Part IIA project guide

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Introduction

During the Easter term following the IIA examinations, all Part IIA students undertake 2 projects from a choice of around 30. A few projects have preparatory sessions during the Lent Term (counting towards the same total workload); Constructionarium starts at the end of Michaelmas.

Some projects have pre-requisite modules (‘useful’ or ‘essential’) and will assume certain background knowledge. NB. It is the students’ responsibility to check these pre-requisites, and to choose projects (and modules) appropriately - this will NOT be checked via COMET.

Details of schedules and pre-requisites are provided in the Project descriptions.

Projects are of two types, “Group” and “Standard”, and you must take at least one Group project. Group-based projects involve working in groups of at least 3, with some degree of inter-dependence, shared effort, and marks for group work. Some Standard projects also involve working in pairs and pooling results.

Most projects are also classified as Design, Field or Language, and you must take at least one Design project. Projects are in timetable sets, and there are other constraints on allowable combinations (details below).

Project codes (e.g. GA1, SB1) indicate Group (G) or Standard (S), and the associated subject area (A-G, as for IIA modules, plus L for Languages, and M for Multidisciplinary). Projects may be chosen from ANY subject area (taking due account of any pre-requisites).

Each project has a leader, but groups of projects also have a coordinator that you are welcome to contact to discuss any general matters throughout your project. You can also contact the Teaching Office, or the overall project coordinator, Dr Hugh Shercliff.

<table>
<thead>
<tr>
<th>Project codes</th>
<th>Coordinator</th>
</tr>
</thead>
<tbody>
<tr>
<td>GA, GC, SA, SC</td>
<td>Dr Alex White</td>
</tr>
<tr>
<td>GB, GF, SB, SF</td>
<td>Dr Graham Treece</td>
</tr>
<tr>
<td>GD, SD</td>
<td>Dr Mauro Overend</td>
</tr>
<tr>
<td>GG, GM, SG, SL</td>
<td>Dr Hugh Shercliff</td>
</tr>
</tbody>
</table>

Project descriptions

<table>
<thead>
<tr>
<th>Project code</th>
<th>Project</th>
<th>Leader</th>
<th>Category</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>GA1</td>
<td>Advanced Cycle Power Generation</td>
<td>Dr T Hynes</td>
<td>Design</td>
<td>Group</td>
</tr>
<tr>
<td>Project code</td>
<td>Project</td>
<td>Leader</td>
<td>Category</td>
<td>Type</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------</td>
<td>-------------------------------</td>
<td>----------</td>
<td>------</td>
</tr>
<tr>
<td>GA2</td>
<td>Turbo-expander</td>
<td>Dr L Xu</td>
<td>Design</td>
<td>Group</td>
</tr>
<tr>
<td>GA3</td>
<td>Heat Exchanger</td>
<td>Dr J P Longley</td>
<td>Design</td>
<td>Group</td>
</tr>
<tr>
<td>GB1</td>
<td>Optical Fibre Link</td>
<td>Prof T Wilkinson</td>
<td>Design</td>
<td>Group</td>
</tr>
<tr>
<td>GB2</td>
<td>Electrical Power</td>
<td>Dr T Long</td>
<td>Design</td>
<td>Group</td>
</tr>
<tr>
<td>GC3</td>
<td>Mechanics of Natural Materials</td>
<td>Dr S Huang</td>
<td>Design</td>
<td>Group</td>
</tr>
<tr>
<td>GD1</td>
<td>Constructionarium</td>
<td>Dr T da Silva</td>
<td>Design</td>
<td>Group</td>
</tr>
<tr>
<td>GD2</td>
<td>Structural Modelling</td>
<td>Prof A McRobie</td>
<td>Design</td>
<td>Group</td>
</tr>
<tr>
<td>GD4</td>
<td>Civil Engineering Design Project</td>
<td>Dr M Overend</td>
<td>Design</td>
<td>Group</td>
</tr>
<tr>
<td>GA3</td>
<td>Heat Exchanger</td>
<td>Dr J P Longley</td>
<td>Design</td>
<td>Group</td>
</tr>
<tr>
<td>GB1</td>
<td>Optical Fibre Link</td>
<td>Prof T Wilkinson</td>
<td>Design</td>
<td>Group</td>
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<tr>
<td>GB2</td>
<td>Electrical Power</td>
<td>Dr T Long</td>
<td>Design</td>
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<td>Group</td>
</tr>
<tr>
<td>GD1</td>
<td>Constructionarium</td>
<td>Dr T da Silva</td>
<td>Design</td>
<td>Group</td>
</tr>
<tr>
<td>GD2</td>
<td>Structural Modelling</td>
<td>Prof A McRobie</td>
<td>Design</td>
<td>Group</td>
</tr>
<tr>
<td>GD4</td>
<td>Civil Engineering Design Project</td>
<td>Dr M Overend</td>
<td>Design</td>
<td>Group</td>
</tr>
<tr>
<td>GA3</td>
<td>Heat Exchanger</td>
<td>Dr J P Longley</td>
<td>Design</td>
<td>Group</td>
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<tr>
<td>GB1</td>
<td>Optical Fibre Link</td>
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<td>Group</td>
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<tr>
<td>GB2</td>
<td>Electrical Power</td>
<td>Dr T Long</td>
<td>Design</td>
<td>Group</td>
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<tr>
<td>GC3</td>
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<td>Design</td>
<td>Group</td>
</tr>
<tr>
<td>GD4</td>
<td>Civil Engineering Design Project</td>
<td>Dr M Overend</td>
<td>Design</td>
<td>Group</td>
</tr>
</tbody>
</table>

