Course Handbook for the Engineering MPhil and PhD Degrees and 2019/2020

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Appendix A – Engineering Modules for Graduate Students
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You should also consult the Code of Practice for Research Students:
https://www.cambridgestudents.cam.ac.uk/new-students/manage-your-student-information/graduate-students/code
The Graduate Studies Office:

Location: Room BEO 24, Office Floor, Baker Building, Trumpington Street

Admissions Enquiries: 01223 7 48233

Current Students and Degree Committee: 01223 7 48230

e-mail: graduate-studies@eng.cam.ac.uk

Staff:

Ms Becky Ramshaw
Office Manager & Secretary of the Degree Committee Secretary

Mrs Deborah Smathers
Administrator – Degree Committee Administration & Conference Grant Applications

Mrs Laura Reed
Administrator – Changes in Circumstances & Supervision Reports

Mrs Louise Wilson
Administrator – Admissions & Studentships

Mr Ronald Collinson
Administrator – Taught Courses and Modules

Deputy Head of Department (Graduate Studies)
Prof Joan Lasenby

Researcher Development Coordinator
Dr Susan Jackson

Graduate Student Mediators
Prof Allan McRobie and Dr Athina Markaki

Information about the Department and facilities can be found on the Intranet:
http://intranet.eng.cam.ac.uk/

and on the Graduate Studies web pages:
http://graduate.eng.cam.ac.uk/

General information on Graduate Studies can be found on the Student Registry website:
http://www.cambridgestudents.cam.ac.uk/

The METEOR module selection system can be found here:
http://meteor.eng.cam.ac.uk/login

The University’s Moodle virtual learning environment can be found here:
https://www.vle.cam.ac.uk/login/index.php
Course Requirements: All Research Degrees

If you are a PhD student, you will not initially be registered for this degree. Instead, your admission is for a probationary year, during which your registration status will usually be PhD (probationary). At the end of the first year, if your progress has been satisfactory, you will be registered for the PhD degree. After registration, you usually continue with your research for a further two years for the PhD degree.

Occasionally, a student’s performance in the first year indicates that he or she is unsuited to research at doctoral level in the Department. In this case you will not be registered for the PhD, but will either leave the course at that point, or you may be offered the opportunity to register for a lower degree or certificate.

All probationary PhD students and students registered for the Engineering MPhil programme follow a similarly structured first year. You will spend most of your time on your research project, which you write up as a first-year report (if you are a probationary PhD student) or thesis (if you are registered for the research MPhil). Additionally, students are normally required to take two modules and one Researcher Development Course (RDC).

Modules and RDCs
Students starting in October are required to take two 16-lecture modules, chosen in consultation with your Supervisor, from the list of approved modules. Each module lasts for one term and has an associated workload of about 80 hours. The module timetable and syllabuses can be found on the Departmental web pages (see page 2). Students who have previously studied at Cambridge may be granted exemption from taking one module.

Students who start in January are required to attend at least one module in their first term (Lent Term), which will be formally assessed by the time of the first year review. The second module may be waived on application to the Graduate Studies Office. Students who have started in April (which only occurs in exceptional circumstances) are required to attend at least one module in the following Michaelmas Term; again, the second module may be waived on application to the Graduate Studies Office.

Students may take a ‘reading club’ in place of a second module. A reading club comprises a group of students led by a member of staff who meet for 2 hours weekly for one term to work through a book or collection of papers. Students who are taking only one module may not replace it with a reading club.

The acquisition of research skills (that is, skills not specifically associated with your own research topic, which are more widely applicable) forms an important part of your development during your research. All first-year research students are required to attend regular sessions of a Researcher Development Course (RDC), and your Supervisor will provide details of the course you should join. Typical activities within the RDC include sessions on reviewing literature, preparation and delivery of presentations and posters, and development of writing skills.

You must enter your selection of Modules/Reading Clubs, and the RDC you will be taking, on our online module-entry system, METEOR (http://meteor.eng.cam.ac.uk/login) by the published deadline (see page 18). METEOR lists the modules and reading clubs that you can take. You must select three entries on METEOR, including the RDC.

If you believe that you are eligible for a module exemption, you must submit the Module Exemption form, available from our website, to the Graduate Studies Office.
If your supervisor recommends that you take modules in other departments, you need to get permission from the Graduate Studies Office in advance. Your supervisor is responsible for making arrangements for you to take the examination.

Modules are generally assessed by coursework, written examinations, or a combination of both. Coursework submission deadlines are set by the course lecturer. All written examinations of modules are held early in the Easter Term.

Attendance at examinations is compulsory. If you have a disability or a specific learning difficulty, your College Tutor can apply for you to be allowed extra time for the exam.

Each written examination paper normally has a duration of one and a half hours plus an initial ten minutes reading time. Past examination papers for modules can be found on the Teaching Office web pages. Standard data books for use in examinations are available from the Teaching Office. Please consult the Module Leader or your Supervisor about the relevant data books that will be provided in the examination rooms for a particular module. Students whose first language is not English should note that dictionaries may not be taken into the examination rooms. Only certain models of calculator are approved for use in University examinations. Further information on examinations can be found on the Teaching Office web pages:
http://teaching.eng.cam.ac.uk/content/lib-course-information

Assessment: MPhil Degree

A pre-meeting should be held with your Supervisor and Adviser 2 – 3 months before your submission date: at this meeting you should present an outline of your thesis for discussion. Before submission, your supervisor will expect you to give him or her drafts of your thesis for comment. The Degree Committee will appoint two examiners for you who will be experts in your field of study, at least one of whom will be from outside the University.

