

---

## SECOND NOTICE ABOUT FOURTH-YEAR PROJECTS 2011/12

---

This Notice is for the attention of all fourth-year students taking Engineering Tripos Part IIB. It contains sections on:

[Introduction](#) - [Aims](#) - [General Administration](#) - [Photocopying/Printing](#) - [Workshop Facilities](#) - [Health and Safety](#) - [Log Books](#) - [Assessment Overview](#) - [Technical Milestone Report](#) - [The Final Project Report](#) - [Oral Presentations](#) - [Deadline Problems](#) - [University Guidelines on Plagiarism](#) - [Risk Assessment and Form](#)

### 1. INTRODUCTION

The final-year project is a major feature of the four-year course for the Engineering Tripos. It is intended to be demanding, to test your skills to the uttermost and to give you opportunity to prove that you are of MEng standard. You should, at the time of issue of this notice, have determined what your project is, who your supervisor is and already spent some time during the Long Vacation thinking about the project. Some students, with projects strongly linked to industry, may have already completed a substantial body of work, such as a programme of tests. For all students a guideline to the amount of effort expected in the coming academical year is that project work should occupy you for some 15 to 20 hours per week throughout the year. Good time management is essential to ensure that your project mark does not suffer as a consequence of too much concentration on the modules, or vice versa. If you find that your project work seems to be in the doldrums, *do not let matters slide*. Discuss the situation with your supervisor.

### 2. AIMS

There is considerable diversity amongst fourth-year projects and the learning experience will differ between projects. This does not necessarily mean that one project topic is better, another worse, but it does imply that each project is likely to fulfil only a selection of the general aims of project work, which are to enable students to:

- Undertake a major piece of connected work of engineering significance.
- Exercise initiative in a technical context.
- Appreciate the problems of planning an investigative, experimental or computational task.
- Develop skills in modelling and analysis in situations where the appropriate assumptions are not known a priori.
- Learn how to search the literature efficiently for relevant information.
- Develop further design skills, including application to the design of experimental apparatus.
- Practise the reporting of a major piece of work and appreciate problems of appropriate selection of matter to be reported.

The working relationship with your supervisor is central to achieving these aims, and for this reason your college authorises up to 1 hour per week formal supervision associated with the project. In practice, you and your supervisor may prefer a more flexible structure. In any case, your supervisor is expected to submit a termly report, which you can view on CAMCORS. Should you have any concerns over supervision arrangements, try first to resolve them with your supervisor. If they persist, contact your Director of Studies.

### 3. GENERAL ADMINISTRATION 2011/12

Detailed guidance in your project work is primarily the responsibility of your supervisor. However, overall control within each Group is in the hands of a **Group Coordinator**. Much of your day-to-day contact will be with the **Group Centres**, which provide a channel for communication and source of information for both students and staff. **You should familiarise yourself with your Group's details early on in the year – you will need them throughout!**