Note: for information on the timing of projects in each set, see the sections below on Timetable and other constraints and Project timetables.

## Key dates

Projects run over a 4-week period after the Part IIA examinations, so that undergraduates have no other scheduled activities. Important dates and deadlines are:

<table>
<thead>
<tr>
<th>Description</th>
<th>Date</th>
<th>Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project descriptions available for browsing</td>
<td>Monday 1 October</td>
<td>(Michaelmas, week 0)</td>
</tr>
<tr>
<td>Start of input of student preferences (first round)</td>
<td>Monday 22 October</td>
<td>(Michaelmas, week 3)</td>
</tr>
<tr>
<td>Language projects information session - in the Language Unit</td>
<td>Wednesday 24 October, 1-2pm</td>
<td>(Michaelmas, week 3)</td>
</tr>
<tr>
<td>Deadline for input of student preferences (first round)</td>
<td>Friday 26 October</td>
<td>(Michaelmas, week 4)</td>
</tr>
<tr>
<td>Confirmation of pre-allocations in specific projects</td>
<td>Monday 19 November</td>
<td>(Michaelmas, week 7)</td>
</tr>
<tr>
<td>Start of input of student preferences (second round)</td>
<td>Monday 7 January</td>
<td>(Lent, week 0)</td>
</tr>
<tr>
<td>Deadline for input of student preferences (second round)</td>
<td>Friday 18 January</td>
<td>(Lent, week 2)</td>
</tr>
</tbody>
</table>
First full list of allocations

Published on CUED undergraduate teaching (http://teaching.eng.cam.ac.uk)

Part IIA project guide

Published on CUED undergraduate teaching (http://teaching.eng.cam.ac.uk)

First full list of allocations
Monday 4 February
(Lent, week 4)

Final list of allocations
Monday 18 February
(Lent, week 6)

Preparatory sessions for Lent-start
projects
See Project
descriptions
(Lent, weeks 3-7)

Easter Term project period begins
(Language projects: Wednesday 8
May)
Thursday 9 May
(Easter, week 3)

Each project will have interim reports
or presentations. Deadlines for these
vary - see the Project
descriptions for
details
(Easter, weeks 3-6)

Hand-in date for final report:
Constructionarium project
Friday 31 May
(Easter, week 6)

Hand-in date for final report:
Multidisciplinary Design project
Friday 31 May
(Easter, week 6)

Latest hand-in dates for final reports:
all other projects
Thursday 6 / Friday 7
June
(Easter, week 7)

Some project leaders may set earlier final report deadlines. Final project reports must be handed in by 4pm on the relevant days. Students should aim to submit ahead of the deadline, and ensure that they allow for significant congestion on DPO printers.