Examination Procedure
Two soft bound copies of the final version of your thesis must be submitted to the Graduate Studies Office. The typical length of an MPhil thesis is 10,000-15,000 words. The Degree Committee cannot give permission to exceed the word limit of 15,000 words. The examiners of your thesis will want to satisfy themselves that it is clearly written, that it takes account of previously published work on the subject and that it represents a contribution to learning. The regulations for the Engineering MPhil programme also require that the thesis provides evidence that you can design and carry out investigations, assess and interpret the results obtained and place the work in the wider perspective of the subject.

You will be required to attend an oral examination (viva) on your thesis and on the general field of knowledge within which it falls. The oral examination is normally held in the Department within eight weeks of the submission date. Students planning to leave the country at the end of their course, or to start a PhD immediately afterwards, may need to be examined early and should aim to submit their thesis well before the deadline.

Full details can be found on our website: http://graduate.eng.cam.ac.uk/mphil-thesis-submission-and-examination
Assessment: PhD Degree

First-Year Report
Probationary PhD students are required to submit two soft-bound copies of a 10,000-15,000 word report on the work that they have been doing that year, and will be doing for the rest of the course. The report – the title of which will have been agreed previously with your Supervisor – is to be submitted to your Divisional Administrator’s office by the published deadline (see page 18). Earlier submission is encouraged. The Degree Committee attaches importance to submission by the due date, and the Secretary of the Degree Committee is required to inform it of the name of any student who fails to submit by the prescribed time. Extensions to the deadline for the First Year Report will not usually be granted, except in case of illness or other grave cause. You should contact the Graduate Studies Office to request an extension, which will be considered by the Secretary of the Degree Committee after consultation with your College Tutor and Supervisor.

Your report should indicate that you have done a good deal of reading and obtained a thorough grasp of your research problem(s). It should contain an informed survey of the relevant literature, a clear statement of the objectives of the research, a description of the methods to be used and a carefully thought out programme for the research, including realistic estimates of timings and dates.

The aim should be to complete the research by the end of the eighth term of residence, leaving the remaining time for the satisfactory completion and examination of the thesis. Although the regulations for the PhD degree allow up to twelve terms before permission for an extension needs to be sought, it is expected that the course leading to the PhD should be completed in three years; you may not be able to secure funding for longer than this.

If you have any questions concerning the content and format of your report, you should raise these with your Supervisor who will explain what is required.

Registration for the PhD Degree:
To be registered for the PhD Degree, you must pass the following steps:

1. Pass two modules (unless you have been granted an exemption). The pass mark for all modules is 50%. A list of approved modules can be found on the Graduate Studies web pages and in Appendix A. The second module can be replaced with a Reading Club.
2. Attendance at a Researcher Development Course (RDC). Your supervisor will advise you which RDC you should attend.
3. First Year Report – the First Year Report must be submitted by the due date to your Divisional Administrator.
4. First Year Assessment – this assessment is in three parts
   a) Preliminary Meeting with your Supervisor and Adviser
   b) Technical Meeting with your Supervisor and an Assessor
   c) Formal Meeting with the Head of Division (or Deputy) and Assessor (in some cases an additional assessor will be appointed)

The most important element of your first year assessment is your first year report and your defence of it in the technical and formal meetings. At the formal meeting, your performance in the modules and your attendance at the RDC will also be considered. A marginal fail in a module can be compensated by an exceptional First Year Report. At the end of the Formal Meeting, the Head of Division will send a recommendation to the Graduate Studies Office. After a successful first year assessment, this recommendation will be for registration for the PhD degree. If you are not successful, there is a range of possible outcomes. Further information can be found on the Graduate Studies website.
PhD Second Year Review

Towards the end of your second year of research, there will be a second progress review meeting with your Supervisor and Adviser to discuss and assess your work over the first two years, and to agree a programme leading to the timely submission of your PhD dissertation. We strongly advise all students to aim to submit within ten terms of their start date, as this allows a contingency if needed.

You should arrange the meeting between yourself, your Supervisor and your Adviser to take place before the end of your sixth term. You will need to bring to the meeting some written work (thesis chapters/publication/etc), a record of the researcher development activities you have taken part in, and a proposed programme of work for completing your thesis by the end of your tenth term. At the meeting you will discuss your progress to date, your plan for completing your thesis on time, your skills development and planning, your workload, and any concerns or difficulties you are facing. After the meeting, you and your supervisor should write a summary of the discussion on the second year review form and both of you, plus your adviser, should sign the form, which you must then submit to the Graduate Studies Office before the end of your seventh term.

Final examination Procedure

PhD theses must be submitted to the Student Registry. The final submission deadline is four years after your start date, although we strongly advise students to aim to complete either by the end of their tenth term or the end of their funded period, whichever is sooner. The word limit for the thesis is 65,000 words. If you need to increase this, you can apply for permission from the Degree Committee via your CamSIS self-service account.