<b>Overall Project Coordinator</b>	Dr Andrew Gee	ahg@eng
<b>Group A - THERMODYNAMICS AND FLUID MECHANICS</b>		
<b>Coordinator:</b>	Prof Howard Hodson	<a href="mailto:hph@eng">hph@eng</a>
<b>Chief Technician:</b>	Mr Mick Underwood	<a href="mailto:mau20@eng">mau20@eng</a>
<b>Secretarial support:</b>	Mrs Kate Graham	<a href="mailto:kag1000@eng">kag1000@eng</a>
<b>Group Centre:</b>	Hopkinson Lab, Ground Floor, Inglis Building	
<b>Noticeboard:</b>	Between rooms 203 and 208, 2nd floor Baker Building	
<b>Group B - ELECTRICAL ENGINEERING</b>		
<b>Coordinator:</b>	Prof Bill Milne	<a href="mailto:wim@eng">wim@eng</a>
<b>Chief Technician:</b>	Mr Dave Gautrey, and Mr Mike Brown	<a href="mailto:dpg@eng">dpg@eng</a> , <a href="mailto:mjb@eng">mjb@eng</a>
<b>Secretarial support:</b>	Mrs Cattie Tuson	<a href="mailto:cet38@eng">cet38@eng</a>
<b>Group Centre:</b>	Electrical and Information Teaching Lab, 1st floor Inglis Building	
<b>Noticeboard:</b>	West end of the EIETL, to the left of the main aisle	
<b>Group C - MECHANICS AND MATERIALS ENGINEERING</b>		
<b>Coordinator:</b>	Dr Digby Symons	<a href="mailto:dds11@eng">dds11@eng</a>
<b>Chief Technician:</b>	Mr Gareth Ryder	<a href="mailto:gr@eng">gr@eng</a>
<b>Secretarial support:</b>	Mrs Anna Walczyk	<a href="mailto:aw571@eng">aw571@eng</a>
<b>Group Centre:</b>	Mechanics of Machines Laboratory, Ground Floor, Baker Building (entrance via central roadway)	
<b>Noticeboard:</b>	North corner of lab (i.e. by roadway entrance)	
<b>Group D- CIVIL, STRUCTURAL AND ENVIRONMENTAL ENGINEERING</b>		
<b>Coordinator:</b>	Dr Abir Al-Tabbaa	<a href="mailto:aa22@eng">aa22@eng</a>
<b>Chief Technician:</b>	Mr Martin Touhey	<a href="mailto:mrt10@eng">mrt10@eng</a>
<b>Secretarial support:</b>	Ms Jen Flack	<a href="mailto:jf368@eng">jf368@eng</a>
<b>Group Centre:</b>	Structures Lab, Ground Floor, Inglis Building	
<b>Noticeboard:</b>	Mezzanine Floor, Inglis Building	
<b>Group F - INFORMATION ENGINEERING</b>		
<b>Coordinator:</b>	Prof Keith Glover	<a href="mailto:kg@eng">kg@eng</a>
<b>Chief Technician:</b>	Mr Dave Gautrey, and Mr Mike Brown	<a href="mailto:dpg@eng">dpg@eng</a> , <a href="mailto:mjb@eng">mjb@eng</a>
<b>Secretarial support:</b>	Mrs Rachel Fogg	<a href="mailto:rff22@eng">rff22@eng</a>
<b>Group Centre:</b>	Electrical and Information Teaching Lab, 1st floor Inglis Building	
<b>Noticeboard:</b>	West end of the EIETL, to the left of the main aisle	

## 4. COMPUTING and PHOTOCOPYING/PRINTING

### 4.1 Computer Facilities

Those who are intending to do projects with major computational elements should be aware that, while the departmental teaching system can be used for project work, priority must be given to timetabled computer based teaching. Where substantial computer resources are required, these should normally be provided by the Research Group hosting the project. If this is not possible, the requirements should be discussed at an early stage with the Teaching Systems Manager, Stephen Mounsey, [sys-admin@eng.cam.ac.uk](mailto:sys-admin@eng.cam.ac.uk).

For those who need to use the departmental teaching system for their project the machine **IIB-projects** is available for project work, but this is shared between all projects. If your project involves computationally intensive work you should be using the "Grid Engine" system to submit offline jobs which can be scheduled on appropriate machines outside of timetabled teaching periods. See <http://www.eng.cam.ac.uk/help/unix/GridEngine/> and the pages it refers to for further information.

For more information on computer-based projects see <http://www-h.eng.cam.ac.uk/help/tpl/IIBprojectstudents.html>.

Students are advised to make their own backups of computer based project work, especially when using systems other than the departmental teaching system. Those using the departmental teaching system should be aware that although files can usually be recovered from the previous night's system backups, this takes time which you may not have as deadlines approach.

## 4.2 Photocopying/Printing

Fourth year students have a certain amount of access to Departmental photocopying facilities to assist them in their research and in preparing for presentations. You will need your University Card and/or Departmental PIN to do this, and also a divisional photocopying job number from your Supervisor. (If you forget your PIN, please contact [operators@eng](mailto:operators@eng), or use the "pin" command on the teaching system, see: [www.eng.cam.ac.uk/help/jmrm/intranet/pins.html](http://www.eng.cam.ac.uk/help/jmrm/intranet/pins.html) ). However, students should note that faculty work will always take precedence in the Departmental Print Room. Students should also note that they are not allowed to use the Print Room for duplication (or binding!) of their final report. Students must either make two word-processing print outs or use copying facilities outside of the Department.

On a similar note, students are reminded to allow plenty of time when asking the operators in the DPO to assist you: your work is not necessarily a priority to them.

## 5. WORKSHOP FACILITIES

Each project is normally allocated a maximum of five days worth of workshop time covering both the main and divisional workshops. Projects requiring more than five days will require permission from the relevant Head of Division. Please discuss this with your supervisor if appropriate.