NB: final reports will not be accepted after the deadlines, unless there has been agreement in advance for a short extension, due to illness or other grave cause. Project leaders are required to complete all marking by Wednesday week 7 Easter term. Note that all interim reports must be resubmitted, appended to your final report.

How to choose a project

Before making your selection, you should read the rest of this guide, noting the project sets, the combinations of sets that are not permitted, and project descriptions of interest.

Note that projects may be chosen from any subject area, regardless of your Engineering Area(s).

Students interested in taking a Language project should attend an information session in the Language Unit (see Key dates).

ALL STUDENTS must enter their preferences between Monday 22 October and Friday 26 October, for the first round of allocations. Certain projects (GD1, GF2, GM1, GM2) are pre-allocated in Michaelmas, and may be balloted. Allocation to these projects will be confirmed during Michaelmas; all other preferences remain provisional until the second round of allocations at the start of the Lent Term. Students will be required to update/confirm their preferences (other than pre-allocated places) between Monday 7 and Friday 18 January.

Preferences should be entered, in order, for exactly five projects, satisfying the following rules:

- Your 1st and 2nd preferences must include at least one Group project, and one Design project (many are both). Your preferences overall must include at least 3 Group and at least 3 Design projects.
- Projects are in sets (P1, P2 etc) with each set having a fixed timetable; projects must be taken from different sets. Certain other combinations of sets are also excluded for timetable reasons.
- Some projects have pre-requisites (e.g. useful or essential IIA modules): it is your responsibility to check the project descriptions, and only to select projects for which you will have taken the pre-requisites. Your module choices are NOT checked automatically on COMET by the project allocation programme.

Other restrictions apply to your selection - see Timetable and other constraints.

How projects are allocated

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Each project has a maximum capacity, due to limits on staff, space and equipment. Some projects may not run if very few students opt for them.

In the online selection page, the sets are colour-coded to guide you. Before you can submit your preferences, the software will:

1. check that your 1st and 2nd preferences form a valid combination;
2. tell you how many of the combinations of your 1st to 4th preferences are valid (at least 2 must work to give yourself a fair chance of obtaining your 1st to 4th preferences).

You will be prompted to reconsider if either of these checks fails.

The computer programme allocates a “score” of 1 to your 1st preference, 2 to your 2nd and so on. The allocation algorithm makes the average total score per student as close to 3 as possible. Most students are usually allocated at least one of their first 2 preference projects, and rarely a 5th choice – but you should still consider all five of your choices seriously, as you may be assigned to any of them.

Pre-allocations will be posted by Monday of Michaelmas week 7; the first full list of allocations will be posted by the Monday of Lent week 4. Any queries or requests for changes should be referred to the Teaching Office by the Friday of week 5 in the Lent Term, giving a reason for any request to change. The Teaching Office will endeavour to arrange alternative projects, but there is no guarantee that this can be achieved as many projects are over-subscribed, and many Group projects must run with multiples of a specified group size.

A final list will be published online by Monday of week 6 in the Lent Term. Changes after this date are only permitted in exceptional circumstances. (Exceptional does not include students being inefficient or indecisive).

**Timetable and other constraints**

Projects are in sets (P1, P2 etc) with each set having a fixed timetable (see Table below); projects must be taken from different sets. Certain combinations of sets and projects are excluded for timetable and other reasons.

**Multidisciplinary design projects (GM1, GM2)**

Students may not be allocated both of these projects, even though they do not clash on the timetable. Both may be included in student preferences, provided that the overall preferences produce enough valid combinations.

