminary presentation, to submit an interim, as well as a final, report and to attend an oral examination. The timescales for these milestones are, however, different from those described above for students following other themes. These timescales are described below.

Semester I Abroad
If you are studying abroad in Semester 1 of Part III it is necessary for you to complete your Individual Project in Semester 2, meeting the following milestones:

i. produce a project proposal and plan and initial literature review for feedback from your supervisor (normally by the end of Semester 2, Week 2)
ii. submit an interim report (normally in Semester 2, Week 5);
iii. submit a project report (normally Semester 2, Week 9);
iv. attend a project poster presentation (normally after the Semester 2 Exam Period).

Semester II Abroad
If you are studying abroad in semester 2 of Part III it is necessary for you to complete your Individual Project in Semester 1, meeting the following milestones:

i. Produce a project proposal and plan and initial literature review for feedback from your supervisor (normally by Semester 1, Week 2)
ii. submit an interim report (normally in Semester 1, Week 8);
iii. submit a project report (normally Semester 1, Week 11);
iv. attend a project poster presentation and oral questions (normally in Semester 1, Week 12).

A6.3 Group Design Projects

MEng students are required to carry out a Group Design Project (GDP) in Part IV. The GDP involves the design and usually build of an artefact or some equipment. Therefore careful planning and organisation is essential. Group Design Projects are worth 45 CATS and run through two semesters. The project teams usually consist of 5-6 students; although this depends on the scope of the project. The following activities take place:

i. team meets to organise and prepare project proposal, including finances and, where applicable, external sponsorship; project supervisor(s) are consulted (normally Week 1); in some cases this will involve crucial presentations of your plans to the researcher coordinating the project,
ii. preparation of a bid for extra funding if deemed necessary by the supervisor(s),
iii. second examiner appointed (normally Weeks 2 - 4),
iv. lab inductions attended by week 4 where applicable
v. teams are advised to have regular progress meetings with supervisor(s),
vi. teams arrange project review meetings during the 1st and 2nd terms with the second examiner and, where applicable, sponsor,
vii. teams attend formal presentation and viva (Semester 2, from Week 12).

Late submissions of project reports (interim and final) are subject to penalties described in section 6.2. The project is a core module therefore a pass mark (40%) must be obtained in the Group Design Project in order for a degree to be awarded.

A7 Prizes

The School likes to recognise outstanding performance in its students and offers a range of prizes. The main established prizes are listed below.

The School is grateful to The Boeing Company for making a gift of one (1) scholarship at £3000/year) for the top student in Part II of the Aeronautics & Astronautics programme, tenable for subsequent year. Selection is based on class ranking and established during the summer examination board.

The Royal Aeronautical Society prize is awarded to the Part IV MEng student in the Aerospace cohort with the best overall performance.

The Jim Graham Prize is awarded to the student with the Best Experimental Individual Project.
The Charlie Williams Wind Tunnel Prize is awarded to the student with the Best Individual Project using the Wind Tunnel.

The Juliette Salzmann Prize is awarded to the student in the final year of a Master of Engineering degree who shows the best overall performance in both studies at Southampton and during a semester abroad in mainland Europe.

**Deans Award**

The School likes to recognise outstanding performance in its students and offers a range of prizes.
Appendix B

Revision Strategy and Examination Techniques

B1 Revision Strategy
Revision should be an on-going process which starts very early in your programme. The amount of knowledge to be accumulated and the variety of skills and techniques to be developed are large and they are best assimilated gradually and consolidated as you go along. Regular revision is really a part of the learning process but, of necessity, becomes more concentrated as the examination approaches. ‘Re-vision’ means looking again at things you have already seen – it is not about learning for the first time.