## 6. HEALTH AND SAFETY

In any activity and at all times, *you have a moral and legal responsibility for your safety and that of others that may be affected by your actions*. It is particularly important in project work, e.g. whilst designing apparatus, which must be safe to use, or planning new uses for existing equipment.

### 6.1 Risk assessment in the Department

All students must discuss the safety implications of their project with their supervisors and complete a risk assessment of their work. A risk assessment form (spare copies of which are available from the Teaching Office) must be completed with the assistance of your supervisor. The form should then be sent to the Departmental Safety Office, even if 'no risk' has been identified. The form must be received by the Safety Office before the end of Week 1, Michaelmas Term (i.e. by midnight on the Wednesday). A penalty of five marks will be deducted from your project total for every week, or part week, the assessment form is late. Students must make every effort to have their risk assessments counter-signed by supervisors, but if this proves difficult and the deadline may be missed, they should submit an unsigned version.

NB: All students are required to attend a talk by the Safety Officer on Wednesday 5 October, 2-3pm, in LT2. No practical work may be undertaken before the risk assessment form has been seen by the Safety Office.

### 6.2 Risk assessment outside the Department

If you are sponsored and your project is a collaborative one with your sponsor, no further action is needed. If your project involves working away from the Department with a firm which is not sponsoring you, the Industrial Experience Coordinator, Mr Igor Wowk, ([iw@eng](mailto:iw@eng)) room BC3-07, must be consulted.

## 7. LOG BOOKS

It is essential good practice to keep a day-to-day record or *log book* when undertaking a major investigative task, such as a programme of experiments. For some types of project, such as software projects, electronic records and documentation may be more appropriate. It is up to individual supervisors to agree with their students what form of log will be kept, and you are expected to adopt this good practice. Laboratory notebooks for use as a written log may be obtained from your Group Centre at the start of the Michaelmas Term (the first note book is free; additional note books can be purchased from the Teaching Office). Remember to put your Name, College and Group on the front cover.

The log should be used for actual work purposes - *it is not for writing up later*. Thus, experimental readings, brief calculations, sketches of proposed designs, etc., should be entered directly into the log. The date of each entry must be recorded. Your supervisor will monitor your log book or electronic record, and it will form the basis for

discussion at the Michaelmas and Lent term progress review meetings (see following section). Log books (or electronic equivalent on CD) are submitted with the Final Reports, and will be considered by the Assessor.

## 8. ASSESSMENT OVERVIEW

Assessment of your project work is based on the following elements:

<i>Element</i>	<i>Credit</i>	<i>Timing / Deadline</i>
Michaelmas term presentation	20	Michaelmas Term, week 7 or 8
Michaelmas term Progress and Industry	20	Michaelmas Term, Friday weeks 5 and 9
Technical Milestone Report	40	Lent Term, Thursday week 1
Lent term Progress and Industry	20	Lent Term, Friday weeks 5 and 9
Technical Abstract and Final Project report	200	Easter Term, Wednesday week 5
Easter term presentation	40	Easter Term, week 6 or 7
Overall Progress and Industry	20	Throughout year

The total credit available is thus 360.

It is important to maintain a steady work-rate throughout the year. **Progress and industry** marks are allocated on the basis of four half-termly meetings in Michaelmas and Lent, and also according to your supervisor's year-end judgement of your overall approach. The half-termly assessments will typically be made during a normal project meeting. Feedback will be provided via e-mail, within 48 hours. **It is your responsibility to ensure that the progress review meetings are arranged by the associated deadlines**, which are the **Fridays of Weeks 5 and 9 (4 November, 2 December, 17 February, 16 March)**, giving your supervisor *at least a week's notice*. If you have good cause for postponing a meeting beyond its deadline (e.g. due to illness), you must request an extension from the Teaching Office using the Allowance for Illness form.

If you are working in **collaboration** with another student or as part of a team, you must nevertheless write your own reports. If there are results obtained jointly, it is acceptable for you to present copies of graphs and tables produced in collaboration, suitably referenced. **The text of the reports must be your own**. See [Section 13](#) for the University Guidelines on Plagiarism. In summary, the golden rule is that "the Examiners must be in no doubt as to which parts of your work are your own original work and which are the rightful property of someone else".