**Over-subscribed projects (GF2, GM2)**

GF2 (Software) and GM2 (Technology for the poorest billion) have previously been over-subscribed. You are only permitted to include these projects as your first preference, and therefore cannot include both projects in your selection. Both will be pre-allocated in Michaelmas, so that students who miss out on these projects may update their preferences in Lent.

Note that GF2 is available in two sets (P2 and P3) and will run with two separate cohorts, GF2A and GF2B. Students select GF2, and the allocation process will determine which set applies to each student on GF2, depending on their other project.

**Constructionarium project (GD1) and Civil Engineering Design project (GD4)**

GD1 Constructionarium, and GD4 Civil Engineering Design, may only be combined with GD2 Structural Modelling or a European Language (SL1-5). GD1/GD4 and GD2 operate to their own timetable during Easter (accommodated by the Language Unit).

GD1 Constructionarium may only be selected as first preference, with its associated project as second preference.
Places on Constructionarium are only available for students who qualify for the Civil, Structural and Environmental Engineering Area (as a primary or secondary EA).

Note that GD1 Constructionarium will have preparatory sessions at the end of Michaelmas and in the Lent Term, and includes a **residential week** on site in Norfolk (for dates, see the project description). GD4 will run at the same time as Constructionarium, but only during the Easter Term. The second project is therefore scheduled in the other project weeks in Easter. All projects carry the same credit, but note that Constructionarium necessarily requires a greater commitment of time (due to the residential week, and associated safety training).

**Field projects (GD6)**

Students must attend timetabled sessions **all day** on Mondays, and **all afternoon** on Wednesdays and Thursdays, thereby clashing with sets P1 and P2. For field projects, the timetabled sessions add up to approximately 16 hours per week, and the time which a student is expected to work independently is correspondingly reduced. Note that GD6 Surveying is only open to students who have NOT taken the Surveying Extension Activity.

**Language projects (sets P8/9)**

Language projects can be combined with any other project, including Constructionarium (European languages only), but excluding Structural Modelling.

The timetabled sessions consist of 2 or 4 fixed hours (on Wednesdays) with the project leader, plus a choice of supported self-study (SS) sessions, which enable you to avoid clashes with your other project. Students should normally expect to attend during 4-6 hours of the self-study sessions (depending on the number of fixed hours on Wednesday). The project leader and/or a demonstrator will arrange supervisions during the SS sessions.

The Table below shows the options for SS sessions for each project – not all of these will run: the schedule for each project will be determined to fit with the 2nd projects chosen by students.

**NB.** Language projects will start with a 2 or 4 hour session on **Wednesday week two Easter term**, one day ahead of the other projects.

If you are interested in taking a foreign language project, you are encouraged to attend an information session from 1-2pm in the Language Unit (see **Key dates**), where all the language project leaders will be on hand to answer any questions you may have.

### Project timetables for Easter Term

<table>
<thead>
<tr>
<th>Time Slots</th>
<th>Monday 09.00-11.00</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P2</strong> (GA1, GB2, GF2A, GF3, GM2, SA1, SB3, SG1)</td>
<td><strong>Field P5</strong> (GD6)</td>
<td><strong>P3</strong> (GA4, GF1, GF2B, SC2, SF3)</td>
<td><strong>Lang P8/9</strong>(Fixed) (SL1, SL3, SL5, SL6, SL7)</td>
<td><strong>Lang (SS option B)</strong> (SL1, SL2)</td>
<td><strong>Lang (SS option A)</strong> (SL3, SL4, SL5)</td>
</tr>
<tr>
<td><strong>Lang (SS option A)</strong> (SL3, SL4, SL5)</td>
<td><strong>Lang (SS option A)</strong> (SL6, SL7)</td>
<td></td>
<td></td>
<td><strong>Lang (SS option D)</strong> (SL3, SL4, SL5)</td>
<td><strong>Lang (SS option C)</strong> (SL6)</td>
</tr>
<tr>
<td>11.00-13.00</td>
<td><strong>P1</strong> (GA2, GB1, GM1, GC3, GG2, SF2)</td>
<td><strong>P4</strong> (GA3, GB3, GG1, SB1, SC1, SF1)</td>
<td><strong>Lang P8/9</strong>(Fixed) (SL2, SL4, SL5, SL6, SL7)</td>
<td><strong>Lang (SS option C)</strong> (SL7)</td>
<td><strong>Lang (SS option C)</strong> (SL6)</td>
</tr>
</tbody>
</table>

