Part IIA guide

This document contains important information for Part IIA students. Where appropriate, supplementary information will be issued throughout the year.

You are reminded of the progression requirements and industrial experience requirements for the Tripos and of opportunities for becoming a student or affiliate member of one or more of the Institutions that accredit the Tripos.

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Part II aims & objectives

Teaching aims

The aims of Part II of the Engineering Tripos are to encourage and enable students to:

- specialise in considerable depth in a chosen area of engineering;
- acquire up-to-date knowledge and understanding of theory and practice in a chosen area of engineering, in an atmosphere informed by research;
- continue to develop skills in modelling, analysis and problem solving;
- develop creativity, synthesis and design skills, and the ability to create engineering design solutions;
- design and evaluate experiments and computer software;
- continue to develop communication, teamwork, management and leadership skills;
- develop an awareness of the international role of the engineer;
- develop the facility for independent learning, open-mindedness, and the spirit of critical enquiry;
- develop the ability to tackle unforeseen technical and management demands and to apply new technologies in novel situations with confidence and competence;
- develop their full potential as innovators and future leaders in industry, the professions, public service, academic teaching and research.

General objectives

At the end of Part II undergraduates should:

- by means of lecture courses, associated course requirements, examples papers and appropriate reading have gained an understanding in depth of engineering science in specialised areas;
- have progressed further with all but the first of the general objectives for Part I of the Engineering Tripos;
- by means of team projects have developed cooperative, management and communication skills as well as practical professional knowledge;
- by means of a major project in either design or research have developed creativity, innovation and a capacity for independent learning and enquiry.

The progress of each undergraduate is measured by Tripos examinations and by assessed coursework. Tripos classes and details of marks are notified to undergraduates through CamSIS or by their Colleges, and progress with coursework is communicated by staff marking individual coursework activities.

Detailed objectives for each element of the course are given with the syllabuses for each series of lectures and with the instruction sheets for coursework.

Structure & balance of work

In Part IIA, you will begin to specialise in your chosen branch of engineering. There is flexibility in the degree of specialisation, although you will devote at least 60% of your time to your chosen branch of the profession. If you wish, you can continue to maintain a wider breadth of study by taking topics outside of your engineering area, including management and foreign languages.

In outline, the course comprises lectured modules and coursework, as specified in the Faculty Board notice. Each single module (the majority) has 16 lectures in either Michaelmas or Lent Term. There are a few double modules, which have 16 lectures in both terms. You take 10 modules (double modules counting as two single modules), 5 in each of Michaelmas and Lent. All modules have associated coursework, which is generally a laboratory experiment or (for modules in group E) a report. You should complete all the coursework for your 10 modules, but only your best 8 marks will be used for examination credit. You will write two Full Technical Reports based on module experiments. In addition, you will have supervisions for each module, arranged by the Module Leader. Some Group E modules have examples classes for the whole group together in place of conventional supervisions. During either Michaelmas or Lent you will undertake a group project in the form of an Extension Activity. The examinations are held at the start of the Easter Term. During the remainder of that term you work on two projects.

Modules

Overview

Most Part IIA modules (preceded by numeral 3) have 16 lectures and 3 hours of small-group supervisions completed in one term (either Michaelmas or Lent). These are examined by an written paper of 1.5 hour duration held early in the Easter term. However, some group A courses are double modules that run throughout both the Michaelmas and Lent terms and are each examined by a 3 hour written paper.

The Faculty Board publishes in May a list of the Part IIA modules that will run the following academic year .

Part II modules are grouped according to the CUED Subject Group offering them and are subdivided into sets (spread evenly across Michaelmas and Lent terms). The lectures for modules in each set are examined at the same time, and you are **not** permitted to choose more than one module from any one set (even if the lectures do not clash). You should discuss module choices with your Director of Studies.

Rules

Please refer to the guidance on Engineering Areas for advice on module choices. The main rules are that:

- you must choose **ten** modules from Groups A-G, M and S, and Group I (if offered);
- **five** must be in the Michaelmas term and **five** must be in the Lent term;
- if you wish to qualify in an engineering area, you must follow the specific rules on module choices for that area;
- no student may include more than two modules from the combination of Groups I and S in his/her total.*
- students may take up to two management modules. Management includes all 3EX modules, and related shared modules offered in some years by other subject groups (e.g. 4D16 Construction & Management).

There are also conditions specific to professional institutions accreditation.

*Group S are Part IIB modules (thus preceded by numeral 4) available to Part IIA students. There are **no supervisions** or separate coursework for fourth-year modules. Group I modules are modules imported from courses within Engineering or from other departments

Selection on COMET

You can update your provisional module selection at the start of each of the Michaelmas and Lent terms, and will be contacted by email with a reminder to log on to COMET to confirm or change your provisional choices.

