

# Examination Conventions 2022/23

## Materials Science - Final Honours School

### 1. INTRODUCTION

Examination conventions are the formal record of the specific assessment standards for the course or courses to which they apply. They set out how examined work will be marked and how the resulting marks will be used to arrive at a final result, a progression decision and/or classification of an award.

These conventions apply to the Final Honours School in Materials Science for the academic year 2022-23. The Department of Materials' Academic (Undergraduate) Committee (DMAC) is responsible for approving the Conventions and considers these annually, in consultation with the examiners. The formal procedures determining the conduct of examinations are established and enforced by the University Proctors. These Conventions are a guide to the examiners and candidates but the regulations set out in the Examination Regulations have precedence. Normally the relevant Regulations and MS FHS Handbook are the editions published in the year in which the candidate embarked on the FHS programme. The Examination Regulations may be found at: <https://examregs.admin.ox.ac.uk/>.

The paragraphs below indicate the conventions to which the examiners usually adhere, subject to the guidance of the appointed external examiners, and other bodies such as the Academic Committee in the Department, the Mathematical, Physical and Life Sciences Division, the Education Committee of the University and the Proctors who may offer advice or make recommendations to examiners.

The examiners are nominated by the Nominating Committee\* of the Department and those nominations are submitted for approval by the Vice-Chancellor and the Proctors. Formally, examiners act on behalf of the University and in this role are independent of the Department, the colleges and of those who teach the MS M.Eng. programme. However, for written papers on Materials Science in Part I examiners are expected to consult with course lecturers in the process of setting questions.

### 2. RUBRICS AND STRUCTURE FOR INDIVIDUAL PAPERS

All papers are set by the examiners in consultation with course lecturers. The responsibility for the setting of each examination is assigned to an examiner, and a second examiner is assigned as a checker.

The examiners, in consultation with lecturers, produce suggested exemplar answer and marking schemes for every question set, including a clear allocation of marks for each part or sub-part of every question. These are annotated to indicate what is considered 'book-work', what is considered to be 'new material' requiring candidates to extend ideas from what has been covered explicitly in the course, and what is considered to be somewhere in between. This enables the examiners to identify how much of the question is accessible to less strong candidates and the extent to which the question has the potential to differentiate among the very best candidates. The marking scheme for each question aims to ensure that weaker candidates can gain marks by answering some parts of the question, and stronger candidates can show the depth of their understanding in answering other parts. The wording and content of all examination questions set, and the suggested exemplar answer and marking schemes, are scrutinised by all examiners, including the external examiners. The marking schemes are approved by the examining board alongside the papers.

Examiners check that questions are of a consistent difficulty within each paper and between papers.

Examiners proofread the final 'camera-ready' pdf version of each examination paper. Great care is taken to minimise the occurrence of errors or ambiguities. Despite this care, on occasion an error does remain in a paper presented to candidates: if a candidate thinks there is an error or mistake in the paper, then they must state what they believe the error to be and if necessary, state their understanding of the question.

All General Papers comprise eight questions from which candidates attempt five. Each question is worth 20 marks. The maximum number of marks available on each general paper is 100. There is no strict rule about how many questions are set on each lecture course in the General Papers. As a result, (i) it should not be assumed that a question will be set on every lecture course and (ii) some questions may require knowledge from across the core courses from Years 1 and 2.

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\* for the 2022-23 examinations the Nominating Committee comprised Prof Assender, Prof Marrow & Prof Speller.

Materials Option papers comprise one section for each twelve-hour Options lecture course, each section containing two questions worth 25 marks: candidates are required to answer one question from each of any three sections and a fourth question drawn from any one of the same three sections. The maximum number of marks available on each option paper is 100, and all questions carry equal marks. Questions are often divided into parts, with the marks for each part indicated on the question paper.

The only types of calculators that may be used in examinations are from the following series:

- CASIO fx-83
- CASIO fx-85
- SHARP EL-531

Candidates are required to clear any user-entered data or programmes from memories immediately before the exam begins. The invigilators may inspect any calculator during the course of an exam.

### 3. MARKING CONVENTIONS

#### 3.1 University scale for standardised expression of agreed final marks

Agreed final marks for individual papers will be expressed using the following scale: 0-100.

#### 3.2 Qualitative criteria for different types of assessment

Qualitative descriptors, based on those used across the Mathematical, Physical and Life Sciences Division, are detailed below:

70-100	The candidate shows excellent problem-solving skills and excellent knowledge of the material over a wide range of topics, and is able to use that knowledge innovatively and/or in unfamiliar contexts. The higher the mark in this band the greater will be the extent to which these criteria will be fulfilled; for marks in the 90-100 range there will be no more than a very small fraction, circa 5-10%, of the piece of work being examined that does not fully meet all of the criteria that are applicable to the type of work under consideration. The 'piece of work' might be, for example, an individual practical report, a question on a written paper, or a whole written paper.
60-69	The candidate shows good or very good problem-solving skills, and good or very good knowledge of much of the material over a wide range of topics.
50-59	The candidate shows basic problem-solving skills and adequate knowledge of most of the material.
40-49	The candidate shows reasonable understanding of at least part of the basic material and some problem solving skills. Although there may be a few good answers, the majority of answers will contain errors in calculations and/or show incomplete understanding of the topics.
30-39	The candidate shows some limited grasp of basic material over a restricted range of topics, but with large gaps in understanding. There need not be any good quality answers, but there will be indications of some competence.
0-29	The candidate shows inadequate grasp of the basic material. The work is likely to show major misunderstanding and confusion, and/or inaccurate calculations; the answers to most of the questions attempted are likely to be fragmentary.