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Organisation

Each project has a project leader who is responsible for its organisation, running and assessment. Most projects will use a Moodle course to provide documentation, and many use electronic submission for reports. Project leaders will confirm arrangements and deadlines for report submission at the first (compulsory) session.

Availability of computers and other equipment may be restricted at times outside your scheduled sessions, so you should allocate your unscheduled time flexibly between your two projects. Chief technicians can advise you on the hours of access to their laboratories.

Timetabled sessions and project workload

During the project period, approximately 8 hours per project per week are timetabled. During these sessions:

1. Students can expect priority access to laboratories, equipment and computers allocated to that project.
2. Students can expect to have access to supervision from the project leader and/or other demonstrators.
3. Project leaders can expect to have access to all of the students on their project, as required.

You are expected to be available for ALL timetabled sessions (unless prevented from doing so by illness or other grave cause). At the first (compulsory) session, project leaders will provide a detailed schedule indicating when you must attend. A record of attendance will be kept for these compulsory sessions, and penalties applied for absence.

It is expected that students will typically spend around 20 hours per project per week, either in timetabled sessions or working on their own (including report writing).

Project reports

Lab notebooks

Students must provide themselves with a lab notebook for their projects. It is essential best practice in project management to use a lab notebook to record all day-to-day activities, as a sketch book for conceptual design work, to record calculations and experimental results etc, dating every entry. For some types of project, such as software projects, electronic records and documentation may be more appropriate. Project leaders may ask for notebooks to be produced at meetings or submitted with reports to check that the books are used correctly, with entries properly laid out and dated.
Interim and final reports

Most projects require 3 reports to be submitted, i.e. 2 interim reports and a final report. All interim reports must be appended to your final report when you hand it in. The maximum total length of all reports taken together (typed or handwritten on A4 pages) must not exceed 14 sides, plus calculations and drawings. Students must adhere to the page limit, and keep the volume of appendices to a minimum.

Some project leaders may ask for reports to be submitted electronically (via Moodle).

Virtually all reports will be produced electronically, and students MUST take responsibility for retaining their own electronic copies as backup.

Format of reports

The format of reports will vary from project to project, and the project leader will tell you what is required. Some general guidelines for design projects are as follows:

Interim reports (2 sides each, excluding appendices)

- Introduction: overview of project and aims
- Project specification
- Summary of preliminary design work
- Conclusions and programme of future work
- Appendices (include important sketches, drawings, computer listings, etc)

Final report (not greater than 10 sides of A4, excluding appendices)

Suggested section headings plus guide lengths are:

- Introduction (1 side)
- Summary of overall design decisions and outline of project management (1 side, possible team material)
- Description of design/computer code (2-3 sides)
- Problems encountered in development and their technical solutions (1 side)
- Test procedure/software implementation (2 sides)
- Conclusions and recommendations for improvements (1-2 sides)
- Appendices (possible team material):
  - Important design details, including mechanical drawings, circuit diagrams, software code
  - Interim reports 1 and 2 (where applicable)

See the Report writing guide for further guidance.

Report cover sheets

At the front of each report (interim and final), every student must include a signed coversheet (to be downloaded and printed from this link, as required). The sheet contains:

- A declaration stating that the student is submitting his or her own work. (Work which has not been done by the author must be identified clearly. It is recognised that there will be some common elements between the work of students in a pair or group, for example in drawings and diagrams.)
- Space for markers to provide written feedback (but not marks) on your reports.
- Space for you to indicate suggestions for improvements to the project.