You should attend the first lecture of any module of interest to gain an overview of its content and structure.

Your selection must be finalised each term by midnight on the Wednesday of week one. Shortly after each deadline, you will confirm your selection for that term as a binding exam entry that may not subsequently be changed or discounted.

COMET will check that your selection is valid and will notify you if your module choices do not fit into your chosen engineering area. If this is the case, you must revise your selection.

Administration

Each course has a module leader and a lab leader (sometimes, but not always, the same person). Any queries regarding lab experiments, lab handouts or coursework should be addressed directly to the lab leader. Any queries regarding lecture notes, examples papers and supervisions should be addressed directly to the module leader.

Contact information for module leaders and lab leaders is available on the syllabus page,

Supervision

Module leaders will appoint supervisors and notify you of their details soon after COMET closes. The number of supervisions to be given for each Part IIA module is usually four, comprising three (one hour) supervisions in the term of the module plus a later ‘revision’ supervision. Any additional supervision must be authorised in advance by your Director of Studies.

Any major problems with regard to supervisions should be brought to the immediate attention of your DoS, even after the first supervision. You may also use the dedicated, anonymous fast feedback facility for Part IIA supervisions.

Engineering areas

Engineering areas

If you wish to qualify in a specific engineering area, at least six modules from your total of ten must fall within one of the engineering areas defined by the Faculty Board.

The title of the engineering area for which you are qualified will appear on each of your Part IIA and IIB transcripts. In some cases, you may be qualified for more than one engineering area, in which case all will appear on your transcript. It is not essential that your engineering area at Part IIB is the same as that at Part IIA.

If you do not wish to choose six modules from an engineering area you may instead qualify in Engineering (i.e. General Engineering). Your choice of modules is less restricted, but you must still follow other requirements about module choices (e.g. sets).

Engineering area	Coordinator
Mechanical engineering	Dr H R Shercliff
Energy, sustainability and the environment	Professor N Collings
Aerospace and aerothermal engineering	Professor WN Dawes
Civil, structural and environmental engineering	Mr A McRobie
Electrical and electronic engineering	Prof A Flewitt
Information and computer engineering	Dr J Sayir
Electrical and information sciences	Professor M Smith
Instrumentation and control	Professor M Smith
Bioengineering	Dr AJ Kabla

For advice on engineering areas and module choices go first to your Director of Studies. The staff listed above will be happy to provide expert advice on their Engineering Areas.

General queries about Manufacturing Engineering should be sent to the MET Course Administrator; detailed queries about academic course content may be sent to Dr James Moultrie or Dr Tim Minshall.

Extension activities

You must also complete a Part IIA Extension Activity, and in most (but not all) cases your choice of this is not restricted. For further details see Part IIA Extension Activities.

Lecture & lab start times & lateness penalties

Lectures

Lectures run from five minutes past the hour to five minutes to the hour, with the following exception:

Part IA and IB lectures in LT0 will start promptly at 9am and 10am. Lecturers will start lecturing at precisely 9am in order to fit in the full 50 minutes of teaching that they need to deliver:

- First lecture 09.00-09.50 (non-standard)
- Second lecture 10.00-10.50 (non-standard)
- Third lecture 11.05-11.55
- Fourth lecture 12.05-12.55

This schedule allows LT0 to empty and refill at 11am. Students should leave LT0 by the doors at the front and on the North side at the back (leading to the roadway), allowing students to enter from the foyer and the courtyard.

Lab times and lateness penalties

Morning laboratory/coursework sessions begin at 5 minutes past the hour.

Afternoon activities start on the hour.

1. Students arriving up to 10 minutes late will be penalised 1 mark for late arrival, but may be excluded entirely at the discretion of the demonstrator in charge.
2. Students arriving more than 10 minutes late, will be automatically excluded from any laboratory experiment. For other coursework activities (e.g. computing, drawing, IEP etc.) the student may, at the discretion of the demonstrator, be allowed to take part in the activity, but will be penalised for late arrival.
3. Students who arrive late due to circumstances beyond their control should first try to rearrange the coursework activity. If this is not possible they may make an application for recovery of marks using the standard allowance procedure.

Coursework & labs overview

Introduction

Most Part IIA modules run completely in either the Michaelmas or the Lent term and have 16 lectures and one associated lab experiment or written assignment to be completed in the same term. However, two of the Group A courses are double modules of 32 lectures that run throughout Michaelmas and Lent terms with two associated lab experiments. Your best 8 marks for coursework associated with any of your modules from Groups A-G and M can be counted towards your final Part IIA coursework credit total.

