



UNIVERSITY OF OXFORD

# DEPARTMENT OF MATERIALS

PARKS ROAD OXFORD OX1 3PH · Telephone: (01865) 273700

**To:** All Candidates for Part I Examination in Materials Science 2019  
**From:** Professor Roger Reed, Chair of Examiners, 2019.  
**Subject:** Examinations Trinity 2019  
**Date:** Friday, 01 March 2019  
**cc:** Tutors, Director of Studies

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## Content of Materials Courses for Examination in Trinity 2019

During the course of your studies, lecturers may have identified material that was issued for background information only and would therefore not be deemed to be examinable. To ensure that clear, consistent and accurate guidance is given about this material, I am issuing, as Chair of Examiners, a statement summarising any such declared material.

To clarify, the examinable material is defined broadly by the course synopses and includes all material covered in lectures and all material covered in course handouts of any type (including problems sheets issued by the lecturers). The only exceptions to this rule are:

- (i) If a course handout states in writing that the material below is for background information only and is non-examinable
- (ii) Notification by the Chair of Examiners to all students taking the course indicating that a specific part of the course is non-examinable.

In the annex to this letter, we have identified the specific material in the **Materials Science** courses which is deemed to be non-examinable in 2019. Material already labelled as non-examinable on handouts issued by the course lecturer is not listed.

**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.** Therefore, if there are any queries about the content of this statement, please address these to Philippa Moss.

Yours sincerely,

Professor Roger Reed



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## Annex to letter from the Chair of Examiners

### Non-examinable material for 2019 FHS Examinations

- 1) Any material on a page of a course handout where that page was identified by the course lecturer in writing on the page as 'non-examinable material'
- 2) 2<sup>nd</sup> Year Core Lectures:
  - a) Microstructural Characterisation – Prof. P D Nellist
    - The relativistic formula for electron wavelength is not required.
  - b) Creep – Prof. R.I. Todd
    - Section 7: "Creep Failure" of the creep notes will not be examinable.
- 3) 3<sup>rd</sup> Year Options Lectures:
  - a) OP1 Strength & Failure – Prof. R C Reed
    - Wear and surface treatments
      - Wear mechanisms
      - Wear-resistant materials
      - Surface treatments.
    - Design of strong alloys
      - Principles of alloy design for high yield strength
      - Examples from aluminium, titanium, nickel and iron-based alloys.
  - b) OP2 Advanced Engineering Alloys & Composites – Dr M Auger:
    - Euler minimisation -  
It is not necessary to be able to carry out the minimisation of the total energy as given in the Cahn Hilliard treatment. However, students should be familiar with the concepts involved in the calculation and the result, which is the expression for the constant  $\alpha$ , as this is needed for the rest of the analysis.