Research degrees are awarded subject to the successful examination of a thesis in two stages: scrutiny by two examiners, and an oral examination (viva). Before recommending the award of the PhD Degree, the examiners must satisfy themselves that the thesis: is clearly written; takes due account of previously published work on the subject; represents a significant contribution to learning, for example through the discovery of new knowledge, the connection of previously unrelated facts, the development of new theory, or the revision of older views. The thesis will be approved in the light of what it is reasonable to expect a student to complete within three years full-time (five years part-time) research. The limitations implied by this advice are intended to apply to the scale and scope of the work presented in the thesis but not to its quality.

Further information can be found on our website: [http://www.eng.cam.ac.uk/graduates/current-graduate-students/how-submit-your-thesis](http://www.eng.cam.ac.uk/graduates/current-graduate-students/how-submit-your-thesis).

Submission Deadline and Extension Applications

It is important that you submit your MPhil or PhD thesis before your submission deadline, and we strongly advise you to aim to submit sooner, so that you have some contingency time. It is possible to apply for an extension, but such a request must be supported by a robust case, usually citing circumstances beyond your control. Your thesis should be your main focus during your time at Cambridge, and the Degree Committee will not support extensions for students who have not maintained this focus. Students who do not submit within four years and have not applied to extend the submission deadline will be automatically removed from the Register.

Inadequate Reasons for Seeking an Extension

It would be very difficult for the Degree Committee to support a case dependent on any of the following:
• loss of data or work which could have been avoided by more rigorously backing-up your computer files (your backups should be updated frequently and regularly, and should not all be stored on the same device);
• spending excessive time participating in voluntary non-academic pursuits, including social activities, sporting activities, and University societies (see also the section on ‘Working while you study’ above);
• spending excessive time engaged in academic activities unrelated to your thesis project, including attending conferences, writing papers, working on other research projects, and teaching;
• poor time-management and planning, where this is not related to a disability, a medical condition, or grave external circumstances;
• failure to provide a draft of your thesis to your supervisor in time for you to be able to respond to feedback before the submission deadline;
• support from a funding body to continue your project.

Additionally, if you find yourself totally or almost totally unable to work on your thesis for a significant period at any point during the PhD, you should apply for intermission at that time or shortly after (see above), rather than waiting to apply for an extension closer to your submission deadline. You will not be granted an extension if you should previously have applied for intermission.

**Procedure for applying for an extension**

If you are approaching your submission deadline and believe that you will be unable to submit on time, and have good reasons for being unable to submit, you should apply through your CamSIS self-service as soon as it becomes clear that you will be unable to submit on time. You will be prompted to set out the reasons that you need an extension, and you will be asked to propose a new submission deadline. You should discuss a realistic new deadline with your supervisor in advance.

This application will be considered sequentially by your Supervisor, by a representative of the Department, by your College, by a representative of the Degree Committee, and by a representative of the Board of Graduate Studies. You will be able to track the progress of your application of CamSIS, and will receive the final verdict by email from the Student Registry. More information on extension applications is available here: [http://www.cambridgestudents.cam.ac.uk/your-course/graduate-study/your-student-status/extending-your-end-registration-date](http://www.cambridgestudents.cam.ac.uk/your-course/graduate-study/your-student-status/extending-your-end-registration-date).

**Part-time students**

The requirements for part-time students are exactly the same as for full-time students except that you have two years to complete the two modules and the Researcher Development Course. Some students find it easier to spend a term in the Department during their first year to complete the modules etc. You should spend at least three weeks each term, on average, in the Department. Your actual attendance should be agreed with your supervisor. You are required to attend at least three Seminars per year and make at least one presentation to your Research Group or a wider audience.

Submission deadlines for your First Year Report and Assessment can be found on our website: [http://www.eng.cam.ac.uk/graduates/current-graduate-students/first-year-assessment](http://www.eng.cam.ac.uk/graduates/current-graduate-students/first-year-assessment). You should aim to complete your PhD within five years. The final submission date for the PhD thesis is at the end of the seventh year.
Supervision

The number of regular one-on-one meetings with your supervisor varies considerably between students and throughout the course of your study. Normally, it is expected that you see your supervisor at least twice a term (and not less than eight times in each academic year) to review your progress. At the start of your course you should agree with your supervisor how often you meet, who initiates meetings, and how you are expected to prepare. In addition to your Supervisor, you will have an Adviser, appointed by your Head of Division. Your Adviser will take an interest in your research and from time to time, with others, will formally review your progress. If you are in difficulty in relation to your course, you should discuss the problem with your Supervisor or Adviser.

In addition to your Supervisor there are other members of staff in the Department who may be able to offer assistance or advice. These include: the Graduate Student Mediators (Dr Athina Markaki and Prof Allan McRobie); your Head of Group or Head of Division; the Secretary of the Degree Committee; and the Deputy Head of Department (Graduates). If your difficulties are not specifically related to your course, you may find that your College Tutor can help or advise you.

If you wish to make a complaint concerning any aspect of your supervision, you should contact either the Secretary of the Degree Committee or the Deputy Head of Department (Graduates).

Working Hours, Residence and Holiday Entitlement

Full time graduate students are expected to work 40 hours per week throughout the year (including during the summer months when undergraduate students are not in residence). Working hours should generally conform to the Department working hours between 8.00 and 18.00. Many of you will find that you will also be working in the evenings, especially towards the end of your course. Graduate research students are entitled to take up to 8 weeks of holiday (for which permission to work away is also not required) in a year, at times agreed with their Supervisor.

