To: All Candidates for Part I Examination in Materials Science and Part II Examination in Materials, Economics and Management 2018

From: Professor Jonathan Yates, Chair of Examiners, 2018.

Subject: Examinations Trinity 2018

Date: Tuesday, 20 March 2018

cc: Tutors, Director of Studies

Content of Materials Courses for Examination in Trinity 2018

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 2018. 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 Jonathan Yates
Annex to letter from the Chair of Examiners

Non-examinable material for 2018 FHS Examinations (Materials papers)

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\textsuperscript{nd} Year Core Lectures:
   a) Microstructural Characterisation – Prof. P D Nellist
      - The relativistic formula for electron wavelength is not required.
   b) Macroplasticity & Mechanical Working Processes – Prof. S G Roberts
      - Weblearn holds a set of notes on finite element analysis (FEA); these are provided for interest only and are not examinable. FEA is only covered in outline in the main handout, and only the general principles of FEA as discussed in non-red-disc main handout sections are examinable.

3) 3\textsuperscript{rd} 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 Polymers – Dr M T F Telling:
      - The section on “Recycling” listed as Part 4 in Dr Telling’s slides
   c) 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.