#### 3.3 Verification and reconciliation of marks

##### Part I Written Papers

During the marking process the scripts of all written papers remain anonymous to the markers. The markers are guided by the suggested exemplar answer and marking schemes.

All papers are marked by course lecturers acting as assessors and an examiner. All scripts are double marked, blind, by the markers each awarding an integer mark for each question. After individual marking the two markers meet to agree marks question by question. If the differences in marks are small (~10% of the maximum available for the question, 2-3 marks for most questions), the two marks are averaged, with no rounding applied.

Otherwise the markers identify the discrepancy and read the answer again, either in whole or in part, to reconcile the differences. If after this process the markers still cannot agree, they seek the help of the Chair, or another examiner as appropriate, to adjudicate. An integer total mark for each paper is awarded, where necessary rounding up to achieve this.

In the event that a possible error in the paper has been identified, the examiners will consider the validity of the error and assess the impact of the error on candidates' choice of questions and on the answers written by those who attempted a question that contained an error, and will take this impact into account when marking the paper and prior to agreeing a final mark for all candidates.

The external examiners provide an independent check on the whole process of setting and marking.

## **Part I Coursework**

In some of the descriptions of marking for individual elements of *coursework* the term 'double marked, blind,' is used; this refers to the fact that the second marker does not see the marks awarded by the first marker until they have recorded their own assessment, and does not indicate that the candidate is anonymous to the markers.

### *(1) Second Year Practicals*

Second year practicals are assessed continually by senior demonstrators in the teaching laboratory and in total are allocated a maximum of 60 marks. Part I examiners have the authority to set a practical examination.

### *(2) Industrial Visits and Talks*

Reports on Industrial Visits and Industrial Talks are assessed by the Industrial Visits Academic Organiser on a satisfactory / non-satisfactory basis, and in total are allocated a maximum of 10 marks. Guidance on the requirements for the reports is provided at the annual 'Introduction to Industrial Visits' talk. Formative feedback is provided on the first of the Industrial Visit reports.

### *(3) Entrepreneurship*

The business plan for the Entrepreneurship module is double marked, blind, by two assessors appointed by the Faculty of Materials. The written business plan is allocated a maximum of 20 marks. Guidance on the requirements for the written business plan and an outline marking scheme are published in the FHS Course Handbook. Further guidance is provided throughout the course, the slides from which are published on Canvas.

If the Foreign Language Option or a Supplementary Subject has been offered instead of the Business Plan, the reported % mark, which is arrived at in accordance with the CVCP degree class boundary descriptors, is divided by five to give a mark out of 20.

### *(4) Team Design Project*

The team design project is double marked, blind, by two of the Part I Examiners. They then compare marks and analyse any significant disagreement between these marks before arriving at a final agreed mark for each project and each team member. Supervisors of the projects submit a written report to the examiners on the work carried out by their teams and these are taken into consideration when the examiners decide the final agreed marks. Industrial representatives may be asked to contribute to the assessment process. The project is allocated a maximum of 50 marks, of which 25 are for the written report and 25 for the oral presentation. The same two examiners assess both the reports and the presentations. Guidance on the requirements for the report and an outline marking scheme are provided in the 'Team Design Projects Briefing Note' published on Canvas.

### *(5) Introduction to Modelling in Materials*

The reports for this module are double marked, blind, by the module assessors. Normally, at least one of the two assessors for each report will be a module organiser. The assessors then compare marks and analyse any significant disagreement between these marks before arriving at a final agreed mark for each report. The lead organiser for the Introduction to Modelling in Materials Module submits to the Assessors and Examiners of the module a short report which provides (i) a summary of the availability of the software & hardware required for each mini-project and (ii) any other pertinent information. The reports for the Introduction to Modelling in Materials module are allocated a maximum of 30 marks (each of two reports allocated a maximum of 15 marks). Guidance on the requirements for the reports and an outline marking scheme are published on Canvas.

## *(6) Advanced Characterisation of Materials and Atomistic Modelling Modules*

The reports for these modules are double marked, blind, by the module assessors. Normally, at least one of the two assessors for each report will be a module organiser. The assessors then compare marks and analyse any significant disagreement between these marks before arriving at a final agreed mark for each report. One of the Examiners oversees this process, sampling reports to ensure consistency between the different pairs of assessors and the two modules. The lead organiser for the Characterisation Module submits to the Assessors and Examiners of the module a short report which provides, by sample set only, (i) a summary of the availability of appropriate characterization instruments and/or data during the two-week module and (ii) any other pertinent information. An analogous report is provided by the lead organiser for the Atomistic Modelling Module in respect of the software & hardware required for the project. The report for the Characterisation Module is allocated a maximum of 30 marks and the report for the Atomistic Modelling Module is also allocated a maximum of 30 marks. For each module, guidance on the requirements for the reports and an outline marking scheme are published on Canvas.