Modules in Groups I and S will be assessed by examination (and in some cases coursework as well) but all marks achieved on these modules will contribute to your overall Part IIA examination mark and will not count as part of your Part IIA coursework credit.

In addition to the activities outlined here, students undertake two projects in the Easter term.

Part II coursework is assessed not only on technical content but also on report-writing and exposition skills.

Extension Activity (ExA)

Most ExAs are designed to introduce you to various measurement and test procedures in your chosen professional area, but non technical options also exist, such as the Language ExA. The commitment is 16 hours total, including up to 12 in the laboratory or the field. The form of the report will vary from area to area. Timetable arrangements also vary, but in all cases they only run on certain specified dates.

You should sign up for your ExA **first** and then fit your regular module labs around it. Sign-up may be on-line or on a signing sheet. Please consult the ExA page for more information.

The deadline for booking your ExA (for either Michaelmas or Lent) is Wednesday of week 1 in Michaelmas Term

Module-related coursework

All Part IIA modules in Groups A-G and M have associated with them at least one lab experiment or written assignment. Experiments typically involve 2 hours in the lab, working individually or in pairs, with a 2-3 hour individual write-up (although some modules may have special arrangements).

Modules in Groups I and S do not have separately assessed coursework – any coursework you do for an I or S

module forms an integral part of the examination credit for that module and does not count towards your coursework credit.

You are strongly encouraged to complete coursework for all your modules from Groups A-G and M. If you do complete more than eight eligible pieces of coursework, your best eight marks will be carried forward towards your Part IIA coursework credit total.

The management modules (in Group E) each have a single piece of coursework instead of a lab experiment. Details of their scope and arrangements for submission will be announced in lectures.

Preparation for the lab

In most cases, Lab Leaders will provide lab handouts online or on paper before the lab. You are required to read these handouts before lab sessions, and perform any activity required by the Lab Leader as a preparation for the lab. This is essential to complete the activity in the allocated time. Lab demonstrators are invited to check that students arrive prepared, and might penalise students coming unprepared.

Lab reports

Students are required to provide their own lab books and paper for recording and/or plotting data during the lab sessions when appropriate. It is best practice to plot graphs (on paper or computer) while you are still at the lab bench so that you can see if you have enough points in the right places to define the required curve – or if you have any readings which look suspect and should be repeated. We are especially insistent that all original readings are retained and submitted in your report.

Writing the report should take no more than two to three hours after the lab. There are no generic guidance regarding constraints on report length or whether hand-written documents would be accepted or not, but word-processed documents with properly typeset equations are recommended. A total length of 3-5 pages would be considered standard. Please check the guidelines from the Lab Leader for that respect. Any instruction from the lab leaders takes precedence over departmental guidelines. Lab leader might apply penalties if students do not comply with the lab report rules of their module.

Coversheets

If submitted on paper, all reports (or essays for Group E modules) must be submitted with a coversheet attached. The coversheet highlight the criteria for marking and guides the marker during the assessment of the report. The department provides a generic coversheet (also available from the racks outside the Teaching Office), but Lab Leaders are invited to provide a module specific coversheet if they would like to use different criteria. This coversheet would have to be made available to students at the time of the lab.

Please indicate the hours spent on the report on the coversheet – this is for feedback purposes only, and will not be considered in marking. Do include in this figure the total time spent on the lab, including preparation and lab time itself.

Markers will be looking for a clear record of the practical work you have carried out, together with appropriate discussion. Readings taken jointly in the laboratory may of course be shared with your lab partner, but reports must be written individually. See the guidance on cooperation and cheating.

Full technical reports (FTRs)

You must submit a total of two full technical reports, at least one of which must be in the Michaelmas term. These reports are based on an expansion of a module experiment, and each should involve a further 10 hours work. Some modules may substitute a written exercise or essay for the full technical report. Lab handouts explicitly state whether they are suitable as the basis of an FTR.

There are no FTRs associated with modules in Groups E, I, M or S.

Having checked that a lab is suitable, you should complete the experimental work early in the term and submit the lab report no later than week 6. This gives time for it to be marked and returned to you before you write your FTR. FTRs rarely require you to carry out additional experimental work, but they do usually require a significantly more extensive analysis of the experimental findings, and/or further reading and discussion of the technical literature. The report itself should be typed or word processed to a professional standard – FTRs are assessed for quality of presentation as well as technical content.

The object of the exercise is to enhance your technical communication skills – your ability to explain to others what you have done and to provide appropriate concise discussion. The main body of the text must be your own work. The marked module lab report should be included as an appendix to the completed FTR.