The University requires research students to be actively pursuing their research and resident within ten miles of Great St Mary’s (the University church) throughout the year. If you will be absent from Cambridge, or will not be actively pursuing your research for a period of more than two weeks, you must apply for permission to reside outside the University precincts, to work away (eg, on fieldwork), or to intermit your studies, as appropriate. These procedures are all described below.

Working while you study

It is a requirement of the University that all full time graduate students have their funding fully in place before they start their course. Under no circumstances will the need to earn money be accepted as a valid reason for failing to complete a course or an assignment on time. These regulations do not apply to part-time students.

The University does not allow full-time graduate research students to undertake more than ten hours per week paid work. Any work undertaken should be either academic-related, related to a student’s professional or career development, or outreach work undertaken on behalf of the University. Students should not rely on such work to generate essential income for their studies. However, academic-related work, especially teaching undergraduates, can provide graduate students with valuable transferable skills; a limited amount of this type of work is encouraged, provided it does not interfere with your studies. As a PhD student, you are encouraged to undertake – with the approval of both your supervisor and your college tutor – a small amount of academic work, such as supervising undergraduates, invigilating examinations, working in a university/college library, or demonstrating in a laboratory. The University stipulates that no more than ten hours a week may be spent in such activities; you should also check whether your funding body has any restrictions. If you are an overseas student, your visa may state that you can work up to twenty hours a week, but you will still be in breach of
the University regulations if you work for more than ten hours a week. For more information, see: http://www.cambridgestudents.cam.ac.uk/your-course/graduate-study/your-student-status/working-while-you-study

Permission to Reside Outside
If you wish to live outside of the ten-mile limit on a long-term basis, you must apply for permission to reside outside the University precincts via your CamSIS self-service page.

Leave to Work Away
If you plan to be away from Cambridge (or the place you have been permitted to reside) to undertake research or field work you must apply for Leave to Work Away via your CamSIS self-service page well before you leave. The date you are leaving Cambridge and the proposed return date should be included in your application to work away. In all cases a risk assessment, signed by yourself, your supervisor, and the Departmental Safety Officer, must be uploaded with your application. Students in their first year are not usually granted Leave to Work Away.

Your application will be considered sequentially by your Supervisor, a representative of the Department, your College, a representative of the Degree Committee, and by a representative of the Student Registry. You will be able to track the progress of your application on CamSIS, and will receive the final verdict by email from the Student Registry. More information on Leave to Work Away is available here: http://www.cambridgestudents.cam.ac.uk/your-course/graduate-study/your-student-status/work-away-cambridge

Sick Leave
If you are ill and cannot attend the Department for any reason you should let your supervisor know; in some Divisions you may be asked to inform the administrator or laboratory manager. If you are not able to work for a period of time longer than two weeks, you should apply to intermit your studies (see below). Your College Tutor should be able to advise you on this and any personal problems you may have.

If you are not able to attend an examination or need an extension to deadlines for module coursework you should contact the Graduate Studies Office as soon as possible.

Intermission
If you are unable to work on your thesis project for more than two weeks, you are strongly encouraged to apply for intermission (a break from study). Intermission can be applied for either for medical reasons, or non-medical reasons (including maternity or paternity leave, an emergency personal situation or to undertake an internship which is not intrinsic to your research).

You will not be allowed to intermit to go on a placement which is intrinsic to your research (in this case, you should instead seek leave to work away – see above), to take up employment (which is not a short-term internship), due to funding issues, or for visa reasons. In these circumstances, there is the option to temporarily withdraw from your studies.

Time spent on intermission does not count towards your total time on the course, and your submission deadline will be moved accordingly.
**Procedure for applying for intermission**

You should apply through your CamSIS self-service either in advance of the intermission (if it is foreseeable), or as soon as possible afterwards. Intermission can only be backdated up to 30 days, so in cases of illness or emergency situations, you should apply as soon as you are able to.

If you are applying for intermission for medical reasons, you should upload a supporting letter from a medical practitioner; alternatively, you can submit any medical evidence directly to the Student Registry. Supporting letters may also be required in other circumstances. The application will be considered sequentially by your Supervisor, by a representative of the Department, by your College, by a representative of the Degree Committee, and by a representative of the Student Registry. You will be able to track the progress of your application on CamSIS, and will receive the final verdict by email from the Student Registry. More information on intermission is available here: [http://www.cambridgestudents.cam.ac.uk/your-course/graduate-study/your-student-status/intermission](http://www.cambridgestudents.cam.ac.uk/your-course/graduate-study/your-student-status/intermission)

**Problems, Complaints and Appeals**

If you are in difficulty in relation to your course, you should discuss the problem in the first instance with your Supervisor or Adviser. There are also a number of other people who may be able to help you if there are difficulties in doing this, including the Head of your Research Group or Head of Division, the Secretary of the Degree Committee (the ‘Responsible Officer’ for local level complaints) and the Deputy Head of Department (Graduate Studies). The Graduate Student Mediator can also offer confidential help and advice if you are in dispute with your supervisor. If your difficulties are not specifically related to your course, you should contact your College Tutor.