### **Part II Coursework**

The Part II project is assessed by means of a thesis which is submitted online to the Examiners, who will also take into account a written report from the candidate's supervisor. The marking criteria are published in the Part II Course Handbook.

The Supervisor's report is divided into Parts A & B: Part A provides simple factual information that is of significance to the examiners, such as availability of equipment, and is seen by the two markers before they read and assess the thesis. Part A does **not** include personal mitigating circumstances which, subject to guidance from the Proctors, normally are considered only in discussion with **all** Part II examiners thus ensuring equitable treatment of all candidates with mitigating circumstances. Part B of the supervisor's report provides their opinion of the candidate's engagement with the project and covers matters such as initiative and independence; it is not seen by the examiners until the discussion held after the viva.

The project is allocated a maximum of 400 marks, which is one third of the maximum available marks for Parts I and II combined. Two Part II examiners read the thesis (including the final chapter with the reflective accounts of project management, health, safety & risk assessment processes, and ethical and sustainability considerations), together with Part A of the supervisor's report, and each of them independently allocates a provisional mark based on the guidelines\* published in the course handbook. In addition, normally the thesis will be seen by one of the two external examiners.

A *viva voce* examination is held: the purpose of the viva is to clarify any points the readers believe should be explored, and to ascertain the extent to which the work reported is the candidate's. Any examiners who have supervised the candidate's Part II project or are their college tutor will not be present at the viva or the subsequent discussion. Normally four individuals will have specified examining roles: Two examiners, or one examiner and an assessor, who have read the thesis entirely; the external examiner to whom the thesis was assigned; and an examiner acting as the session Chair who will complete any necessary documentation for that viva. Other examiners beyond these four individuals will be present to the extent possible given the existence of parallel sessions. A discussion involving all examiners present is held after the viva, during which Part B of the supervisor's report is taken into account. The outcome of the discussion is an agreed mark for the project. In arriving at the agreed mark the Examiners will take into account all of the following, (i) the comments and provisional marks of the original markers, (ii) the candidate's understanding of their work as demonstrated during the viva and (iii) the opinion of the external examiner who has seen the thesis.

If the two provisional marks allocated in advance of the viva differ significantly (that is, normally by more than 10% of the maximum available for a Part II project) this will be addressed explicitly during the discussion after the viva. In the majority of other cases the viva has only a small influence on the agreed mark awarded to a Part II thesis.

\*These guidelines may change and candidates are notified of any such changes before the end of Hilary Term of their 4<sup>th</sup> year.

### **3.4 Scaling**

#### **Part I Written Papers**

As the total number of candidates is small, it is not unusual for mean marks to vary from paper to paper, or year to year. It is not therefore normal practice to adjust marks to fit any particular distribution. However, where marks for papers are unusually high or low, the examiners may, having reviewed the difficulty of the paper set or other circumstances, decide with the agreement of the external examiners to adjust all marks for those papers.

Such adjustment is referred to as 'scaling' and the normal procedure will be as follows:

- (a) Papers with a *mean taken over all candidates* of less than 55% or more than 75% are normally adjusted to bring the *mean* respectively up to 55% or down to 75%. Normally this is achieved by adding/subtracting the same fixed number of marks to/from each candidate's score for the paper.
- (b) For papers with a mean in the ranges either of 55-60% or 70-75%, including those scaled under (a) above, the questions and typical answers are compared in order to ascertain, with the help of the external examiners, whether the marks are a fair reflection of the performance of the candidates as measured against the class descriptors. If not, the marks are adjusted. Normally this is achieved by adding/subtracting the same fixed number of marks to/from each candidate's score for the question or for the paper.
- (c) The mean mark and the distribution of marks, both taken over all written papers, are considered, again with the help of the external examiners, in order to ascertain whether these overall marks are a fair reflection of the performance of the candidates as measured against the class descriptors. If not, the overall marks are adjusted. Normally this is achieved by adding/subtracting the same fixed number of marks to/from each candidate's overall score.

### **Part I Coursework**

Adjustment to marks, known as scaling, normally is not necessary for coursework.

The Practical Courses Organiser reviews the marks for the practicals before they are considered by the examiners, drawing to their attention (i) any anomalously low or high average marks for particular practicals and (ii) any factors that impacted on the practical course, such as breakdown of a critical piece of equipment. The examiners review the practical marks.

### **Part II Coursework**

Adjustment to marks, known as scaling, normally is not necessary for the Part II theses.

