DEPARTMENT OF MATERIALS
FRESHERS INDUCTION COURSE
2017

Dr Adrian Taylor
Director of Studies
WELCOME TO OXFORD MATERIALS

Fri 1.15 – 4.30 pm Wk 0: Induction
Mon 11am Wk 1: Full briefing on the Practical Classes (Prof O’Reilly)
Mon 12 noon Wk 1: Introduction to the Prelims Programme (Prof Grovenor)
Mon 12 noon Wk 3: Teaching, Study Skills & Learning Development (Prof Nellist & Dr Taylor)
First Year: Materials Science (MS)

Directly examined:
- Structure of materials
- Properties of materials
- Transforming materials
- Maths for materials science

Continual assessment:
- Practical work
- Crystallography classes

Additional elements:
- IT skills
- Engineering drawing & CAD classes
- Industrial visits
- Career planning
- Optional foreign language training
- Introduction to errors in measurement
- Introduction to MatLab

Assessment: First University examinations (preliminary)
- Four written papers and continual assessment components equivalent to a fifth paper
OUTLINE OF MS PROGRAMME & ASSESSMENT

An Outline of the Programme Content, Assessment and Key Progression Criteria for the M.Eng in Materials Science

(Please note that this outline is for illustrative purposes and that details may change from time to time)

THE CURRENT OXFORD M.ENG DEGREE PROGRAMME IN MATERIALS SCIENCE IS ACCREDITED BY THE INSTITUTE OF MATERIALS, MINERALS AND MINING (IOM3), ON BEHALF OF THE UK ENGINEERING COUNCIL, TOWARDS THE ACHIEVEMENT OF CHARTERED ENGINEER STATUS.

1st year (‘Prelims’)

Courses
Directly examined
- Structure of materials
- Properties of materials
- Transforming materials
- Mathematics for materials

Continual assessment
- Practical work
- Crystallography classes

Additional elements
- Engineering drawing and CAD classes
- IT skills
- Industrial visits (optional)
- Career planning
- Foreign language (optional)
- Introduction to errors in measurement
- Introduction to MatLab

Assessment
First University examination (‘Prelims’): Four written papers; continual assessment components equivalent to a fifth paper. Resit for written papers available in September.

Progression
Normally, students are required to achieve an overall mark of at least 40% in the first year examination in order to progress to Year 2.

(The ‘prelims’ mark does not contribute to the final degree classification upon graduation.)

2nd year & 3rd Year (‘Part I Final Honours School’)

2nd year

Courses
Directly examined
- Structure and transformation of materials
- Electronic properties of materials
- Mechanical properties
- Engineering applications of materials
- Foreign language (optional)
- Supplementary subject (optional)

Continual assessment
- Practical work
- Industrial visits
- Entrepreneurship course

Additional elements
- Mathematics
- Industrial talks
- Communication skills

3rd year

Courses
Directly examined
- Options courses in Materials. For further information about the options courses we offer at present please see our Lecture Course Synopses.

Continual assessment
- Team design project, assessed by written report and oral presentation
- ‘Introduction to Materials Modelling’ module, assessed by written report
- ‘Characterisation of Materials’ or ‘Atomistic Modelling’ module, assessed by written report
- Industrial visits
2nd year & 3rd Year ('Part I Final Honours School')……continued

(At the start of Year 3 it is possible to transfer to a 3-year BA degree in Materials Science, graduating at the end of Year 3. A student opting to do this takes a smaller set of materials option lecture courses and carries out a literature-based research module. This option is intended for the occasional student who may change their mind about their career path while following our M.Eng programme. The BA degree is not accredited by the IOM3 / UK Engineering Council.)

Assessment

Final University examination, Part I: Six written papers; continual assessment components equivalent to a further two papers. Resit available one year later.

Progression

Normally, students are required to achieve an overall mark of at least 50% in the Part I assessment in order to progress to Part II)

4th year (extended terms) ('Part II Final Honours School')

Courses

Research project (full-time). See examples of previous projects.

Additional elements

- Presentation skills
- Project management skills
- Industrial visits
- Careers events
- Information skills & Reference Management
- Writing skills and IPR
- Foreign language option
- Technology transfer (to be confirmed)
- Workshop skills
- MatLab and LabVIEW

Assessment

Final University examination, Part II (equivalent to 4 papers): Part II dissertation submitted and assessed; Oral examination of project dissertation
| Directly examined: | Structure and transformation of materials |
|                  | Electronic properties of materials       |
|                  | Mechanical properties                     |
|                  | Engineering applications of materials     |
|                  | Foreign language training (optional)       |
|                  | Supplementary subject (optional)           |

| Continual assessment: | Practical work |
|                      | Industrial visits |

| Report assessed:     | Entrepreneurship course |
|                     | (assessed by business plan) |

**Assessment:** Continual & Report assessment components equivalent to 0.8 (tbc) of one paper
# Summary of marks for MS Final Examination

<table>
<thead>
<tr>
<th>Component</th>
<th>Mark</th>
</tr>
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<tbody>
<tr>
<td><strong>Part I</strong></td>
<td></td>
</tr>
<tr>
<td>General Paper 1</td>
<td>100</td>
</tr>
<tr>
<td>General Paper 2</td>
<td>100</td>
</tr>
<tr>
<td>General Paper 3</td>
<td>100</td>
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<tr>
<td>General Paper 4</td>
<td>100</td>
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<tr>
<td>Options Paper 1</td>
<td>100</td>
</tr>
<tr>
<td>Options Paper 2</td>
<td>100</td>
</tr>
<tr>
<td>Practicals</td>
<td>50 tbc</td>
</tr>
<tr>
<td>Industrial visits</td>
<td>10 tbc</td>
</tr>
<tr>
<td>Engineering and Society coursework</td>
<td>20</td>
</tr>
<tr>
<td>Team Design Project</td>
<td>40 tbc</td>
</tr>
<tr>
<td>‘Introduction to Modelling’ module</td>
<td>40 tbc</td>
</tr>
<tr>
<td>‘Characterisation’ or ‘Atomistic Modelling’ module</td>
<td>40 tbc</td>
</tr>
<tr>
<td><strong>Part I Total</strong></td>
<td>800</td>
</tr>
<tr>
<td><strong>Part II</strong></td>
<td></td>
</tr>
<tr>
<td>Thesis</td>
<td>400</td>
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<tr>
<td><strong>Overall Total</strong></td>
<td>1200</td>
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<tr>
<td>(of which 50% is coursework/project work)</td>
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PLAGIARISM

THIS REFERS TO ANY KIND OF UNREFERENCED USE OR REPRODUCTION OF THE WORK OF ANOTHER, WHETHER A FELLOW STUDENT OR THE AUTHOR OF A PUBLISHED WORK.

IT IS ESSENTIAL THAT YOU READ THE SECTION IN YOUR HANDBOOK ON PLAGIARISM SO THAT YOU ARE AWARE OF THIS TOPIC.
Professional Accreditation

• The MS M.Eng degree programme is accredited by the UK Engineering Council as satisfying the education requirement for the achievement of Chartered Engineer status. After graduation a period of professional practice is then required. The BA is not accredited.

  http://www.engc.org.uk/professional-qualifications/chartered-engineer/about-chartered-engineer

• The accreditation exercise is carried out on a five yearly cycle by the Institute of Materials, Minerals & Mining, who are licensed by the UK Engineering Council for this purpose.
GOOD LUCK!