B1.1 Final Revision Programme
At the start of your final revision schedule (during the Christmas Vacation for Semester 1 exams, and during the Easter Vacation and at the end of the taught element of the programme for Semester 2 exams) you must get organised, and the best way to do this is to devise a revision timetable. Plan your time carefully, give yourself definite objectives for each session, revise actively, test yourself regularly, make notes, and practice problem solving. Use revision sessions to study topics you have worked on before, as revision is simply the process of reminding you of topics and techniques previously understood. You will appreciate how well-organised notes will help you during your revision. Write out important definitions, proofs, formulae and equations, checking them against your notes. Re-work previously solved problems without looking at your previous solution, then attempt questions that you have not looked at before. Make special revision notes for quick reference on cards to keep in your pocket and charts to hang on the wall of your study room. Practice your examination technique.

Examination Practice
You should be familiar with the courses and syllabuses you will be examined in at the end of Semester 1 and Semester 2. Analyse recent examination papers. Work out how long you have for each question and become familiar with the style of questions.

During your ordinary study periods you will have attempted many questions but will have seldom given yourself strict time restrictions. In examinations the timing of your answers to questions is vitally important. Practice answering examination questions in mock examination conditions, allowing yourself only the normal available examination time and the equipment you are permitted to take into the examination room. To obtain ‘mock examination’ practice save one or two complete examination papers so that you can use them as final test papers ‘against the clock’.

Examination nerves are common and understandable but will be lessened if you have followed a sensible course of study and revision. You may not do yourself justice if you have a poor examination technique. The hints below should help you to tackle the examination with greater confidence.

Examination Techniques
Before the Day
Before the actual day of your examination, make sure you know:
• the date, day, time and venue of each paper for your course;
• how to get to the examination venue if it is not well known to you;
• your student ID (take your ID card to all examinations);
• the telephone number of the Student Office (external) 02380 594171 (internal) 24171.

Prepare any equipment you will need for your particular examination:
• pens which are comfortable to use;
• sharp pencils, a pencil sharpener and rubber;
• drawing instruments such as a ruler, compasses, protractor, set squares;
• University approved calculator (if allowed) and spare batteries (check that you know how to replace them quickly);
• an accurate watch or small clock.

On the Day
Before the examination:
Check that you have all the equipment you will need before setting off for your examination with plenty of time to spare. If you are delayed, contact the Student Office (have the telephone number with you) to explain what has happened. Arrive at the examination room early; a late start to an examination cannot be a good start and you will not be permitted to enter the examination room later than 30 minutes after its scheduled start time.

Just before the start:
Listen carefully to the invigilator. There may be some changes or special instructions which you were not expecting or some errors in the paper. Fill in any details, such as your student ID, when the invigilator instructs you to do so.
Reading the instructions

When the invigilator says that you may begin, read the instructions on your examination paper very carefully. Make sure that it is the correct examination paper and in particular note:

- the number of sections and questions you have to do;
- how much time you have to do them in;
- which questions (if any) are compulsory;
- what choice of questions (if any) you have;
- how to present your answers.

Planning your time

Quickly calculate the length of time you should spend on each question. You will have practised doing this for past papers but make sure that you use the instructions on your actual examination paper, rather than making any assumptions. Try to allow about 10 minutes at the end for checking your paper.

Choosing the questions

Read through the whole examination paper carefully, checking that you have read each page. If you have a choice of questions:

- cross out the ones you cannot do;
- tick those you can definitely do;
- choose the correct number to do;
- mark the order in which you are going to attempt them, attempting your best question(s) first.

Answering the question

Before you attempt to answer a question, read it all again carefully, jotting down points such as formulae and information relating to that question. These hints should help you when writing an answer.