## **3.5 Short-weight convention and departure from rubric**

### **Part I Written Papers**

The rubric on each paper indicates a prescribed number of answers required (e.g. "candidates are required to submit answers to no more than five questions"). Candidates will be asked to indicate on their cover sheet which questions, up to the prescribed number, they are submitting for marking. If this information is not provided then the examiners will mark the questions in numerical order by question number. If the candidate lists more than the prescribed number of questions then questions will be marked in the order listed until the prescribed number has been reached. The examiners will NOT mark questions in excess of the prescribed number. If fewer questions than the prescribed number are attempted, (i) each missing attempt will be assigned a mark of zero, (ii) for those questions that are attempted **no** marks beyond the maximum per question indicated under section 2 above will be awarded and (iii) the mark for the paper will still be calculated out of 100. In addition, for the Materials Options Papers, as per the rubric, the examiners will mark questions from only three sections. Should a candidate attempt questions from more than three sections the examiners will mark those questions from the first three sections in the order listed by the candidate on the covering page. If this information is not provided then the examiners will mark the sections in alphabetical order by section delineator (section A, section B, etc.).

### **Part I Coursework**

It is a requirement for candidates to submit an element of coursework for each of the following: Practical Classes; Industrial Visits and Talks; Entrepreneurship Coursework (or substitution); Team Design Project; Introduction to Modelling in Materials, Advanced Characterisation of Materials or Atomistic Modelling. For the Practical Classes and Industrial Visits & Talks, the element of coursework comprises a set of reports: reports submitted on four Industrial Visits and two Industrial Talks and reports submitted on ten Practical Classes as specified in the Course Handbook. In these cases, a candidate must submit a report for each visit and talk/practical in order to satisfy the examiners. Failure to complete satisfactorily one or more elements of Materials Coursework normally will constitute failure of Part I of the Second Public Examination. Further details about this are provided in the Course Handbook.

### **3.6 Late- or non-submission of elements of coursework**

***Including action to be taken if submission has been or will be affected by illness or other urgent cause, and circumstances in which academic penalties may be applied.***

The Examination Regulations prescribe specific dates and times for submission of the required elements of coursework to the Examiners (1. One piece of Entrepreneurship Coursework; 2. A set of reports of practical work as specified in the Course Handbook (normally each individual report within the set has been marked already as the laboratory course progresses - penalties for late submission of an individual practical report are prescribed in the Course Handbook and are applied prior to any additional penalties incurred under the provision of the present Conventions.); 3. A Team Design Project Report and associated oral presentation; 4. A set of reports on Industrial Visits and Talks as specified in the course handbook; 5. A report on the work carried out in the Introduction to Modelling in Materials module; 6. A report on the work carried out in either the Characterisation of Materials module or the Atomistic Modelling module; and 7. A Part II Thesis). Rules governing late submission of these seven elements of coursework and any consequent penalties are set out in the 'Late submission and non-submission of a thesis or other written exercise' clause of the 'Regulations for the Conduct of University Examinations' section of the Examination Regulations (Part 14, 'Late Submission, Non-submission, Non-appearance and Withdrawal from Examinations' in the 2022/23 Regulations). A candidate who fails to submit an element of coursework by a prescribed date and time will be notified of this by means of an email sent on behalf of the Chair of Examiners.

Under the provisions permitted by the regulation, late submission of an element of coursework, as defined above, for Materials Science examinations will normally result in one of the following:

- (a) Under paras 14.3 to 14.6. In a case where illness or other urgent cause has prevented or will prevent a candidate from submitting an element of coursework at the prescribed date, time and place the candidate may, **through their college**, request the Proctors to accept an application to this effect. In such circumstances the candidate is **strongly** advised to (i) carefully read paras 14.3 to 14.6 of the aforesaid Part 14, where the mandatory contents of such an application to the Proctors are outlined and the several possible actions open to the Proctors are set out, and (ii) both seek the guidance of their college Senior Tutor and inform at least one of their college Materials Tutorial Fellows. Some, but not all, of the actions open to the Proctors may result in the work being assessed as though it had been submitted on time (and hence with no late submission penalty applied).
- (b) Under para 14.7. In the case of submission on or after the prescribed date for the submission and within 14 calendar days of notification of non-submission and without prior permission from the Proctors: subject to leave from the Proctors to impose an academic penalty, for the first day or part of the first day that the work is late a penalty of a reduction in the mark for the coursework in question of up to 10% of the maximum mark available for the piece of work and for each subsequent day or part of a day that the work is late a further penalty of up to 5% of the maximum mark available for the piece of work; the exact penalty to be set by the Examiners with due consideration given to the circumstances as advised by the Proctors. The reduction may not take the mark below 40%.
- (c) Under Para 14.3(5). In the case of failure to submit within 14 calendar days of the notification of non-submission and without prior permission from the Proctors: a mark of zero shall be recorded for the element of coursework and normally the candidate will have failed Part I or II as appropriate of the Examination as a whole.

If a candidate is unable to submit by the required date and time for any reason other than for acute illness their college may make an application to the Proctors for permission for late submission. An extended deadline may be approved, or late submission excused where there are grounds of 'illness or other urgent cause'. Applications may be made in advance of a deadline, or up to 14 days from when the candidate is notified that they have not submitted. In all cases, the applications will be considered on the basis of the evidence provided to support the additional time sought.

It should be noted that the maximum extension that the examiners can normally accommodate for a Part II thesis to be examined in the 2022/23 session is 7 days. Any extension awarded for longer may mean the assessment will either be considered by an extraordinary examination board or the scheduled examination board in the next academic year.