Your FTR should not exceed 10 pages (including title page, diagrams, appendices etc., but excluding the original lab report if included as an appendix) and be written in a sensible font size (minimum 11 pt) with appropriate line spacing. Blank FTR coversheets should be downloaded or collected from the racks outside the Teaching Office. Lab leaders might ask that you submit your report electronically on Moodle. If paper submission is allowed or requested, FTRs must be handed in directly to the group centre for the relevant module, to the designated person or a secure mailbox. Do not leave your report in an open unattended tray, and do keep a copy.

FTR Deadlines

The Michaelmas term FTR must be submitted by 4pm on Wed 7 December 2016, and will be marked over the Christmas vacation and available for collection at the start of the Lent term. The Lent term FTR must be submitted by 4pm on Wed 22 March 2017 and will be marked over the Easter vacation. Collection is from the group centre where you handed it in.

Guidance on report writing

See the report writing guide for generic guidance. The lab handouts will outline the technical aspects of the problem you should address when writing your lab report or FTR, and may provide guidance on the required content and structure of the report: specific instructions given in the lab handouts always take precedence.

Signing up for labs

Most labs have a booking system but a few have a restricted rota or experiments that are available only for a limited period. Any special arrangements for module practical work will usually be described during the first module lecture. Sign-up may be on-line or sheets located in group centres. Some modules offer a choice of lab, but you may only sign up for one lab associated with the module. You may sign up only for labs associated with modules you are taking. Please remember to remove your name from lab signing sheets if you change your module choice.

Study the booking sheets for all your modules before signing up. Sign up for your ExA and get any fixed commitments sorted before signing up for the remaining experiments. For most labs in Groups A, C, D and G you will usually work in pairs (formed for each experiment), but for labs within Groups B, F and M you will usually work singly.

NB: the first lab period is on Friday 7 October 2016, so sign up for at least one experiment before then. Lab handouts will be available and the booking sheets posted by 9am on Wednesday 5 October 2016.

Marking

Completed reports must be submitted for marking within 2 weeks of carrying out the experiment. The default latest time for handing in coursework on the deadline date is 4pm (unless you are specifically told otherwise in the coursework instructions for a given activity).

Marked reports should be returned within 15 term days (inclusive) of a hand-in date (or by the Friday of week 1 at

the start of the following term, if there are fewer than 15 days remaining in term). Arrangements for marking may slightly vary from lab to lab. In most cases, reports are collected in, marked and returned with a feedback sheet. Group feedback sessions might also be offered in order to cover most common issues with the reports and provide students with an opportunity to discuss specific aspects of their report.

Plan ahead: any experiment that you are considering writing up as a FTR should be done early enough in the term for the marked lab report to be returned well before the FTR deadline at the end of term.

Mark scheme

Also see the Faculty Board notice on coursework and exam credit.

Extension Activity (1 per student)

- 16 hours activity with no more than 12 hours in the lab or field. [20 marks]
- Individual ExAs may break this mark total down into smaller units corresponding to different aspects of the chosen activity. Students who participate diligently in all stages of the exercise will gain the full 20 marks.

Module experiments or coursework (at least 8 per student)

- Up to 40 marks available from best 8 experiments or coursework [5 marks each]
- Each report is marked on the scale 0–5; the marking scheme is given on the coversheet.
- 1 mark is available for suitable preparation and participation during the lab. If a lab based activity is not available for your module, the Lab Leader will indicate the criteria for awarding this mark.
- The total Module coursework mark is: the report mark capped to 4 + the preparation mark.

Penalties

- Lateness: 1 mark lost for each week or part week during full term that a report is late.
- No report, no marks.
- Failure to sign up for or attend a feedback session, where these are part of the lab arrangements: 1 mark penalty.

Full technical reports (2 per student, at least one of which must be in Michaelmas) [10 marks each]

- Marks on the scale 0–10. The marking scheme is given on the coversheet. Emphasis is placed on good presentation.

Penalties

- Penalty for lateness: 2 marks lost for each week or part week (term or vacation) that a report is late.
- No report, no marks.