- Plan before you write – the stress of working under time constraints in the exam room can make all your good study intentions disappear. However, this is when it is more important than ever. Take a few minutes to think and plan.
- Think about what the question is actually asking. What are you expected to include in your answer? Which material will be relevant?
- Underline the key words in the question; identify the main topic and discussion areas; choose a few points/arguments about which you can write; make a mini plan which puts them in order before you start writing. You can cross through it afterwards.
- Make sure that your writing is legible.
- Present your answer in a neat, logical and concise way.
- Show all your working; marks are often given for methodology as well as your answers.
- You should be able to refer by name to the main theorists/researchers in your topic, giving the year of their major works. You do not need to give page numbers of lengthy quotes, except in an open book exam. You do not need a reference list.
- Do not do things you are not asked for.
- If relevant, state any principles, results, formulae used and indicate your reasons for using them.
- Check any formulae you use with the formula sheet, if provided.
- Always do a rough estimate of any calculation to check that your answer is sensible.
- When using a calculator, make sure that each calculation is shown clearly in your answer and give your final answer to the required degree of accuracy.
- If you get 'stuck', re-read the question carefully to check that you have not missed any important information or hints given in the question itself.
- When you have completed your solution, re-read the question to check that you have answered all parts.

Examination discipline

It is important that you try to keep to the times you have allocated to answering a question or section and that you answer the correct number of questions. If you answer less than the number of questions required you are limiting the number of marks available to you.

At the end

Before handing in your examination script, check that:

- any 'front sheet' is completed according to the instructions;
- every loose page is clearly marked with your student ID, etc;
- every answer is numbered correctly;
- pages are numbered clearly and in order.
Appendix C

Access to student learning facilities at Southampton Boldrewood Innovation Campus

The Faculty is opening up access to many student learning facilities at the Boldrewood campus ‘out of hours’, after piloting some extended access, and discussion through Staff-Student Liaison Committees.

When can I access facilities?
You are welcome to access student learning facilities between 0600-2300, seven days each week, excluding University closure periods - typically at Christmas, Easter and Bank Holidays. Your access includes weekends and May and August bank holidays.

<table>
<thead>
<tr>
<th>Colour code</th>
<th>Days and times</th>
<th>Access permitted for students?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green - ‘normal working hours’</td>
<td>Monday to Friday 0800-1800 EXCEPT ‘Red’ or ‘Amber’ days</td>
<td>Yes; buildings open, teaching and exams routinely scheduled. Access to labs and workshops may be restricted; activities must be risk assessed.</td>
</tr>
<tr>
<td>Amber - ‘out of hours’</td>
<td>Monday to Friday 0600-0800&lt;br&gt;Monday to Friday 1800-2300&lt;br&gt;Saturday, Sunday and Bank Holidays 0600-2300 EXCEPT ‘Red’ days</td>
<td>Yes; Boldrewood campus buildings are open to the Faculty’s staff and students. Teaching and exams occasionally scheduled. Buildings open to visitors/the public only by special arrangement. Staff and students have access to social spaces and common learning spaces at Boldrewood. Access to labs and workshops is highly restricted; activities must be risk-assessed. Lone working in labs and workshops is not permitted.</td>
</tr>
<tr>
<td>Red - ‘University shut down’</td>
<td>2300-0600 on all dates&lt;br&gt;Also at all times over the University closure period at Christmas, Easter, Bank Holidays and any other date notified as ‘University shut-down’</td>
<td>No. It is exceptional for staff to be granted access to buildings during shut down periods - a rigorous permissions process applies.</td>
</tr>
</tbody>
</table>

What facilities are available?
- B176L/1101 SMMI Design and Project Studio – 48 PCs [eating and drinking not permitted, except bottled water]
- B176L level one CLS rooms and meeting rooms¹, toilet facilities
- B176 level one 'out of hours' building entrance, toilets and shower facilities
- B176 level two Cafe area and vending machines², toilet facilities
- B176 2013 Seminar room²
- B177 level one building entrance, social area and vending machines, toilet facilities
- B177 level one multi-faith room
- B177/2011 PC workstation cluster – 15 PCs [eating and drinking not permitted, except bottled water]
- B177 2011/2012 CLS room/s², toilet facilities
- B177/3011 Design (and Fabrication) Studio [where eating and drinking is permitted], toilet facilities

Faculty meeting rooms can be used by students to work or eat their lunch. The rooms will need to be vacated if a formal meeting has been booked.

What is not available ‘out of hours’?
Unless specific arrangements have been made with a member of staff, students are not permitted to enter or remain in labs and workshops, staff and PGR offices, kitchens and B176 levels three and above.