#### Elements of coursework comprising more than one individual piece of assessed coursework

Penalties for late submission of individual practical reports are set out in the 2021/22 MS FHS Handbook and are **separate** to the provisions described above.

The consequences of failure to submit individual practical reports or failure to submit/deliver other individual pieces of assessed coursework that contribute to one of the *elements* of coursework scheduled in the Special Regulations for the Honour School of Materials Science are set out in the MS FHS Handbook (sections 7 and 10.7 of the 2021/22 version) and are **separate** to the provisions described above. In short normally this will be deemed to be a failure to complete satisfactorily the relevant element of Materials Coursework and will therefore constitute failure of Part I of the Second Public Examination.

Where an individual practical report or other individual piece of assessed coursework that contributes to one of the *elements* of coursework scheduled in the Special Regulations for the Honour School of Materials Science is not submitted or is proffered so late that it would be impractical to accept it for assessment the Proctors may, exceptionally, under their general authority, and after (i) making due enquiries into the circumstances and (ii) consultation with the Chair of the Examiners, permit the candidate to remain in the examination. In this case *for the individual piece of coursework in question* (i) the Examiners will award a mark of zero and (ii) dispensation will be granted from the Regulation that requires submission/delivery of every individual piece of assessed coursework if the candidate is not to fail the examination as a whole.

### **3.7 Penalties for over-length work and departure from approved titles or subject-matter**

For elements of coursework with a defined word limit: if a candidate exceeds this word limit without permission normally the examiners will apply a penalty of 10% of the maximum mark available for the piece of work. [It is only possible to apply for permission to exceed a word limit if the Examination Regulations for the specific element of coursework concerned state explicitly that such an application is permitted, excepting that the Proctors may, exceptionally, under their general authority grant such permission.]

### **3.8 Penalties for poor academic practice**

Substantial guidance is available to candidates on what constitutes plagiarism and how to avoid committing plagiarism (see Appendix B of the 21/22 FHS Course Handbook and <https://www.ox.ac.uk/students/academic/guidance/skills/plagiarism?wssl=1> )

If plagiarism is suspected, the evidence will be considered by the Chair of the Examiners (or a deputy). They will make one of three decisions (<https://academic.admin.ox.ac.uk/examiners>):

- (a) No evidence, or insufficient evidence, of plagiarism – no case to answer.
- (b) Evidence suggestive of more than a limited amount of low-level plagiarism – referred to the Proctors for investigation and possible disciplinary action.
- (c) Evidence proving beyond reasonable doubt that a limited amount of low-level plagiarism has taken place – in this case the Board of Examiners will consider the case and if they endorse the Chair's judgement that a limited amount of low-level plagiarism has taken place will select one of two actions:
  - (i) Impose a penalty of 10% of the maximum mark available for the piece of work in question and a warning letter to be issued to the candidate explaining the offence and that the present incident will be taken into account should there be a further incidence of plagiarism. For a student who remains on course in addition there will be a requirement to demonstrate to their college Materials Tutorial Fellow that in the period between the present offence and the next submission of work for summative assessment they have followed to completion the University's on-line course on plagiarism (<https://www.ox.ac.uk/students/academic/guidance/skills/plagiarism?wssl=1> ).
  - (ii) No penalty, but a warning letter to be issued to the candidate explaining the offence, indicating that on this occasion it has been treated as a formative learning experience, and that the present incident will be taken into account should there be a further incidence of plagiarism. For a student who remains on course in addition there will be a requirement to demonstrate to their college Materials Tutorial Fellow that in the period between the present offence and the next submission of work for summative assessment they have followed to completion the University's on-line course on plagiarism (<https://www.ox.ac.uk/students/academic/guidance/skills/plagiarism?wssl=1> ).

### 3.9 Penalties for non-attendance

Unless the Proctors have accepted a submission requesting absence from an examination, as detailed in [Section 14 of the Regulations](#), failure to attend a written examination in Part I or the *viva voce* examination in Part II will result in the failure of the whole Part.

## 4. PROGRESSION RULES AND CLASSIFICATION CONVENTIONS

### 4.1 Qualitative descriptors of classes (FHS)

The following boundaries (CVCP) and descriptors (MPLSD) are used as guidelines:

Class I Honours 70 – 100	The candidate shows excellent problem-solving skills and excellent knowledge of the material over a wide range of topics, and is able to use that knowledge innovatively and/or in unfamiliar contexts.
Class II(i) Honours 60 – 69	The candidate shows good or very good problem-solving skills, and good or very good knowledge of much of the material over a wide range of topics.
Class II(ii) Honours 50 – 59	The candidate shows basic problem-solving skills and adequate knowledge of most of the material.
Class III Honours 40 - 49	The candidate shows reasonable understanding of at least part of the basic material and some problem solving skills. Although there may be a few good answers, the majority of answers will contain errors in calculations and/or show incomplete understanding of the topics.
Pass 30 - 39	The candidate shows some limited grasp of basic material over a restricted range of topics, but with large gaps in understanding. There need not be any good quality answers, but there will be indications of some competence.
Fail 0 - 29	The candidate shows inadequate grasp of the basic material. The work is likely to show major misunderstanding and confusion, and/or inaccurate calculations; the answers to most of the questions attempted are likely to be fragmentary only.