If you are unhappy with the experience you have received from a University department, faculty, service or staff member, the University has a Student Complaints Procedure for you to use in order to try and resolve the situation. All complaints are treated seriously and are handled sensitively. We understand that it can be a stressful experience to submit a complaint, particularly when it is about an individual staff member, for example a PhD supervisor. We recommend that you seek support and advice before submitting your complaint. Further information can be found at: [https://www.studentcomplaints.admin.cam.ac.uk/student-complaints](https://www.studentcomplaints.admin.cam.ac.uk/student-complaints).

The University has robust policies in place to ensure that all examination results are accurate. However, something unusual may have taken place in the examination and you may want to check that the examiners were aware of the circumstances and that they have been taken into account. The term ‘examination’ can include any assessment you submit, which will receive marks that are counted towards your University of Cambridge award.

If you have taken any University of Cambridge examination, including a PhD probationary examination and believe that:

- a procedural irregularity in the examination process has adversely impacted on your examination results; or
- demonstrable bias or the perception of bias has occurred within the examination process; or
- the withdrawal of academic provision, which had adversely impacted on your examination results and of which the Examining Board were not aware,

you can request that your examination results are reviewed using the Examination Review Procedure, see: [https://www.studentcomplaints.admin.cam.ac.uk/examination-reviews](https://www.studentcomplaints.admin.cam.ac.uk/examination-reviews).
Department of Engineering

Departmental Organisation

Head of Department Prof Richard Prager
Deputy Head of Department (Graduate Studies) Dr Joan Lasenby
Deputy Head of Department (Undergraduates) Dr Claire Barlow

Operating Divisions

The Department is divided, by academic subject, into six divisions:

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<th>Division</th>
<th>Subject Area</th>
<th>Head of Division</th>
<th>Divisional Administrator</th>
</tr>
</thead>
<tbody>
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<td>A</td>
<td>Energy, Fluid Mechanics &amp; Turbomachinery</td>
<td>Professor Holger Babinsky</td>
<td>Mrs Wendy Raymond</td>
</tr>
<tr>
<td>B</td>
<td>Electrical Engineering</td>
<td>Professor Andrew Flewitt</td>
<td>Mrs Sue Murkett</td>
</tr>
<tr>
<td>C</td>
<td>Mechanics, Materials &amp; Design</td>
<td>Professor Robin Langley</td>
<td>Ms Claire Whitaker</td>
</tr>
<tr>
<td>D</td>
<td>Civil Engineering</td>
<td>Professor Simon Guest</td>
<td>Mrs Sharon Nightingale</td>
</tr>
<tr>
<td>E</td>
<td>Manufacturing and Management</td>
<td>Professor Tim Minshall</td>
<td>Mrs Maggie Harriss</td>
</tr>
<tr>
<td>F</td>
<td>Information Engineering</td>
<td>Professor Simon Godsill</td>
<td>Mrs Rachel Fogg</td>
</tr>
</tbody>
</table>

Secretary of the Degree Committee Ms Becky Ramshaw
Director of Research and Finance Mr Philip Guildford
Secretary of the Department Mrs Sally Collins-Taylor
Finance Manager Mrs Anne Waldock
Graduate Student Mediators Prof Allan McRobie and Dr Athina Markaki

Contact details for all staff and students are available on the Intranet.
Department Facilities:

**Catering:** On the Main Site in Trumpington Street the Common Room, on the second floor is open from 07.30 to 16.15. Tea is available free of charge from 9.30. A range of sandwiches, snacks and cakes are available all day. Payment should be made by your University Card which you can top-up online [http://epos.eng.cam.ac.uk/](http://epos.eng.cam.ac.uk/) or you can top-up with cash in the Common Room when it is not busy.

Satellite sites at West Cambridge have alternative local arrangements.

**Telephones** are available only for business in connection with your work.

**Useful Links:**

- Computing facilities: [http://www.eng.cam.ac.uk/itservices/](http://www.eng.cam.ac.uk/itservices/)

**Access to the Department**

For reasons of safety and security the buildings and laboratories of the main site of the Department are protected by Closed Circuit Television (CCTV) and an Access Control System using proximity cards. The Institute for Manufacturing, Electrical Engineering Building, Schofield Centre and Whittle Laboratory have their own arrangements. All staff and students of the Department are issued with a university card which should be worn at all times and affords access to the Department out of hours.

**Buildings:** Baker and Inglis buildings have no access restrictions between 08.00 and 17.15 hours Monday to Friday. Outside those hours access to both buildings is available by proximity card. Normal access rights for Graduate Students are defined as 07.00 to 23.00 hours seven days a week. Anyone requiring access outside these hours should ask their Supervisor to write to the Security Office.

**Rooms:** Once inside the building, access to rooms and the Library is allowed until 22.00 hours but not thereafter unless special arrangements are made.

**Laboratories:** Normal hours are 08.00 to 17.00 hours. Certain Laboratories have access controlled by proximity card, all of which become active out of hours. Persons wishing to work after 17.00 hours may continue up to 23.00 hours provided another person is present. Working alone in a laboratory is an increased risk to your safety and requires a Risk Assessment (cleared by the Safety Office, room BNO-41) and deemed to be appropriate by your supervisor.