Records of coursework marks

Some lab leaders display marks alongside the lab booking sheets, but it is important that you retain **all** your marked coursework, in case of later query, and for scrutiny by the external examiners. During the Easter term, a consolidated list of coursework credit marks will be displayed in the foyer of the Baker Building and there will be an opportunity to rectify any clerical errors that have arisen. Students will be emailed to check the list, and any queries must be made by Wednesday 31 May 2017 at the latest, by email to the relevant lab coordinator: Dr D Liang

Submission of coursework to external examiners

For examination purposes, **all** your Part IIA module coursework has to be available for inspection by the External

Examiners. You must therefore ensure that you:

1. collect all your work from wherever you handed it in to (for paper submission);
2. excluding documents submitted on Moodle, hand in all your lab reports, essays and full technical reports (plus any coursework taken as part of a Part IIB module) to ***Lecture Room 11 between 10 am and noon on one of the following days: Thursday 8, Friday 9 or Monday 12 June 2017*.**
3. download and sign submission form, stating that all work submitted is your own. Please also indicate which documents were submitted on Moodle. This should be placed on top of your bundle of coursework, which should then be tied securely with string or elastic bands.

If you will have a problem attending on the above dates or times, please contact the Teaching Office.

The Chairman of IIA Examiners will be advised of any student whose coursework is not received.

Part II spare lecture notes & examples papers distribution system

All Part II subject groups have a designated area where either racks and/or filing cabinets are provided in which lecturers can deposit spare copies of lecture handouts and examples papers, and from where students and staff can collect copies. The designated areas are as follows (if handouts are not there, please contact the relevant module leader directly):

- Group A (modules 3A* and 4A*): some handouts are available from the Hopkinson Lab
- Group B (modules 3B* and 4B*): racks (Part IIA) and filing cabinet (Part IIB) in the EIETL
- Group C (modules 3C* and 4C*): racks in the Centre Wing Mechanics Lab
- Group D (modules 3D*, 4D* and 5R5): racks on the Inglis Mezzanine
- Group E (modules 3E* and 4E*): racks (Part IIA) and filing cabinet (Part IIB) in the EIETL
- Group F (modules 3F* and 4F*): racks (Part IIA) and filing cabinet (Part IIB) in the EIETL
- Group G (modules 3G*): racks in the EIETL
- Group I (modules 4I*): filing cabinet in the EIETL
- Group M (modules 3M*, 4M* and 5R1): racks (Part IIA) and filing cabinet (Part IIB) in the EIETL

Guidelines for Examiners and Assessors: Part IIA supplement

Style of the exam papers

The style of the paper should be in keeping with a Part II examination that is the final classified examination of the four-year course.

Prizes

See the prize guidelines for Part IIA Examiners.

Additional information

Advice on good practice in examining

Practical information about Part II exams

Form & conduct of the examinations (the notice for the 2017 exams will be published after the November meeting of the Faculty Board)

Part IIA Coursework and Exam Credit notice

Marking & classing criteria

Exam data retention policy

Regulations for the Engineering Tripos

Part II exam period, location & timetable

General information

Exams for Part II modules begin on Monday, 24 April and end on Monday, 8 May. There will be no exams on Bank Holiday Monday, 1 May. All exams will take place in the Inglis Building on the main site with MET exams taking place at the IfM.

The exam timetable can be found here and will be displayed on the exams noticeboard in the Inglis corridor before the end of the Lent term. More information and reminders about the exams will be emailed to you in April.

Part IIA overview

Single modules (16 lectures) are each assessed by a 1.5-hour examination and double modules (32 lectures) by a 3-hour examination.

The total available credit for examinations is 600 marks (which is added to your coursework total, where the maximum available is 240). For further information see the Part IIA exam and coursework credit notice.

Part IIB overview

Each module is marked out of 60, and your total out of the 480 marks available is added to the marks for your project, for which 360 marks are available. For further information see the Part IIB exam and coursework credit notice.

All written examinations are of 1.5 hours' duration, whether they count for 100% or 75% of the module credit.

Accreditation of the MEng

All students are encouraged to become student or affiliate members of one or more of the professional institutions.

Introduction

Most students reading Engineering at Cambridge will at some stage consider becoming professional engineers, and many will be firmly intending to do so. The engineering profession as a whole is currently supervised by the Engineering Council (UK). There are a number of chartered institutions or similar bodies, each concerned with a particular branch or type of engineering. Corporate membership of the appropriate institution is the professional qualification for that branch of engineering, and carries with it the title of Chartered Engineer.

A Cambridge Master of Engineering degree (MEng), with the appropriate choice of modules in Part II, provides exemption from part or all of the examination requirements at all the principal institutions (although a number of years of practical training and responsible experience are also required for corporate membership). See below for conditions of exemption for each institution.

The institutions welcome enquiries from engineering students and will supply, on request, information about careers and reading lists. Undergraduates may apply for student membership of any of the institutions listed below. Student membership is generally free and entitles the student to receive certain publications and to attend meetings organised in all parts of the country.