In reaching their decisions the examiners are not permitted to refer to a candidate's outcome in, or profile across the assessments in, the First Public Examination ('Prelims').

In borderline cases the examiners use their discretion and consider the quality of the work the candidate has presented for examination over the whole profile of FHS assessments; thus for Part I outcomes the Part I assessments, and for overall degree outcomes the assessments for both Parts I and II. The external examiners often play a key role in such cases.

### 4.2 Classification rules (FHS)

#### Part I:

The examiners are required to classify each candidate according to their overall average mark in Part I as (a) worthy of Honours, (b) Pass or (c) Fail. The examiners do not divide the categories further but tutors and students may infer how well they have done from their marks.

**Unclassified Honours** –A candidate is allowed to proceed to Part II only if they have been adjudged worthy of honours by the examiners in Part I and normally obtained a minimum mark of 50% averaged over all elements of assessment for the Part I Examination.

Candidates adjudged worthy of honours and obtaining a minimum mark of 50% averaged over all elements of assessment for the Part I Examination normally proceed to Part II but they may, if they wish and subject to approval from the relevant bodies, leave after Part I in which case an Unclassified Honours B.A. degree will be awarded.

Candidates adjudged worthy of honours who do not obtain a minimum mark of 50% averaged over all elements of assessment for the Part I Examination may, if they wish and subject to approval from the relevant bodies, leave after Part I in which case an Unclassified Honours B.A. degree will be awarded or may retake Part I the following year (subject to college approval).



Pass – The examiners consider that the candidate is not worthy of honours and therefore will not be allowed to proceed to Part II. The candidate may leave with a B.A. (without honours) or may retake Part I the following year (subject to college approval).

Fail – The examiners consider that the candidate is not worthy of a B.A. The candidate either leaves without a degree or may retake Part I the following year (subject to college approval).

## **Part II:**

Classified Honours – Once marking is completed for both Parts I and II an overall percentage mark is computed for each candidate and classification then takes place. Subject to the requirement that Part II be adjudged worthy of honours (see below), classification is based solely on the overall percentage mark; the candidate's profile of marks from each element of assessment is only taken into account in borderline cases. However, a candidate cannot be awarded an M.Eng. degree unless their performance in Part II is adjudged worthy of honours i.e. a candidate must be adjudged worthy of honours both in Part I and in Part II to be awarded the M.Eng. degree. Failure to achieve honours in Part II will result in the candidate leaving with an unclassified B.A. (Hons) irrespective of the aggregate mark.

Pass – Notwithstanding the award of unclassified honours in Part I, the examiners consider that the candidate's overall performance is not worthy of an M.Eng. The candidate is listed as a Pass on the class list and is awarded an unclassified B.A. (Hons) on the basis of Part I performance.

Fail – The examiners consider that the candidate's overall performance is not worthy of an M.Eng. and that the performance in Part II is not worthy of a Pass. The candidate is excluded from the class list but is nevertheless awarded an unclassified B.A. (Hons) on the basis of Part I performance.

- The examiners cannot award unclassified honours on the basis of Part II performance unless permitted to do so by the Proctors.
- Nevertheless, candidates awarded a Pass or a Fail by the Part II examiners leave with an unclassified B.A. (Hons) because they were judged worthy of that in Part I (i.e. their degree is the same as if they had left immediately after Part I).
- In terms of the degree awarded, there is no difference between a Pass and a Fail in Part II. The only difference is whether or not the name appears on the class list.
- Candidates cannot normally retake Part II because the Examination Regulations require that they must pass Part II within one year of passing Part I. This rule can be waived only in exceptional circumstances, with permission from the Education Committee.

### **4.3 Progression rules**

The attention of candidates for Part I of the Examination is drawn to key phrases in clauses 8 and 11 of Section A and clause 3 under Part I of Section B of the Special Regulations for the Honour School of Materials Science:

Section A. 8. No candidate for the degree of Master of Engineering in Materials Science may present themselves for examination in Part II unless they have (a) been adjudged worthy of Honours by the Examiners in Part I and (b) normally obtained a minimum mark of 50% averaged over all elements of assessment for the Part I Examination.

Section A. 11. To achieve Honours at Part I normally a candidate must fulfil all of the requirements under (a), (b) & (c) of this clause. (a) Obtain a minimum mark of 40% averaged over all elements of assessment for the Part I Examination, (b) obtain a minimum mark of 40% in each of at least four of the six written papers sat in Trinity Term of the year of Part I of the Second Public Examination, and (c) satisfy the coursework requirements set out in Section B, Part I [of the Regulations].

Section B. Part I. 3. In the assessment of the Materials coursework, the Examiners shall take into consideration the requirement for a candidate to complete satisfactorily the coursework to a level prescribed from time to time by the Faculty of Materials and published in the Course Handbook. Normally, failure to complete satisfactorily all six elements of Materials Coursework will constitute failure of Part I of the Second Public Examination.

#### **4.4 Use of vivas**

There are no vivas in the Part I examination.

In Part II, a *viva voce* examination is held for all candidates.

The purpose of the viva is to clarify any points the readers believe should be explored, and to ascertain the extent to which the work reported is the candidate's.