**Working 'after hours':** If you choose to remain on site after 19.30 and are not working in one of the communal areas (Library, DPO, Dyson Centre) you will be asked to register your presence via one of the signing-in books. These are located in Baker Reception, the James Dyson Building lobby and inside the Inglis entrance to the courtyard. Special permission to enter the Department after 23.00 hours may be requested through a Request for Out of Hours Access, available from the Security Office. The form requires authorisation from your Supervisor and Head of Division. The security team have instructions to challenge anyone not wearing a university card and to escort from the building anyone unable to produce one.

**Holiday shutdowns** are notified in the Weekly Bulletin in advance for the Christmas period, Easter and the Late Summer Bank Holiday. Since permission to work in the Department during these
periods will normally be denied, you should arrange your work programme so as to avoid the shutdown periods.

**Car parking** is not available on the Main Site for research students during weekdays and offending vehicles are likely to be wheel clamped. Students have permission to park cars on the Main Site during the evenings and at weekends.

**Engineering Buildings on the West Cambridge Site**

**Whittle Laboratory**  
1 JJ Thomson Avenue

The Whittle Laboratory houses the Turbomachinery Group – part of Division A.

**Electrical Engineering Building**  
9 JJ Thomson Avenue

The Electrical Engineering Building houses the Electrical Division – Division B.

**Civil Engineering Building**  
7a JJ Thomson Avenue

The Civil Engineering Building houses most of the Civil Engineering Division – Division D.

**Schofield Centrifuge Centre**  
High Cross, Madingley Road

The Schofield Centrifuge Centre is also part of the Civil Engineering Division – part of Division D.

**The Alan Reece Building**  
17 Charles Babbage Road

The Alan Reece Building is home to the Institute for Manufacturing (IfM) – Division E.

Interactive Map of West Cambridge: [http://map.cam.ac.uk/West+Cambridge+Site](http://map.cam.ac.uk/West+Cambridge+Site)
Library Support
The Engineering Library offers training and support at every stage of your research journey, from searching for resources to organising your references, managing your data, navigating research ethics and communicating your results. The Library team hold taught sessions on information and research skills throughout the year, and are always happy to provide one-to-one support and advice.

The Library is based in the main Department building on Trumpington Street and has three distinct working and study areas: a silent space for quiet individual study, a collaborative space which welcomes people working together and features a range of seating, portable whiteboards and screen-casting AV equipment, and the North Room, a flexible work and study space with a full presentation suite for you to use.

You have access to Cambridge libraries resources, both printed and electronic. All the University's collections can be searched online from the iDiscover catalogue: http://idiscover.lib.cam.ac.uk. The Engineering Library's LibGuide pages keep all of the Engineering focused research resources, databases and helpful guides in one place, which you can access at http://libguides.cam.ac.uk/engineering.

If a resource is not available in Cambridge we may be able to get it for you through inter library loan.

For more information on the University of Cambridge libraries, see http://www.lib.cam.ac.uk.

You can get in touch with the Engineering Library team by email at cued-library@eng.cam.ac.uk or drop in any time Monday-Friday 9.00am – 5.00pm.
Intellectual Property Rights

Extract from Ordinances, Chapter 13, Section 2

14. The entitlement to intellectual property rights in material created by a student shall rest with the student, with the following exceptions:

(a). Where a student is sponsored by a third party, a condition of sponsorship may be that the sponsor may own any intellectual property developed during the period of sponsorship. Sponsored students are, therefore, advised to check the terms of their sponsorship agreement.

(b). Where a student is working on a sponsored project as part of his or her coursework or research, the sponsor may own any intellectual property that the student develops. This will be specified in the research contract and the supervisor or Department should inform students if this is the case as early as possible in the admissions process and in any case prior to the start of their research.

(c). Where a student is working in collaboration with others in a manner that gives rise to joint creation of intellectual property, or interdependent intellectual property, the student may be required to assign intellectual property to the University or place the results in the public domain without restriction. He or she will be treated in the same way as University staff under these regulations. If this case is likely to arise, students should be so informed at the offer of admission where practical, and in any case prior to the start of their research.

A student who believes that clause (c) above has been inappropriately applied may make an application to the University Technology Referee under Regulation 15.

A sponsorship agreement may also place a requirement on the student and his or her examiners to undertake to keep results confidential while steps are being taken to protect intellectual property or to establish exploitation arrangements. The student may also be required to submit the thesis to the sponsor for scrutiny before submitting it for examination. Any confidentiality agreement whose purpose is to delay public disclosure for the purpose of protection should usually not have effect for longer than three months from the time the sponsor is notified of intent to publish. When the University obtains an assignment of student-created intellectual property, it undertakes to provide the student with a share in such financial returns from the exploitation as there may be on the same basis as that applying to University staff by virtue of Regulation 25.

15. Where a dispute occurs between the University and a University staff member, a person referred to in Regulation 12 or a student, or between staff members, a person referred to in Regulation 12 and/or a student, as to the application of these regulations or the terms of the agreement on which they should enter, or on which they have already agreed to proceed, concerning the commercial exploitation of any intellectual property rights, or the subject matter to which such rights relate, the dispute shall, at the request of either, be referred to a University Technology Referee in accordance with Regulations 32–39.
Plagiarism

Don't be a copy cat!

The confidence which a reader has in the contents of a report, paper or thesis is based on trusting the author. An important contribution to building that trust is through the author demonstrating clearly how they have built on the work of others and giving full credit to previous contributions as well as identifying unambiguously which parts of the overall work are their own, original contribution. That is the role of references in technical writing: to give recognition to other people's work and to provide an 'audit trail' of links to previous work. Developing a good style of referencing takes some effort: in many cases, facts and ideas are so well known and standard that no reference is needed but if you have doubts about whether the reader might misinterpret the extent of your own contribution you should always refer explicitly to the source of any previous work. Please note this also applies to computer codes etc.