The online survey should be completed at the end of the project period.
Return of reports

Reports, drawings, etc. will be kept until after the Tripos results have been published. Project work will NOT automatically be returned to students. Some project leaders may recover reports from the Teaching Office.

Assessment

For each project, there are 80 marks available. In order to spread the workload for both students and staff, continuous assessment will take place for the duration of the project period, with a number of staged reports. Some projects include individual or group presentations as part of the assessment. Each project has its own mark distributions and submission dates, and these are stated in the online Project descriptions. A typical allocation is:

<table>
<thead>
<tr>
<th>Report</th>
<th>Length</th>
<th>Marks</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Interim report</td>
<td>2-3 sides</td>
<td>15 marks</td>
<td>Thursday, project week 2</td>
</tr>
<tr>
<td>2nd Interim report</td>
<td>2-3 sides</td>
<td>15 marks</td>
<td>Thursday, project week 3</td>
</tr>
<tr>
<td>Final report</td>
<td>10 sides</td>
<td>50 marks</td>
<td>Thursday, project week 5</td>
</tr>
</tbody>
</table>

The main criteria for assessment will be the quality of the project work done, and the quality of the technical report writing. Marks will typically be awarded as follows:

<table>
<thead>
<tr>
<th>Standard</th>
<th>Marks out of 80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I</td>
<td>56+ (70%+)</td>
</tr>
<tr>
<td>Class II.i</td>
<td>48+ (60%+)</td>
</tr>
<tr>
<td>Class II.ii</td>
<td>40+ (50%+)</td>
</tr>
<tr>
<td>Class III</td>
<td>32+ (40%+)</td>
</tr>
<tr>
<td>Below honours</td>
<td>0-31 (0-39%)</td>
</tr>
</tbody>
</table>

Notes

- **No report, no marks.** Half marks will not be awarded.
- For non-attendance at compulsory timetabled sessions, the penalty is 1 mark per hour or part hour missed.
- For late submission of interim reports, the penalty is 3 marks per weekday.
- No reports will be accepted after the submission date for the final report.
- Feedback will be given on each report, but the marks will not be disclosed.
- The marks for different projects may be moderated after the conclusion of the project to even out any significant differences in mark distributions.

Part IIA allowances

Overview

During the Michaelmas and Lent terms, Part IIA undergraduates submit a minimum of 8 reports/essays associated with modules, and 2 full technical reports (FTR), and complete an Extension Activity (ExA). During the Easter term, students undertake 2 projects. Students are expected to make all reasonable efforts to complete missed experiments, FTRs and ExAs at a later date, and should contact the member of staff in charge of the activity concerned as soon as possible.

An allowance of marks will not normally be made for more than the coursework for 4 modules and an ExA. Applications should be made at the time rearrangement proves not to be possible, and at latest by the end of the relevant term. Allowance forms can be downloaded here.

Part IIA projects
Students are expected to complete as much as possible of the work associated with their two projects, but the four week timetable imposes tight constraints. If there is any significant disruption to your project work (whether or not a report deadline is missed), you must notify your Tutor, project leader(s) and the Director of Undergraduate Education by email immediately, and the Tutor should submit a IIA project allowance form (NB: this is not the standard form used for all other allowances). If the deadline for any report is missed, a form must be submitted by the student’s Tutor within three working days of the report deadline.

Following first notification of disruption of a project due to illness, weekly consultations involving the Director of Undergraduate Education, project leader(s) and Director of Studies will be required until the project is back on track. This is in order to determine reasonable extensions to deadlines, or to agree a reduced or alternative submission of project work if appropriate.

Extensions for interim reports may be made until the final project deadline. Extensions for final reports are limited to a maximum of four days, and only in exceptional circumstances, since the Examiners must publish the final class lists two weeks after the submission date. An allowance of marks may be made only if a substantial part of the project work has been submitted, with the total mark being extrapolated in suitable proportion. Note that allowances are considered separately for each project, i.e. marks awarded for one project will not be used as a basis for awarding marks on the other project. Failure to submit any reports on a project will be treated in the same way as a missed examination: zero marks awarded and the case referred to the University’s Applications Committee. The final deadline for receipt of allowance forms is 4pm on Wednesday of week 7 Easter term.