It is stressed that it is the scientific content of the project and the candidate's understanding of their work that is being considered in the viva.

### **5. RESITS**

In the event that a candidate obtains a mark of less than 50% averaged over all elements of assessment of Part I, or if a candidate fails to satisfy the examiners, a resit is permitted. Such a candidate may re-enter for the whole of the Part I examination on one occasion only, normally in the examining session in Trinity Term 2024, following the examiners' original decision. The examination will cover the same material as the original examination and will follow the same rubric. If such a candidate is adjudged worthy of honours and achieves a mark of 50% or more averaged over all elements of assessment in Part I, the candidate may progress to Part II but will carry forward only a capped mark of 50% for Part I.

Part II may be entered on one occasion only.

### **6. MITIGATING CIRCUMSTANCES NOTICES TO EXAMINERS (MCE)**

[For **late- or non-submission** of elements of coursework, including cases due to illness or other urgent cause, see section 3.6 of the present Conventions.]

A candidate's final outcome will first be considered using the classification rules/final outcome rules as described above in section 4. Cohort-wide adjustments will then be considered, e.g. any scaling. The exam board will then consider any further information they have on individual circumstances.

There are two applicable sections of the University's *Examination Regulations*.

- **Part 13 Mitigating Circumstances: Notices to Examiners** relates to unforeseen circumstances which may have an impact on a candidate's performance.
- **Part 12 Candidates with Special Examination Needs** relates to students with some form of disability.

Whether under Part 12 or Part 13, a mitigating circumstances notice to examiners should be submitted by the candidate through student self-service/eVision, or by the college on behalf of the candidate as soon as circumstances come to light. Candidates with alternative arrangements under Part 12 will not be considered under this mitigating circumstances process if they do not submit a separate mitigating circumstances notice.

Where a candidate or candidates have made a submission, under Part 12 or Part 13, that unforeseen circumstances may have had an impact on their performance in an examination, a subset of the internal examiners will meet to discuss the individual applications and band the seriousness of each application on a scale of 1-3 with 1 indicating minor impact, 2 indicating moderate impact, and 3 indicating very serious impact.

For Part I, normally, this MCE meeting will take place before Part A of the meeting of the internal examiners at which the examination results are reviewed. When reaching these Part I decisions on MCE impact level, a subset of internal examiners will take into consideration, on the basis of the information received, the severity and relevance of the circumstances, and the strength of the evidence provided in support. This subset of examiners will also note whether all or a subset of written papers and/or elements of coursework were affected, being aware that it is possible for circumstances to have different levels of impact on different written papers and elements of coursework. The banding information is used at Part B of the meeting of the Part I internal examiners at which the examination results are reviewed: in Part B a candidate's results are discussed in the light of the impact of each MCE and recommendations to the Finals Board formulated regarding any action(s) to be taken in respect of each MCE.

For Part II, a subset of internal examiners will meet to band the seriousness of each notice in advance of the Part II vivas and prior to sight of any preliminary marks awarded by the internal examiners. When reaching these decisions on MCE impact level, the subset of examiners will take into consideration, on the basis of the information received, the severity and relevance of the circumstances, and the strength of the evidence. The banding information will be used at Part B of the meeting of Part II internal examiners, which is held after the vivas, at which the marks agreed following the discussion after the viva are reviewed and recommendations to the Finals Board formulated regarding any action(s) to be taken in respect of each MCE.

Further information on the procedure is provided in the [Examination and Assessment Framework, Annex E](#) and information for students is provided at <https://www.ox.ac.uk/students/academic/exams/problems-completing-your-assessment>. It is very important that a candidate's MCE submission is adequately evidenced and, where appropriate, verified by their college; the University forbids the Board of Examiners from seeking any additional information or evidence.

Candidates who have indicated they wish to be considered for DDH/DDM<sup>†</sup> will first be considered for a classified degree, taking into account any individual MCE. If that is not possible and they meet the DDH/DDM eligibility criteria, they will be awarded DDH/DDM.

## 7. DETAILS OF EXAMINERS AND RULES ON COMMUNICATING WITH EXAMINERS

The Materials Science Examiners in Trinity 2023 are: Prof. Jan Czernuszka, Prof. Nicole Grobert, Prof. Sergio Lozano-Perez, Prof. Pete Nellist (Chair), Prof. Jason Smith and Prof. Andrew Watt. The external examiners are Prof. Geraint Williams, Swansea University, and Prof. Paul Midgeley, University of Cambridge.

It must be stressed that to preserve the independence of the examiners, candidates are not allowed to make contact directly about matters relating to the content or marking of papers. Any communication must be via the candidate's college, who will, if the matter is deemed of importance, contact the Proctors. The Proctors in turn communicate with the Chair of Examiners.

Candidates should not under any circumstances seek to make contact with individual internal or external examiners.