Your **Log Book (or electronic equivalent on CD)** is not assessed as a separate item, but you **must submit it** together with the two copies of your Final Report. It will be taken into account when a mark is allocated for the report by the Assessor. An extra copy of your **technical abstract** is to be submitted with the two copies of your Final Report and this will be archived for reference by future staff and students.

**Submission dates** for 2011/12 are: (i) **Thursday 19 January for the Technical Milestone Report** (2 copies); and (ii) **Wednesday 30 May for the Technical Abstract** (3 copies), **Final Project Report** (2 copies) and **Log Book (or electronic equivalent on CD)**. These documents should be handed in to the **Group Centre** on or by the due dates. They will be date-stamped and automatically passed on to your Supervisor and Assessor for assessment.

One copy of your Milestone Report and one copy of your Final Report is kept by your Supervisor. The second copy and the project record are held until after the meeting of the Fourth Year Examiners and may then be collected, together with your coursework (more details will be given in the Easter term Briefing Notes). Work not collected from CUED will be forwarded to your College for collection on Graduation Day.

## 9. THE TECHNICAL MILESTONE REPORT

### 9.1 Style and Content

It is common in academic and industrial research to produce an interim report about half way through a piece of project work. Such a document details the progress to date and outlines the strategy that will be adopted to ensure that the project is completed successfully and on time. Typically, a milestone report is read by both technical and business managers. It should therefore contain details of technical issues, but must also be well presented and clearly written. The reader will need to be convinced that the work is worthwhile and is likely to result in an interesting and/or useful outcome.

You are required to write a Technical Milestone Report conforming to the following rules:

- The length of your TMR must not exceed 6 A4 sides, including diagrams, references, appendices and all other content elements. A penalty of up to 20 marks may be applied for exceeding the page limit.
- Use 12-point font, single line spacing and 2.5 cm margins all round.
- **Two copies** of the TMR must be submitted to Group Centres by **5pm on Thursday of Lent Term week 1** (19 January 2012). 5 marks will be deducted for each day a report is late.
- The title, author's name and a summary should appear at the top of the first page, with the main text continuing. No special covers are required and the sheets should be stapled together before submission.

## 9.2 Assessment

The Technical Milestone Report will be assessed against the following criteria:

- Professionalism of presentation
- Motivation for work
- Clarity of explanation of the work that has been completed
- Achievement in the project so far
- Quality of structure and detail in the plan for future work

## 10. THE FINAL REPORT

### 10.1 Technical Abstract

The Final Report must begin with a **Technical Abstract** of not more than 2 pages in length. This should be designed as a self-contained document and should provide a concise overview of the report structure and the key features of your work (e.g. the problem being addressed, techniques used, main results, and conclusions). **Note:** as well as being submitted as part of your Final Report, you will be required to submit a **separate copy** of your Technical Abstract, which will be archived by the Department. Thus it is important that you include your name, college and project title in your abstract.

### 10.2 Risk Assessment Retrospective

Your report should include a brief appendix (maximum one side of A4) commenting on the risk assessment you submitted to the Safety Office at the start of the Michaelmas Term. How well did this reflect the hazards actually encountered during the course of the project? In retrospect, how might you go about assessing risk differently if starting the project again?

### 10.3 Style

The Final Report should not exceed 12,000 words or 50 A4 pages, including figures and appendices (but not counting the title page and Technical Abstract). It should be double-sided if at all possible, typed in 12 point at one-and-a-half line spacing. Margins are to be approximately 25mm all round. You may use colour for diagrams etc. if you so wish. You will need to submit **two copies** – Departmental photocopying machines may not be used for making the second copy (section 4.2),

The blue front cover sheet and backing sheet for each copy should be of the standard departmental pattern, two copies of which will be supplied (with fastening clips) by Group Centres in the Easter Term.

The first page beneath the cover should show the following information:

(A) Visible through the cover window:

(window size = 8.5 cm/3.3" by 5cm/2.5", situated 10cm/3.95" from top of page, 6.25cm/2.45" from LH side of page)

**Title of Project**  
**by**  
**Student's Name (College Abbreviation)**

**Fourth-year undergraduate project**  
**in Group X, 2011/2012**

(B) Half way down the first page:

The following statement should be added to all 4th year project reports, dated and signed by the student:

***"I hereby declare that, except where specifically indicated, the work submitted herein is my own original work."***

## 10.4 Planning the report

Before you start writing, it is essential that, from the start, you have a clear view of the technical level at which the report should be pitched. Remember that you are writing for two readers:

- (i) **Your project supervisor**, who should know the aims and the technical background of your project, and
- (ii) **An assessor**, who will know something about the subject area (e.g. an Information Engineering report will not be examined by a lecturer in Structures), but will not be familiar with details. *i.e. do not fill the report with elementary theory and descriptions of standard processes.*

There are no set rules for how a technical report should be structured and the pattern may depend on whether the work being reported is theoretical, experimental, computational or on design. What is certain is that you must have a technical abstract, an introduction and conclusions. Between the introduction and conclusions, the theme of the report should be developed in the manner which you judge to be most clear and logical. However, a typical plan for a report on an experimental project might be:

- **Technical Abstract**  
A self-contained summary in not more than 2 sides. Write this last.
- **Introduction**  
An important section in which you can point out what has been done before and put the project into context. Many students seem to confuse Introduction and Summary. In this section you explain why you are doing the work. If you don't know, ask your supervisor.
- **Theory and design of experiment**  
Explain the assumptions behind the theoretical development you are using and the application of the theory to your particular problem. Any heavy algebra or details of computing work should go into an Appendix.
- **Apparatus and experimental techniques**  
This section should describe the running of the experiment or experiments and what equipment was used, but should not be a blow by blow account of your work. Experimental accuracy could be discussed here.
- **Results and discussion**  
This could be split into two separate sections but it may be easier to present the results and your discussion of them in the one section. This is the most difficult part of the report: you must present the results, interpret them and compare them with any theory or other published results.
- **Conclusions**  
This should contain the main findings and possibly ideas for future work.
- **References**  
List the sources of information which you have quoted in your background material, theory, or experimental methods in sufficient detail for anyone else to find the sources in the library.
- All **figures and graphs** in the report should be clearly labelled with figure numbers and captions. Make sure that you show scales and label the axes on all your graphs.

## 10.5 Computer-program listing

In the same way that it is a mistake to include in a report every detail of standard experimental procedures, it is inappropriate to reproduce an entire computer program, which will inevitably contain much which is of small intrinsic interest. If there are elements in a program which are novel, these should be selected for proper discussion in the text.

It may well be that your supervisor will want to keep a record of the program, but this should be done separately. It may also be appropriate to include computer code as part of the project record; your supervisor can advise on this.

## 10.6 Writing the Final Project Report

You should expect to make at least one and probably more revisions to your first draft. ***So, make sure that you complete that draft well before the deadline.*** Then leave it for a few days and read it through. Does it make sense? Make your revisions and prepare the final version.

If you are using departmental facilities for word processing, note that you may have to share with other users. In particular, the third-year Easter-term projects start before the submission date of your report and at certain times the third-year projects have priority.

If you are using your own computer for word processing, be careful to **keep plenty of backup copies** of your work. **Computer failure** is not an acceptable excuse for handing in your report late, and if you fail to hand in your main report, you will fail the MEng.

## 10.7 Assessment of the Final Report

The following criteria will be considered in the assessment:

### A. Effort:

- Practical skill in experimental, computational, design or theoretical work.
- Diligence.
- Persistence in overcoming difficulties and achieving objectives.

### B. Achievement:

- Appreciation of significance of project.
- Competence in planning attack on problems.
- Initiative and generation of ideas.
- Ingenuity and perspicacity.
- Deductive power and judgement.

### C. Communication:

- Overall planning of the account - the logic of its development.
- Clarity of Technical Abstract.
- Clarity of main text and analysis.
- Quality of language, readability, freedom from errors.
- Clarity of diagrams and graphs.

## 10.8 Feedback

Feedback on the marking of the Final Project Report is provided by the project supervisor *on request*. (Marks are never released at this stage.)

## 10.9 Archiving

There is no central archive of Final Project Reports, although individual supervisors may keep a copy of their students' work. Copies of Technical Abstracts will be collected at the time of the submission of Final Reports and archived by the Department after the projects are finished. They will then be available in the Departmental Library for consultation by staff and students in future years.

## 11. THE ORAL PRESENTATIONS

### 11.1 Formalities

The project Coordinator of your Group will arrange a session (or mini-conference) towards the end of the Michaelmas term and another towards the end of the Easter term. At each mini-conference, you are required to give a presentation of your project, speaking for 10 minutes and answering questions for another 5. The audience will consist of other students with projects in your Group, supervisors and assessors of the students present, and other interested members of staff.