University-wide statement on plagiarism

The General Board, with the agreement of the Board of Examinations and the Board of Graduate Studies, has issued this guidance for the information of candidates, Examiners and Supervisors. It may be supplemented by course-specific guidance from Faculties and Departments.

Plagiarism is defined as submitting as one's own work, irrespective of intent to deceive, that which derives in part or in its entirety from the work of others without due acknowledgement. It is both poor scholarship and a breach of academic integrity.

Examples of plagiarism include copying (using another person's language and/or ideas as if they are a candidate's own), by:

- quoting verbatim another person's work without due acknowledgement of the source;
- paraphrasing another person's work by changing some of the words, or the order of the words, without due acknowledgement of the source;
- using ideas taken from someone else without reference to the originator;
- cutting and pasting from the Internet to make a pastiche of online sources;
- submitting someone else's work as part of a candidate's own without identifying clearly who did the work. For example, buying or commissioning work via professional agencies such as 'essay banks' or 'paper mills', or not attributing research contributed by others to a joint project.

Plagiarism might also arise from colluding with another person, including another candidate, other than as permitted for joint project work (i.e. where collaboration is concealed or has been forbidden). A candidate should include a general acknowledgement where he or she has received substantial help, for example with the language and style of a piece of written work.
Plagiarism can occur in respect to all types of sources and media:

- text, illustrations, musical quotations, mathematical derivations, computer code, etc;
- material downloaded from websites or drawn from manuscripts or other media;
- published and unpublished material, including lecture handouts and other students' work.

Acceptable means of acknowledging the work of others (by referencing, in footnotes, or otherwise) vary according to the subject matter and mode of assessment. Faculties or Departments should issue written guidance on the relevant scholarly conventions for submitted work, and also make it clear to candidates what level of acknowledgement might be expected in written examinations. Candidates are required to familiarize themselves with this guidance, to follow it in all work submitted for assessment, and may be required to sign a declaration to that effect. If a candidate has any outstanding queries, clarification should be sought from her or his Director of Studies, Course Director or Supervisor as appropriate.

Failure to conform to the expected standards of scholarship (e.g. by not referencing sources) in examinations may affect the mark given to the candidate's work. In addition, suspected cases of the use of unfair means (of which plagiarism is one form) will be investigated and may be brought to one of the University's Courts. The Courts have wide powers to discipline those found guilty of using unfair means in an examination, including depriving such persons of membership of the University, and deprivation of a degree.

The University makes use of text-matching software for the purpose of plagiarism education and detection, and reserves the right to submit a candidate’s work to such a service. For this purpose, candidates consent to the submission of their papers to the service and for the submitted papers to form part of the service’s comparative source work database. To facilitate use of the service, students (and participating Examiners and Assessors) may be required to agree to the service provider’s end-user agreement and provide a limited amount of personal data upon registration to the service, for instance, their name, email address, and course details.
Timetable of deadlines for First Year Research Students in Engineering

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<th>Not at First Registered for any Qualification (Probationary PhD)</th>
<th>For students starting in October 2019</th>
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<tr>
<td>Submission of modules on METEOR</td>
<td>24 October 2019</td>
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<tr>
<td>Progress Review Meeting</td>
<td>30 June 2020</td>
</tr>
<tr>
<td>Submission of First Year Report to Divisional Administrators</td>
<td>4.00 pm, 31 August 2020</td>
</tr>
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<th>Engineering MPhil (by research)</th>
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<td>Progress Review Meeting</td>
<td>30 June 2020</td>
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<tr>
<td>Submission of Thesis – to Graduate Studies Office</td>
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<thead>
<tr>
<th>Not at First Registered for any Qualification (Probationary PhD)</th>
<th>For students starting in January 2020</th>
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<tr>
<td>Submission of modules on METEOR</td>
<td>30 January 2020</td>
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<tr>
<td>Progress Review Meeting</td>
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<tr>
<td>Submission of First Year Report to Divisional Administrators</td>
<td>4.00 pm, 30 November 2020</td>
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Extensions to the First Year Report Deadline are not permitted without prior permission of the Secretary of the Degree Committee.
## Appendix A: Engineering Modules for Graduate Students