Accrediting bodies and CUED institutional liaison officers

All the four-year MEng courses offered by the Department of Engineering are accredited by one or more of the following institutions, depending on the engineering area studied. More details, including application forms, relating to membership of individual institutions can be obtained from the institutions' websites or from the appropriate liaison officer:

Acronym	Institution	Liaison officer
ICE	Institution of Civil Engineers	Dr D Liang
IStructE	Institution of Structural Engineers	Prof CJ Burgoyne
IMechE	Institution of Mechanical Engineers	Dr DJ Cole
IET	Institution of Engineering and Technology	Prof TD Wilkinson
RAeS	Royal Aeronautical Society	Dr J P Jarrett
InstMC	Institute of Measurement and Control	Professor M C Smith
CIHT	Chartered Institution of Highways and Transportation	Prof CJ Burgoyne
IHE	Institute of Highway Engineers	Prof CJ Burgoyne
IPEM	Institute of Physics and Engineering in Medicine	Dr GM Treece

The MEng course is also recognised by the European Network for Accreditation of Engineering Education (ENAEE) as meeting the requirements of a “second cycle” European accredited engineering programme. In essence, this means that it meets the European standard for a Master’s degree.

Conditions of exemption

Institutions	Conditions of exemption
All Institutions:	Students must complete two management modules (which includes those in Group E plus '4I1: strategic valuation') during the final two years of the MEng course.
CIHT, IHE, ICE and IStructE:	The MEng is accredited as fully satisfying the educational base for a Chartered Engineer (CEng) with the same requirement of two management modules being taken in Part II. For the purposes of accreditation, '4D16: construction and management' can be counted as one of the two management modules.
RAeS, IMechE and IET:	The MEng is accredited for all engineering areas.
InstMC:	The MEng is accredited for the instrumentation and control engineering area. Other engineering areas are also accredited provided that at least two of the following modules are taken:

Institutions	Conditions of exemption
	• 3F1: signals and systems • 3F2: systems and control • 4F1: control systems design • 4F2: robust multivariable control • 4F3: nonlinear and predictive control
IPEM:	The MEng is accredited for students who take the bioengineering engineering area in both Part IIA and Part IIB.

The Engineering Council

Graduates in Engineering, who are Corporate Members of one of the Engineering institutions above are invited to register with the Engineering Council to achieve Chartered Engineer status (CEng). This is usually acquired by application through the particular institution at the time of acceptance as a Corporate Member.

Students may like to become involved with the various activities of the Engineering Council which promote engineering among young people.

European-Accredited Engineering Programme

The Engineering Tripos (MEng) has been designated as a second cycle European-accredited engineering programme within the EUR-ACE system

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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.

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.

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

Part IIA coursework contacts and hand-in locations

Overall Coursework Leader: Dr Dongfang Liang

Locations for handing in experiments and full technical reports

3A…	Ms W Raymond	Post box outside room BE2-03, 2nd floor Baker Building
3B…	Mr K Barney	EIETL, 2nd floor Inglis Building
3C…	Mrs H Fernandez	Room BE3-39, 3rd floor Baker Building

3D…	Ms Karen Mitchell	Structures Lab, mezzanine, Inglis Building
3E…	Mrs M Wilby	Teaching Office, room BEO-04, Office floor, Baker Building
3F…	Mr K Barney	EIETL, 2nd floor Inglis Building
3G…	Mrs H Fernandez	Room BE3-39, 3rd floor Baker Building
3M…	Mr K Barney	EIETL, 2nd floor Inglis Building

Related coversheets and forms

IIA Lab Report coversheet

IIA Full Technical Report coversheet

Distinguishing between cooperation & cheating

Coursework marks contribute significantly to your overall Tripos mark. Because this work is not carried out under examination conditions, the distinction between beneficial cooperation and deliberate cheating should be clearly understood.

The following information applies to **all students**. There is also supplementary information for Part IIB students.

Cooperation

It is perfectly acceptable to discuss continuously assessed work with other students, or with demonstrators or supervisors. Such discussions are beneficial and are to be encouraged. Effective use of such discussions can lead to higher marks, always provided that the student has made the main contribution to the work submitted and understands all of it.

Cheating

Cooperation can go too far, however, especially if one student is effectively carried by another or by the demonstrators. For example, while it may well be beneficial for students to discuss a problem in computing, it is unacceptable for two students to submit effectively identical programs. The named author must have made the main contribution to the work submitted and the report must be in his or her own words.

Electronic exchange of lab work is likewise acceptable up to a point. Results obtained jointly in the lab may have only been recorded by one student in a pair, due to time constraints, and it may be more practical to pass these on in electronic format (e.g. for a word-processed report). But analysis of the data, or production of graphs for the write-up, and all written sections of the report **must** be done individually, and may not be exchanged electronically.

