



UNIVERSITY OF OXFORD

DEPARTMENT OF MATERIALS

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**To: All Candidates for Part I Examinations in Materials Science
2022/23**

From: Professor Peter Nellist, Chair of Examiners 2023.

Subject: Part I Examinations – Trinity 2023

Date: Monday, 06 March 2023

cc: Director of Undergraduate Studies, Tutorial Fellows

Information on the Part I Examination 2022-23

I am writing with information about the arrangements for your forthcoming examination and to provide you with a copy of the Examination Conventions for 2023.

The Examiners for the Trinity 2023 exams are: Prof. Jan Czernuszka, Prof. Nicole Grobert, Prof. Sergio Lozano-Perez, Prof. Peter Nellist (Chair), Prof. Jason Smith and Prof. Andrew Watt. The external examiners are Prof. Paul Midgley University of Cambridge, and Prof. Geraint Williams, Swansea University.

Candidates are reminded that in order to preserve the independence of the examiners, **you are not allowed** to contact them directly about matters relating to the content of the exams or the marking of papers. Any communication must be via your college, who will, if the matter is deemed of importance, contact the Proctors. The Proctors in turn communicate with the Chair of Examiners. If you have any queries about the Examinations or anything related to the Examinations, for example illness or personal issues, please don't hesitate to seek further advice from your College tutor, or one of the Department's academic support staff as listed in your course handbook.

Examination Conventions

The appropriate Examination Conventions for your degree course are enclosed. Please ensure you read the Conventions thoroughly. Please note that any communication to the Proctors about such matters should be via **your College**.

You are reminded that you are required to wear Sub Fusc and Academic Dress to all examinations. Further information about in person examinations may be found at <https://www.ox.ac.uk/students/academic/exams/guidance>.

Format of Exam Papers

Past papers can be found on OXAM at <https://weblearn.ox.ac.uk/portal/site/oxam> (or go to the University's homepage, click on "Oxford Students – Academic Matters – Examinations and Assessment" and select "OXAM: past examination papers")

The **general papers** will be of the same format as in recent years. That is, there will be eight questions on each paper, of which you are to answer five. The total number of marks for each paper is 100. Each question will therefore be worth 20 marks. Questions will be sub-divided into sections with the breakdown of marks that the examiners expect to give to each part of each question indicated.

As in previous years, the general paper questions are, where possible, likely to have some mathematical or analytical content.

There will be two **options papers**. Materials Options papers comprise one section for each twelve-hour Options lecture course, each section containing two questions: 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 total number of marks available on each option paper is 100, and all questions carry equal marks. Questions will be sub-divided into sections with the breakdown of marks that the examiners expect to give to each part of each question indicated.

Some candidates sitting the options papers took the courses in academic year 2021-22 in which there were some differences in the courses offered compared to 2022-23. **Only one version of each options paper will be set**, but where sections are only relevant to one of the academic years this will be made clear on the paper.

As in previous years, the option paper questions are, where possible, likely to have some mathematical or analytical content.

NOTE: Each question is to be started in a new answer booklet.

Recording the questions you submit:

The rubric on each paper indicates a prescribed number of answers required (e.g. "candidates are required to submit answers to no more than (x) questions"). You are asked to indicate on a covering sheet which questions, up to the prescribed number, you are submitting for marking. If this information is not provided then the examiners will mark the first (x) questions in numerical order by question number. 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 on the paper 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 the information is not provided on a covering page then the examiners will mark the sections in alphabetical order by section delineator (section A, section B, etc.).

Although great care is taken when setting the exam papers, occasionally an error does remain. **If you think that there is an error or mistake** in your exam paper then you should make a note of this at the top of the relevant answer and clearly state the assumptions you have used in answering the question. You should then try

to complete the paper as best you can. It will not be possible to query the content of the exam paper during the exam.

Timetable of the Examination Papers

It is hoped that the timing of the examination papers will be similar to that of previous years when in-person examinations were sat (see below). However, **THIS CANNOT BE CONFIRMED UNTIL THE EXAMINATION SCHOOLS PUBLISH THE OFFICIAL TIMETABLE, AND MAY BE SUBJECT TO CHANGE.**

- Week 6** Monday 29th May- General Paper 1
 Tuesday 30st May - General Paper 2
 Thursday 1st June - General Paper 3
 Friday 2nd June - General Paper 4
- Week 7** Monday 5th June - Options Paper 1
 Tuesday 6th June - Options Paper 2

All exams are expected to start at 9.30am. The exact timetable of all the exams will be confirmed shortly by the Examination Schools.

Use of Calculators

The only types of calculators that may be used in Materials Science 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.

Allocation of Marks in Part I Materials Science.

PART I	General Paper 1 Structure and Transformation of Materials	100
	General Paper 2 Electronic Properties of Materials	100
	General Paper 3: Mechanical Properties	100
	General Paper 4 Engineering Applications of Materials	100
	Options Paper 1	100
	Options Paper 2	100
	Industrial Visits and Talks	10
	Laboratory Practicals	60
	Entrepreneurship coursework*	20
	Team Design Project	50
	Introduction to Modelling of Materials module	30

	Characterisation of Materials or Atomistic Modelling module	30
	PART I TOTAL	800

* - or Language option or Supplementary subject where taken.