### Modules for 2019–20

<table>
<thead>
<tr>
<th>Number and title of module</th>
<th>Term</th>
<th>Mode</th>
<th>Contact</th>
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<tr>
<td>4A2 Computational fluid dynamics</td>
<td>M</td>
<td>C</td>
<td>Dr J Li</td>
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<tr>
<td>4A3 Turbomachinery I</td>
<td>M</td>
<td>E &amp; C</td>
<td>Prof W. N. Dawes</td>
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<td>4A4 Aircraft Stability and Control</td>
<td>M</td>
<td>C</td>
<td>Dr W. R. Graham</td>
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<tr>
<td>4A7 Aerodynamics and Design</td>
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<td>C</td>
<td>Dr J. P. Jarrett</td>
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<td>4A9 Molecular Thermodynamics</td>
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<td>4A10 Flow instability</td>
<td>L</td>
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<td>Prof G. R. Hunt</td>
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<tr>
<td>4A12 Turbulence and vortex dynamics</td>
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<td>4A13 Combustion and engines</td>
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<td>4B5 Quantum and Nano-technologies</td>
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<td>4B11 Photonic Systems</td>
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<td>4B13 Electronic Sensors and Instrumentation</td>
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<td>4B19 Renewable Electrical Power</td>
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<td>M</td>
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<td>4B23 Optical Fibre Communication</td>
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<td>4B24 Radio Frequency Systems</td>
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<td>4B25 Embedded Systems for the Internet of Things</td>
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<td>4B26 Advanced Devices for High Frequency Electronics and Biosensing</td>
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<td>Group C: Mechanics, materials, and design</td>
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<td>4C2 Designing with Composites</td>
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<td>4C3 Advanced Functional Materials and Devices</td>
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<td>4C4 Design Methods</td>
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<td>4C5 Design Case Studies</td>
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<td>4C6 Advanced Linear Vibrations</td>
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<td>4C7 Random and Non-linear Vibrations</td>
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<td>4C8 Applications of Dynamics</td>
<td>L</td>
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<td>4C9 Continuum Mechanics</td>
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<td>4D9 Offshore Geotechnical Engineering</td>
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<td>4D14 Contaminated Land and Waste Containment</td>
<td>M</td>
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<td>Group E: Management and manufacturing</td>
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<td>4E1 Innovation and Strategic Management of Intellectual Property</td>
<td>M</td>
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<td>L</td>
<td>C</td>
<td>Prof S. M. Ansii</td>
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- 'M' refers to the Michaelmas (Winter) term; 'L' refers to the Lent (Spring) term.
- 'Mode' refers to mode of examination: either by coursework (C), by written examination (E), or both (E&C).
- The email addresses of contacts consist of that person’s CRSID, ending with @cam.ac.uk. For example, if somebody's CRSID is rwdc2, that person's email address is rwdc2@cam.ac.uk.
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<td>4M21 Software Engineering and Design</td>
<td>L</td>
<td>E</td>
<td>Dr. E. Punskaya</td>
<td>op205</td>
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<tr>
<td>4M22 Climate Change Mitigation</td>
<td>M</td>
<td>C</td>
<td>Prof. J. M. Allwood</td>
<td>jma42</td>
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<td><strong>Group R: Research modules</strong></td>
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<tr>
<td>5R5 Advanced Experimental Methods in Geomechanics</td>
<td>L</td>
<td>C</td>
<td>Dr. S. K. Haigh</td>
<td>skh20</td>
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<tr>
<td>5R7 Advanced Numerical Methods in Geomechanics (may not be available - TBC)</td>
<td>L</td>
<td>C</td>
<td>Dr. G. Biscontin</td>
<td>gb479</td>
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<tr>
<td>5R17 Integrated System Design</td>
<td>L</td>
<td>C</td>
<td>Dr. P. O. Kristensson</td>
<td>pok21</td>
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<td><strong>Additional Borrowing</strong></td>
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<tr>
<td>Modules made available by other MPhil/MRes courses in the Department and across the University</td>
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<tr>
<td>Before selecting modules prefixed with ‘ESD’, please gain the permission of the named contact, as there will be limited places on these modules.</td>
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<tr>
<td><strong>Reading Groups</strong></td>
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<tr>
<td>Can replace one module</td>
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<tr>
<td>RC3 Robust Control</td>
<td>M + L</td>
<td>C</td>
<td>Prof. M. C. Smith</td>
<td>mcs1000</td>
</tr>
<tr>
<td>RC4 Manufacturing Management</td>
<td>L</td>
<td>C</td>
<td>Dr. C. Velu</td>
<td>cv236</td>
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<tr>
<td>RC15 Engineering Design</td>
<td>L</td>
<td>C</td>
<td>Dr. N. Crilly</td>
<td>ac846</td>
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<tr>
<td>RC18 Nuclear</td>
<td>L</td>
<td>C</td>
<td>Dr. G. T. Parks</td>
<td>gtp10</td>
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</table>

- ‘M’ refers to the Michaelmas (Winter) term; ‘L’ refers to the Lent (Spring) term.
- ‘Mode’ refers to mode of examination: either by coursework (C), by written examination (E), or both (E&C).
- The email addresses of contacts consist of that person’s CRSID, ending with @cam.ac.uk. For example, if somebody’s CRSID is rwdc2, that person’s email address is rwdc2@cam.ac.uk.
Appendix B: Researcher Development Courses

Division A
5CA2: Energy Leader: Prof Matthew Juniper mpj1001@cam.ac.uk
5CA4: Fluid Mechanics Leader: Prof Holger Babinsky hb209@cam.ac.uk

Division B
5CB1: Electrical Engineering Leader: Dr Hannah Joyce hjj28@cam.ac.uk

Division C
5CC1: Materials, Mechanics and Design Leader: Dr John Biggins jsb56@cam.ac.uk

Division D
5CD1: Civil Engineering Leader: Prof Abir Al-Tabbaa aa22@cam.ac.uk

Division E
5CE1 Manufacturing Leaders: Dr Frank Tietze Ft263@cam.ac.uk

Division F
5CF3: Information Engineering Leader: Dr G Hennequin ghjeh2@cam.ac.uk