**Summary**

Application deadline: Applications for coursework in Michaelmas and Lent Terms must be made on an Allowance form and received by one week after the end of the relevant Full Term. All other applications must be received by the Wednesday of the last week of Easter Full Term.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Deadline extension</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab experiments and management exercises</td>
<td>Yes</td>
<td>Yes, but not if it is possible to reschedule. Allowance will not normally be made for more than four experiments/exercises</td>
</tr>
<tr>
<td>Full technical reports</td>
<td>Yes</td>
<td>Not normally</td>
</tr>
<tr>
<td>Extension Activity</td>
<td>Yes</td>
<td>Yes, but not if student can join another group</td>
</tr>
<tr>
<td>Easter term projects: - Interim reports - Final reports</td>
<td>Yes No (or up to 4 days in exceptional circumstances )</td>
<td>Not normally, and only if a substantial part of the project work is submitted</td>
</tr>
</tbody>
</table>

**Purchasing guide for Part II project students**

**How does purchasing work in CUED?**
Purchasing is done through a system called the Engineering Department Requisitioning System, or EDRS for short. It is accessible only to some staff and graduate students, with no exceptions. This system offers access to the university-wide purchasing system known as the Marketplace, as well as to a long list of other companies that are “on the system”.

If you want to buy something, the first step is to decide what you want, and then find a supplier to sell it to you. This is done in the usual way, via a search engine of your choice. It’s best to look for big, well known national suppliers, or suppliers local to Cambridge.

Once you have selected your product and supplier, you try them in the system. First try the marketplace route, which is by far the easier option if it is possible. If you are able to find the product on marketplace, then it doesn’t matter which supplier it’s from, and the order will go through without issue. Most marketplace suppliers deliver within the next two working days.

If you cannot find the product on marketplace, then search the list of companies that are “on the system” for your desired supplier. If yours is not on the list, try and find a different supplier that is. If you cannot find a supplier on the system for your desired product, you must choose a different product. Table 1 shows a list of commonly used suppliers that have well-indexed websites.

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Typical Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS</td>
<td>Hardware e.g. Screws, Motors, Switches etc.</td>
</tr>
<tr>
<td>Farnell</td>
<td>Discrete electronic components e.g. ICs, Resistors etc.</td>
</tr>
<tr>
<td>Comar</td>
<td>Low-Cost optics e.g. Lenses, Filters, Gratings</td>
</tr>
<tr>
<td>Thor</td>
<td>High end optics</td>
</tr>
<tr>
<td>Sigma</td>
<td>Chemical supplies</td>
</tr>
<tr>
<td>CUED Stores</td>
<td>Various metal stock e.g. Sheet, Bar and Round</td>
</tr>
</tbody>
</table>

Once an appropriate supplier has been found, they must be contacted for a quote to supply the desired product. This can then be entered into the system and the order will be processed, though non-marketplace suppliers will often take longer to supply than marketplace ones. This lag, coupled with the delay that typically results from having to procure a quote, means that non-marketplace orders typically take as long as one working week to process.

How do students purchase for their projects?

As undergraduates are not permitted to access EDRS, they must work with someone who does have access. Different people will have different preferences on how they want this to happen, but it is always best to have a list of the products you want to buy in advance of contacting them. If possible, have either a product code or directions to information from a supplier, as this will make the process much quicker. Once the order has been placed, the person that placed the order will be notified by email when it arrives. They may instruct you to collect it from Stores (next to the workshops), where you will need the Purchase Order number, and you will be asked to sign to show you have accepted the order.

Are there any ways of getting things which aren’t on EDRS?

In broad, yes, though they are not easy. It is usually better to find an alternative product than to try to purchase one that cannot be found on the system. Contact your project leader, supervisor or demonstrator if no alternatives can be found.

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