Further information about distinguishing between Plagiarism, cooperation and cheating

Any deliberate attempt to pass off the work of others as being produced by the named author is cheating. Students suspected to have cheated will be reported to the Director of Undergraduate Education, and interviewed by an appropriate member of staff. For each coursework submission found to have been even partially copied, a mark penalty will be imposed and the student's Director of Studies informed. The examiners may be informed and might take further action. Serious cheating will be referred to the University proctors.

Online surveys

Giving feedback on your course

This year's course surveys are available online.

The web-based survey for all years is open until the end of the Easter term. Students are able to update their survey entries at any point while the survey is running. If a question is answered and then, at a later point in the year, the answer is changed, only the later response will count.

To use the survey system from a machine in the DPO either (i) type "survey" at the teaching system prompt, or (ii) click on the "survey" icon on the desktop or (iii) from within a web browser click on the "online survey" link on the CUED local web page. Option (iii) also allows you to use the survey system from elsewhere in Cambridge (eg from your College).

Answers to the survey questions will be kept completely anonymous and no reference to the computer user will be made in any output from the survey program.

Please remember to do the survey. This is your chance to let us know how you feel about the course, and we take the results very seriously. Surveys provide valuable feedback for lecturers, which helps us to improve the course. If you have any problems with the survey, please contact Director of Undergraduate Education

For all years, lecturers sometimes also issue a short questionnaire during lectures to obtain some running feedback on how their courses are going. Part IIA students also have their own survey and fast feedback facility for supervisions.

Archives of past survey results

Best lecturer award

Undergraduates in all years are encouraged to vote online for their 'best' lecturer. Don’t worry about what we mean by ‘best’ – it could be the most inspirational, clear, funny etc… whatever… you decide. The Teaching Office will just count up the votes and see who wins, and give them a prize at Prize Day. Voting closes at the end of Easter Term.

Fast feedback facility

The fast feedback facility can be used to send rapid messages to warn teaching staff of problems as they arise (or to complement teaching staff on a job well done). These messages are automatically anonymised (email addresses are hidden). In order for the system to work, it is necessary to specify the general topic area of each feedback comment using the menus at the top of the comment window. Note that all fast feedback traffic is monitored (before anonymisation) by the Director of Undergraduate Education in the Teaching Office.

To use the fast feedback facility for a machine in the DPO either (i) type "feedback" at the teaching system prompt, or (ii) click on the "fast feedback" icon on the desktop. To access the facility from elsewhere: click on the "fast feedback" link on the CUED local web page, which takes you to http://www.eng.cam.ac.uk/teaching/apps/FFF/. If you have any problems with the fast feedback facility please contact the Director of Undergraduate Education.

Inclusive teaching

The Equality Act (2010) requires higher education institutions to take positive steps to make their education accessible to disabled students and to make 'reasonable adjustments' to provision to ensure that disabled students are not disadvantaged. Disabilities may include physical or mental impairments: the majority of these students have specific learning difficulty (SpLD) in the form of dyslexia. Cambridge University Disability Resource Centre has some standard recommendations for appropriate academic support for such students. Further provision may be required in particular cases.

In an organisation of our size and complexity, individual variations in provision are potentially disruptive. However, many of the suggested adjustments are just good educational practice, so represent things we should be doing anyway as a Department that takes pride in the excellence of its teaching. Indeed, we already follow many of the recommendations (e.g. provision of cribs). The approach we have adopted is therefore to aim to have inclusive standard procedures for all teaching activities. Students are expected to make use of available resources to suit their needs, and to contact staff themselves (e.g. lecturers, lab leaders) if additional material is required.

The syllabus pages will give you lecturer details for part IA and part IB lecturers. Lab leader details can be found here for IA and IB.

Contact details of part II lecturers can be found on the relevant syllabus pages.

Any enquiries should be addressed to the CUED Director of Undergraduate Education.

The following recommendations have been agreed by the Faculty Board (12 November 2012):

- Electronic versions of handouts should be made available on-line 24h in advance of lectures or other teaching sessions (e.g. labs). [This allows students who do have special requirements to produce their own customised hard copy if they wish: e.g. single-sided; large format; non-white background].
- Filled-in versions of notes should be made available on-line after lectures.
- Recording lectures (audio) is often recommended to students as a learning aid. They must sign an agreement to use the recording only for their own personal study, and acknowledging IP and copyright. The agreement form can be found here, and students are asked to provide the Teaching Office with a copy. Lecturers are asked to consent to their lectures being recorded under these conditions. A list of students who have completed agreement forms can be made available on request.
- In labs, instruction should be provided in both written and verbal form.
- Lecturers should remember to pay attention to 'signposting' e.g. statement a start of each lecture of what is being covered; tracking progression throughout lecture; summary of main teaching points at end.
- All staff should make particular effort to put new vocabulary into context and explain new concepts. It is helpful to provide some repetition.