All lecture rooms are now fitted with permanent LCD data projectors, with associated computers for Powerpoint or PDF presentations. Students are encouraged to bring slides/data on CDs or plug-in USB drives/memory sticks, to avoid any problems with laptops due to incompatibilities of various kinds. Note that you *cannot* rely on other programs (eg Matlab) being available. It is essential to have a run-through on the relevant computer *well in advance*.

Alternatively, you may wish to produce your slides on OHP transparencies. You may collect materials (from Group Centres) to prepare up to 6 OHP transparencies, or, using your job number and PIN, you may make up to 6 photocopied transparencies in the Departmental print room. Alternatively, you can ask the Operators to print up to 6 laserjet transparencies on the colour laserjet in their room (they will provide transparencies for this). See also Section 4. If you need more than 6, you will have to make your own arrangements for their preparation, but note 11.2 below. *Check in advance that an overhead projector will be available in the presentation venue.*

**Note:** Each Group makes its own arrangements for the oral presentations. Therefore any administrative queries or problems should be addressed to your Group Centre and not to the Teaching Office.

## 11.2 Some generalities

**Remember** that one or two well made points will be worth more to your audience than ten presented scrappily, however brilliant the underlying ideas are.

**Avoid** putting too much material in your slides. 6 slides in 10 minutes gives you an average of about one-and-a-half minutes to discuss each - all too short a time.

Both presentations need meticulous preparation, but this is particularly true of the Michaelmas term one, since it is the first major element in the assessment of your project work and it is important that you make a good impression. Discuss what you intend to say with your supervisor and, if possible, hold a rehearsal with him/her listening.

## 11.3 Michaelmas term presentation

The Michaelmas-term presentation is intended to give you an opportunity of describing work in progress to a peer group and benefiting from their criticisms and suggestions. In making the presentation you will be expected to give clear expression to:

- The aims of the project and their significance
- The background and context
- Your plan of how to achieve the aims
- The progress made so far towards fulfilling the plans.

You will receive copies of the comments made by your supervisor and assessor by the end of Michaelmas full term.

## 11.4 Easter term presentation

You should base the Easter-term presentation on the most significant aspect of your project. It is not necessary, or indeed sensible, to try and include all the information from your Final Report.

- Define the problem addressed by the project
- Explain briefly the significance
- Describe how the problem was tackled
- Present the most important results and explain their significance
- Highlight the conclusions.

## 12. DEADLINE PROBLEMS

### 12.1 Illness

If you are unable to attend for a presentation/progress review meeting or cannot submit a report because of illness or other grave cause, you should notify your Supervisor immediately. If your supervisor recommends it, you should collect an Allowance for Illness form from the Teaching Office. This form has sections for both you and your Tutor to complete before it is returned to the Teaching Office for consideration by the Director of Undergraduate Education. In the case of a missed presentation/meeting, every effort will be made to reschedule it. In the case of a report you may be required to submit to the Teaching Office what notes, drafts, etc. you have available, so that as fair an allowance of marks as possible can be made.

### 12.2 Penalties

The time staff have for marking project reports is short, given that mark lists have to be ready for the meeting of Examiners. Failure to meet submission deadlines for no good reason is treated seriously.

**5 marks per day** will be subtracted for each day that a report is late. Normally, reports will not be accepted if more than two days late.

**Up to 20 marks** may be deducted for infringement of the rules on length in the case of a report.

## 13. UNIVERSITY GUIDELINES ON PLAGIARISM

The following statement has been issued by the Board of Graduate Studies. Written as guidance for postgraduate students, the information is equally relevant to all students taking a 4th year project.

In general, plagiarism can be defined as: **“the unacknowledged use of the work of others as if this were your own original work.”**

In the context of work submitted for examination, this amounts to: **“passing off the work of others as your own to gain unfair advantage.”**

Such use of unfair means will not be tolerated by the University; if detected, the penalty may be severe and may lead to failure to obtain your degree.