¹ Unless those rooms are booked/in-use for teaching/assessment/meetings or other events, including set-up and take-down periods.
² Unless those rooms are booked/in-use for teaching/assessment/meetings or other events, including set-up and take-down periods.
The B176 level one labs and B177 level two workshop are not open ‘out of hours’.

The School’s Boldrewood Student Office, based in building 177 (the Annex) is not always staffed and it is best to visit the Student Office in B13 on Highfield campus.

Academic staff/your tutor is not available to see you ‘out of hours’, unless they’ve made a special arrangement with you.

What is expected of me?
You are expected to...

- respect your fellow students and University staff, by behaving reasonably and keeping noise levels down inside the buildings
- respect the needs of our partners on the campus, in the Lloyds Register Global Technology Centre, and local residents, by behaving reasonably and keeping noise levels down outside the buildings
- co-operate with signs and instructions about where you may eat and drink
- co-operate with directions given by University security and other staff
- leave the buildings promptly by 2300
- keep areas clean and tidy, reporting any accidental damage or equipment faults to Security before leaving the site
- return furniture to its initial layout if you move things (being careful not to damage yourself or furniture/floors)
- ensure that you do not let others use your card for access, or ‘tail-gate’ you into and out of buildings
- and of course, comply with the University’s regulations and policies, as set out in your Student Handbook (see http://www.southampton.ac.uk/studentservices/faculty_handbooks/).

How do I get in and out ‘out of hours’?
Access applies only to students enrolled on programmes in the Faculty of Engineering and Physical Sciences. Permission for out of hours access must be provided by the School Safety Officer – Mr David Lynock email D.J.Lynock@soton.ac.uk. Students enrolled on programmes in other Faculties do not have ‘out of hours’ access.

<table>
<thead>
<tr>
<th>Building 176L level one and building 176</th>
<th>Building 177</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Normal working hours’</td>
<td>Through B176 level two reception area and card-access turnstiles</td>
</tr>
<tr>
<td></td>
<td>Through B177 level one reception area – automatic doors (inner and outer)</td>
</tr>
<tr>
<td>‘Out of hours’</td>
<td>Through B176 level one ‘out of hours’ door at the bottom of the steps – swipe card access point to the side of the door.</td>
</tr>
<tr>
<td></td>
<td>Through B177 level one reception area – swipe card access point outside outer and inner doors; white release switch inside the inner door; swipe card point inside the outer door.</td>
</tr>
<tr>
<td>University shut down</td>
<td>No access</td>
</tr>
<tr>
<td></td>
<td>No access</td>
</tr>
</tbody>
</table>

What do I do if...?

- I need help?
- I need a first aider?
- I observe others misbehaving?
- I accidentally damage something or find something damaged?
- I believe people are in the building who should not be here?

In all these cases, you alert the University Security staff, who are present on the campus 24/7. They are based in building 176, level two, office 2025 (although they patrol the campus, and may not be in the office all the time). You can call for assistance via the University’s Central Control room on 023 8059 3311, or dial 23311 from any internal phone extension.

- the fire alarm goes off?
  Leave the building by the nearest available exit, without delaying to collect your belongings. Assemble on the west that has the bronzed artwork located, and wait to be let back into the building when it has been declared safe. If you wish to leave the site/not wait, please make sure that a member of staff/Security/Fire Warden knows you have exited the building safely already.

- there is a problem with my ID card?
  There may be a technical issue with your status in the access control system, or with your student record/enrolment status; unfortunately you will need to wait until normal working hours for this to be investigated and resolved. Please email boldrec@soton.ac.uk, giving your student number and details, or drop in to the Boldrewood Reception in B176 level two, between 8.30am and 5.00pm.
• I've lost my ID card? … my ID card has been stolen? … my ID card is damaged?
You will need to get a replacement ID card. See https://www.southampton.ac.uk/studentservices/id-cards/index.page for further information about how to apply, charges and timescales.