### ANNEX

**Summary of maximum marks available to be awarded for different components of the MS Final Examination in 2023 (For Part I and Part II students who embarked on the FHS respectively-in 2021/22 and 2020/21)**

	<b>Component</b>	<b>Mark</b>	
<b>Part I</b>	General Paper 1	100	
	General Paper 2	100	
	General Paper 3	100	
	General Paper 4	100	
	Materials Options Paper 1	100	
	Materials Options Paper 2	100	
	Practicals	60	
	Industrial Visits and Talks	10	
	Entrepreneurship coursework	20	
	Team Design Project	50	
	Introduction to Modelling in Materials	30	
	Characterisation or Atomistic Modelling module	30	
	<i>Part I Total</i>		<i>800</i>
	<b>Part II</b>	Thesis	400
<i>Overall Total</i>		<i>1200</i>	

<sup>†</sup> DDH/DDM – Declared to have Deserved Honours / Declared to have Deserved Masters

## 8. APPENDIX – B.A. IN MATERIALS SCIENCE (EXIT AWARD ONLY)

In their 3<sup>rd</sup> year, a candidate may opt to transfer out of the M.Eng. programme and seek to exit with a classified B.A. award, via one of the following routes:

- Route 1 – Transfer to the B.A. at the start of the 3<sup>rd</sup> year
- Route 2 – Transfer to the B.A. at the end of the 3<sup>rd</sup> year

### Route 1

Such a candidate will have studied a reduced subset of Options courses and undertaken an additional element of coursework, comprising a literature-based research module. In this case, the candidate will sit the same Option papers as all other Part I candidates but for each paper will answer only two questions in a reduced timeframe of 1.5 hours. The maximum number of marks available on each option paper is 50, and questions carry equal marks. The literature-based research module will be assessed by means of an extended essay of up to 4,000 words which is submitted to the examiners, who will also take into account a written report from the candidate's academic advisor for this research module. The essay is double marked, blind, by two examiners and allocated a maximum of 50 marks.

### Route 2

Such a candidate will have completed the same elements of assessment as for Part I of the M.Eng. and in addition will be required to undertake a literature-based research module during the Long Vacation following the written papers. Consideration of all the results will be made by the examiners in the Trinity term of the year following the written papers. The literature-based research module will be assessed by means of an extended essay of up to 4,000 words which is submitted to the examiners, who will also take into account a written report from the candidate's academic advisor for this research module. The essay is double marked, blind, by two examiners and allocated a maximum of 50 marks.

The examiners will apply to the extended essay the conventions detailed above in relation to:

- Short-weight and departure from rubric
- Late or non-submission
- Over-length work and departure from approved titles or subject-matter

The examiners will apply the conventions that relate to the M.Eng. as detailed above to all other elements of assessment for the B.A.

The qualitative descriptors of classes given in Section 4.1 also apply to the B.A.

Once marking is completed an overall percentage mark is computed for each candidate and classification then takes place. Subject to being adjudged worthy of honours, classification is based solely on the overall percentage mark; the candidate's profile of marks from each element of assessment is taken into account only in borderline cases.

**Classified Honours** – To be adjudged worthy of Honours normally a candidate must obtain a minimum mark of 40% averaged over all elements of assessment, obtain a minimum mark of 40% in each of at least four of the six written papers, and satisfy the coursework requirements.

**Pass** – The examiners consider that the candidate's overall performance has reached an adequate standard but is not worthy of Honours. The candidate is listed as a Pass on the class list and is awarded a B.A. (without honours).

**Fail** – The examiners consider that the candidate's overall performance is not worthy of a B.A.

In the event that a candidate obtains a mark of less than 40% averaged over all elements of assessment, or if a candidate fails to satisfy the examiners, a **resit** is permitted. Such a candidate may re-enter for the whole of the examination on one occasion only, normally in the year following the examiners' original decision. The examination will cover the same material as the original examination and will follow the same rubric. If such a candidate is adjudged worthy of honours, as defined under 'Classified Honours' above, the examiners may award a 3<sup>rd</sup> class Honours classification. The Examiners shall be entitled to award a Pass to a candidate who has reached a standard considered adequate but who has not been adjudged worthy of Honours on the occasion of this resit.

## ANNEX

### Summary of maximum marks available to be awarded for different components of the MS Final Examination in the B.A. (Hons) exit award in 2023

#### Route 1

	<b>Component</b>	<b>Mark</b>
<b>Part I</b>	General Paper 1	100
	General Paper 2	100
	General Paper 3	100
	General Paper 4	100
	Materials Options Paper 1	50
	Materials Options Paper 2	50
	Practicals	60
	Industrial Visits and Talks	10
	Entrepreneurship coursework	20
	Team Design Project	50
	Introduction to Modelling in Materials	30
	Characterisation or Atomistic Modelling module	30
	Literature-based research module	50
<b>Overall Total</b>	<b>750</b>	

#### Route 2

	<b>Component</b>	<b>Mark</b>
<b>Part I</b>	General Paper 1	100
	General Paper 2	100
	General Paper 3	100
	General Paper 4	100
	Materials Options Paper 1	100
	Materials Options Paper 2	100
	Practicals	60
	Industrial Visits and Talks	20
	Entrepreneurship coursework	20
	Team Design Project	50
	Introduction to Modelling in Materials	30
	Characterisation or Atomistic Modelling module	30
	Literature-based research module	50
<b>Overall Total</b>	<b>850</b>	