In 2016-2017, the department is trialing a lecture capture system for IA and IB. More information will be added to this guide in due course.

Departmental rules

Food and drink in lecture theatres

In response to a request from the SSJC, students are now permitted to take bottled water into CUED lecture theatres. Food, canned drinks, hot beverages etc will **not** be permitted. Please take your empty bottles away with you or dispose of them in the bins provided.

Food and drink in the DPO

The DPO is a centre for student project work and academic interaction, and students are permitted to eat and drink in the DPO provided they show appropriate consideration for the teaching, the equipment and their peers. In

particular, it is inappropriate to eat or drink in a:

- formal lab session (unless the lab leader and demonstrators give explicit permission);
- crowded area (because of the spillage risk);
- way that gets in the way of your neighbour;
- unhygienic way (please use the wipes and handwash where appropriate);
- way that leaves a mess (please always put any waste in the bins).

Student notices and posters

Students are not allowed to put posters up in the Department without permission, except on the designated noticeboard in the Inglis corridor. Students who wish to display items in areas other than this should contact reception in the first instance.

Smoking

There is a total ban on smoking on Departmental sites.

Access to the Department

ID cards

All students should have been issued with a University ID card by their College. If you have any problems with access in the Department, please take your card to the CUED Security Office between 9am and 1pm. Students are advised that they may be challenged at any time when in the Department and asked to produce identification unless they are displaying their ID card.

If you lose your card, please report its loss immediately to the Security Office (or email security-admin@eng.cam.ac.uk), but note that replacements for lost cards should be ordered through your College.

General access to the Department

The Department's central site is open 7am – 10pm seven days a week. Further to this, the Baker building, including Library and DPO, remains open to students until 11pm. Access to the Department after 5pm will be through the foyer entrance to the Baker Building. Students must be carrying their University card at all time.

Access to the Department between 11pm and 7am

Only students who have attended a safety briefing are permitted to be present in the building outside the hours of 7am - 11pm. Access to the Department between 11pm and 7am requires an authorised Late Working Permit. This is available to download below or a hard copy is available from Reception.

N.B. At no time may any undergraduate work unsupervised in laboratory areas, including those with a Late Working Permit.

Access to the DPO

Drawing equipment and computer workstations and printers are available for private study except when there are timetabled classes or during periods when certain groups have priority. Normal IT helpdesk hours in full term are 8.30 am - 6.00 pm Monday to Friday. Any DPO equipment problems should be reported to the IT Helpdesk, either in person or by email.

Dyson Centre

Private engineering project space, training and student team space

The Dyson Centre for Engineering Design (not to be confused with the James Dyson Building) is your space as Engineering Undergraduates, where you can undertake your own private engineering projects and experiments, and a space in which engineering students teams can operate.

The area offers training in use of a variety of machines including lathes, milling machines, laser cutters, and there are also selfservice 3D printers which you can learn how to use.

Various funding sources are available to help you kick start your project and the staff are on hand to offer help and advice with all aspects of engineering theory, development and design.

More details on www.dysoncentre.eng.cam.ac.uk

Also of note is Engineering Stores, where a vast range of engineering materials and components are held in stock for immediate purchase, details are available on:

http://www.dysoncentre.eng.cam.ac.uk/stores

Course material on Moodle

Most courses in the department have a page on the University's Virtual Learning Environment Moodle.

These pages are maintained by course lecturers. Students registered to these courses are automatically enrolled at the start of the course and can engage in the course activities, including coursework submission when appropriate.

Other members of the University, staff or students, can self-enroll as observer and gain access to handouts and other documents made available to the students by the lecturers. This access is provided to students so that they can make an informed decision regarding their course selection. There might be copyright restrictions to the course material; any use of the course content that is not related to students education is not allowed. The material should not be redistributed by the students in any circumstances.

A key is needed to self-enroll on any course. By using this key, you indicate that you agree with the condition above.

Enrolment key: cued_moodle_access

NB. If you wish to unenrol yourself from a page that you have enrolled yourself on, please look for the Administration block within the course (usually lower down the page on the left) and click 'unenrol me'.

Source URL (modified on 26-09-16): https://teaching16-17.eng.cam.ac.uk/content/part-iia-guide