### 13.1. The scope of plagiarism

- a. Plagiarism may be due to:
  - Copying (using another person's language and/or ideas as if they are your own);
  - Collusion (unauthorized collaboration)
- b. Methods include:
  - **quoting directly** another person's language, data or illustrations without clear indication that the authorship is not your own and due acknowledgement of the source;
  - **paraphrasing** the critical work of others without due acknowledgement - even if you change some words or the order of the words, this is still plagiarism if you are using someone else's original ideas and are not properly acknowledging it;
  - **using ideas** taken from someone else without reference to the originator;
  - **cutting and pasting** from the Internet to make a "pastiche" of online sources;
  - **colluding** with another person, including another candidate (other than as might be permitted for joint project work);
  - **submitting** as part of your own report or dissertation someone else's work without identifying clearly who did the work (for example, where research has been contributed by others to a joint project).
- c. Plagiarism can occur in respect to all types of sources and all media:
  - not just text, but also illustrations, musical quotations, computer code etc;
  - not just text published in books and journals, but also downloaded from websites or drawn from other media;
  - not just published material but also unpublished works, including lecture handouts and the work of other students.

### 13.2. How to avoid plagiarism

The stylistic conventions for different subjects vary and you should consult your supervisor about the conventions pertaining in your particular subject area. Most courses will issue written guidance on the relevant scholarly conventions and you are expected to have read and to follow this advice. However, the main points are:

- when presenting the views and work of others, include in the text an indication of the source of the material, e.g. 'as Sharpe (1993) has shown,' and give the full details of the work quoted in your bibliography;
- if you quote text verbatim, place the sentence in inverted commas and give the appropriate reference, e.g. 'The elk is of necessity less graceful than the gazelle' (Thompson, 1942, p 46) and give the full details in your bibliography as above;
- if you wish to set out the work of another at length so that you can produce a counter-argument, set the quoted text apart from your own text (eg by indenting a paragraph) and identify it by using inverted commas and adding a reference as above. NB long quotations may infringe **copyright**, which exists for the life of the author plus 70 years.
- if you are copying text, keep a note of the author and the reference as you go along, with the copied text, so that you will not mistakenly think the material to be your own work when you come back to it in a few weeks' time;
- if you reproduce an illustration or include someone else's data in a graph, include the reference to the original work in the legend, eg (figure redrawn from Webb, 1976) or (triangles = data from Webb, 1976)
- if you wish to **collaborate** with another person on your project, you should check with your supervisor whether this might be allowed and then seek permission;
- if you have been **authorised to work together** with another candidate or other researchers, you must acknowledge their contribution fully in your introductory section. If there is likely to be any doubt as to who contributed which parts of the work, you should make this clear in the text wherever necessary, e.g. 'I am grateful to A. Smith for analysing the sodium content of these samples';
- be especially careful if **cutting and pasting** work from electronic media; do not fail to attribute the work to its source. If authorship of the electronic source is not given, ask yourself whether it is worth copying.

### 13.3. The Golden Rule...

The examiners must be in no doubt as to which parts of your work are your own original work and which are the rightful property of someone else.

---

## RISK ASSESSMENT OF HAZARDS IN 4TH YEAR PROJECTS

---

### Note from the Safety Office

One of the key roles of this Department is to develop students for a role within industry and/or academia. As this is likely to include positive engagement in health and safety procedures, you will be expected to demonstrate an awareness of the hazards presented by your work, both to yourself and others, understand the risks that these present and think of control measures that would minimise these.

To help prepare you for this we ask you to include a risk assessment as part of your project documentation. Certain projects, such as computer based, will have relatively simple risk assessments but consideration should still be given to ergonomic issues. Other projects may have a whole range of hazards, physical (e.g. electrical or lasers), chemical or biological, to be considered.

The principles of risk assessment will be explained in the Safety Officer's talk at the start of the Michaelmas term. Attendance at this presentation by all final year students is expected. A risk assessment form is attached to this notice: if you have mislaid yours, spare copies will be available after the talk

Discuss the risk assessment with your supervisor, and submit the completed risk assessment to me before starting practical work on the project, and at the latest by the end of Week 1. I will review them, countersign them if they adequately reflect the principles of risk management, and return them to your supervisor for inclusion in the project package.

I may ask for more details about certain technical aspects of the project or for an enhanced risk assessment for particular hazards. I am happy to discuss any safety questions or reservations you may have with you.

IAN SLACK  
Departmental Safety Officer  
Room BNO-41, Office Floor, Baker Building (Centre Wing)

[4TH YEAR PROJECT RISK ASSESSMENT FORM](#) (PDF). A paper copy of this form is issued to all students at the start of Michaelmas Term at the end of their 'Second Notice about Fourth Year Projects' document.

Updated: June 2011  
[teaching-office@eng.cam.ac.uk](mailto:teaching-office@eng.cam.ac.uk)