

Examination Conventions 2019/20

Materials Science - Final Honours School

(revised to reflect the changes introduced for COVID-19 pandemic)

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 **Part II** of the Final Honours School in Materials Science for the academic year 2019-20; **the entries in green font reflect the special measures and changes adopted to allow for the COVID-19 pandemic.** The Department of Materials' Academic 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: <http://www.admin.ox.ac.uk/examregs/>.

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

[Not relevant for Part II - There are no timed written papers for the Part II FHS.]

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.

* for the 2019-20 examinations the Nominating Committee comprised Prof Nellist, Prof Marrow & Dr Taylor.

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 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 the impact on the candidate's project of the COVID-19 pandemic**, 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 her/his 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 **using video-conferencing technology**: 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 for 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 the Viva Record form for that viva. 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 4th year.

3.4 Scaling

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

[Not relevant for Part II coursework]

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 a specific date and time for submission of the required coursework to the Examiners (A Part II Thesis). The normal Rules governing late submission of this 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 2019/20 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 14.4 to 14.8. 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 14.4 to 14.8 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 14.9. 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 14.4(4). 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, and their inability to meet the deadline is due to COVID-19 or a short-term illness or a flare-up of an existing condition that is documented in a Student Support Plan they should follow a self-certification process. For those affected directly or indirectly by COVID-19 this will enable an initial self-certification of up to 14 days, whilst for those affected by a short-term illness (e.g. migraine, noro-virus, gastroenteritis, flu, diarrhoea, etc.) or a flare-up of an existing condition that is documented in a Student Support Plan this will enable an initial self-certification of up to 7 days. Candidates will be able to submit a self-certification for the same submission for up to a maximum of 21 days. Candidates will need to complete the self-certification form themselves, the Proctors will then consider the case and inform the student, college and department of the outcome.

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 accommodate for a Part II thesis to be examined in the 2019/20 session is 14 days. Any extension awarded for longer shall mean the assessment will be considered by a scheduled examination board in the next academic year.

If the direct or indirect impact of COVID-19 makes it impossible for a candidate to complete their Part II thesis, this being the means by which the Part II project is assessed, the candidate would be entitled to apply to graduate with a 'Declared to Deserve Honours' (DDH) status by completing an application form at least two days before the deadline for submission of the Part II thesis. It is strongly advised that this option is discussed with college Materials Tutorial Fellows before submitting such an application.

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 2018/19 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). He or she will make one of three decisions (http://www.admin.ox.ac.uk/media/global/wwwadminoxacuk/localsites/educationcommittee/documents/policyguidance/Plagiarism_procedures_guidance.pdf):

- (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 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 II:

Classified Honours –

The following 'safety net' will be applied in respect of the possible impact(s) of COVID-19 on the Part II project and thesis.

Provided a mark of at least 40% is achieved for the Part II project, the overall degree classification for a 2020 final year student reading for the degree of M.Eng in Materials Science will be the higher of:

- a) The degree classification based on all assessments (Part I and Part II), using the normal weightings of the Part I & Part II contributions, and as usual taking careful account of all mitigating circumstances, or
- b) The degree classification based on only the banked overall Part I FHS mark, taking careful account of any mitigating circumstances that were submitted in respect of the assessments that contributed to that Part I mark.

It is recognised that it is not uncommon for some Materials undergraduates to obtain a better % mark for their Part II project than the overall % mark they achieved at Part I, and in some cases this improvement is sufficient to take a candidate's overall degree mark into a higher classification band than that in which their overall Part I mark sits. Clearly the 'Type 1 Safety Net Policy' does not deal with a case where in the absence of impact(s) of COVID-19 a candidate's Part II mark would have been sufficient to raise their degree classification from that based on their Part I mark alone, but due to these COVID-19 impacts the 'raw' Part II project mark is lower than it otherwise could have been to an extent that the overall degree mark is no longer high enough to raise the degree class in the aforementioned way.

The examiners will address this by careful and sympathetic consideration of all available evidence in respect of mitigating circumstances connected with the potential impact(s) of COVID-19 on each candidate's Part II project mark.

Subject to the requirement that a candidate's Part II mark is at least 40% 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.

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

[Not relevant to Part II]

4.4 Use of vivas

In Part II, a *viva voce* examination is held for all candidates and in 2020 will be held using video-conferencing technology. The effectiveness of the video-conference provision will be tested in advance with each candidate and where this is judged to be inadequate the viva will be conducted by telephone conference call instead. In all cases provision will be in place to switch to a telephone conference call if on the day the video-conference technology/connectivity causes problems.

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

Part II may be entered on one occasion only.

6. CONSIDERATION OF MITIGATING CIRCUMSTANCES

[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.]

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 Self-assessment Mitigating Circumstances Form should be submitted directly by the candidate to the Proctors within 5 working days of their last examination. For the purposes of the Part II thesis the day of the last examination shall be taken to be the day on which the thesis is submitted; if a candidate subsequently wishes to draw to the attention of the Examiners

mitigating circumstances in respect of their viva the Chairman of FHS Examiners will accept a 'viva-addendum' to the self-assessment form. The viva-addendum should be submitted, normally no later than twenty-four hours after the end of the viva, for the attention of the Chairman of the Materials FHS Examiners by means of an email to undergraduate.studies@materials.ox.ac.uk. The [Self-Assessment form](#) and further guidance can be found here: <http://www.ox.ac.uk/students/coronavirus-advice/mitigating-circumstances>

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

Where a candidate or candidates have made a submission, under Part 13 of the Regulations for Conduct of University Examinations, that unforeseen factors may have had an impact on their performance in an examination, the [final board of examiners will decide whether and how to adjust a candidate's results](#).

Further information on the procedure is provided in the *Examination and Assessment Framework*, [Annex E](#) and information for students is provided at www.ox.ac.uk/students/academic/exams/guidance.

7. DETAILS OF EXAMINERS AND RULES ON COMMUNICATING WITH EXAMINERS

The Materials Science Examiners in Trinity 2020 are: Prof. Hazel Assender, Prof. Simon Benjamin (Chair), Prof. James Marrow, Prof. Pete Nellist, Prof. Roger Reed and Prof. Richard Todd. The external examiners are Prof. Alison Davenport, University of Birmingham, and Prof. Peter Haynes, Imperial College, London.

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 Chairman 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 2020 (For Part II students who embarked on the FHS in 2017/18)

	Component	Mark
Part I	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	20
	Engineering and Society coursework	20
	Team Design Project	50
	Characterisation or Modelling module	50
	<i>Part I Total</i>	
Part II	Thesis	400
<i>Overall Total</i>		<i>1200</i>

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

[Not relevant for Part II]