

Materials Graduate Student Handbook 2019-20

Version 1.0 **Sections 1 to 17 only** (20/10/19)

This handbook applies to postgraduate research students starting a Materials Science research degree programme at the University of Oxford in Academic Year 2019/20:

DPhil in Materials
MSc (Research) in Materials
'Diamond' CDT (Materials cohort)

The information in this handbook may be different to that for students starting in other years.

The information in this handbook is accurate as at 20 October 2019, however it may be necessary for changes to be made in certain circumstances, as explained at www.ox.ac.uk/coursechanges. If such changes are made the Department will publish a new version of this handbook together with a list of the changes and students will be informed.

Version	Action	Date
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CHECKLIST FOR KEY ACTIONS BY DPHIL IN MATERIALS STUDENT (Bold = mandatory)

Action	Period Due	Completed (dd/mm/yy)
Register at College	Annually, MT	
Submit to GSR and discuss with your supervisor your quarterly GSR report	Quarterly until thesis submission	
Discuss with your supervisor your research training needs	As necessary, at least annually, Y1-3	
Discuss with your supervisor your transferable 'career skills' training needs	Annually, MT, Y1-3	
YEAR 1		
Attend Induction	Wk 0, MT	
Attend Safety Lecture	Wk 1, MT	
Complete Risk Assessment and DSE Forms	Wk 1-3, MT	
Submit 'Grad Student' Questionnaire for review by Graduate Studies Office (Thur/Fri Wk 2), then upload to WebLearn by Wk 8	Wk 2, MT Wk 8, MT	
Attend Workshop Induction (unless opted out)	tbc, MT	
Attend Information Skills Workshop	Wk 2, MT	
Attend IOM ³ Presentation	Wk 4, MT	
Attend Project Management Workshop	Wk 4, MT	
Attend Looking to the Future Workshop	Wk 5, MT	
Attend Junior Demonstrating Training Workshop	Wk 7, MT	
Attend Poster Skills Workshop	Wk 8, MT	
Attend Owning a Successful DPhil Workshop	Tbc, MT	
Upload Project Management Form 1 to Weblearn	Wk 0-1, HT	
Attend relevant parts of Presentation Skills Workshop	Wk 2, HT	
Attend Writing Skills Workshop	Wk 3, HT	
Attend Managing Your References Workshop	Wk 7, HT, tbc	
Attend and obtain satisfactory assessments on 2 lecture courses	MT, HT	
Attend a minimum of 7 colloquia	MT, HT	
Informal meeting with Lead Assessor	Wk 2-4, TT	
Submit 'Preparing for Transfer of Status' form to GSR	Wk 7-9, TT	
Upload Literature Review to Weblearn	Wk 8, TT	
Upload Project Management Form 2 to Weblearn	July	
Complete on-line course on Research Integrity Training	Before applying for Transfer	
Apply for Transfer of Status (form GSO.2.MPLS + appendices)	July	
YEAR 2		
Transfer of Status Interview	Wks -3 to +1, MT	
Upload Project Management Form 3A to Weblearn	Wk 0-1, HT	
Present Research Talk to Department	Wk 7, HT	
Upload Project Management Form 3B to Weblearn	July	
YEAR 3		
Upload Project Management Form 3C to Weblearn	Wk 0-1, HT	
Submit Poster for Competition	Mon, Wk 3, HT	
Present Poster to Department	Wk 6, HT	
Submit 'Preparing for Confirmation of Status' form to GSR	Wk 7-9, HT	

Apply for Confirmation of Status (form GSO.14.MPLS + appendices)	Wk6 HT to Wk6 TT
Confirmation of Status Interview	Wks 0 to 8 TT
Upload Project Management Form 4 (3 y projects) to Weblearn	Wk 2, TT
Upload Project Management Form 3D (3.5 y projects) to Weblearn	July
Apply for Appointment of Examiners (3 y projects)	July
Submit Thesis via on-line portal (3 y projects)	Sept
DPhil Viva (3 y projects)	Sept to Dec
YEAR 4	
Upload Project Management Form 4 (3.5 y projects) to WebLearn	Wk 0-1 MT
Apply for Appointment of Examiners (3.5 y projects)	Jan to Feb
Submit Thesis via on-line portal (3.5 y projects)	March
DPhil Viva (3.5 y projects)	TT

Materials students following one of the EPSRC CDT DPhil programmes have different timings for some of these required elements – details are given in [Section 4.7](#) of this Handbook and via [Appendix XII](#).

Materials students following a standard DPhil in Materials programme **and who have full funding for forty-eight months**, for example EPSRC Industrial CASE studentships and Faraday Institution studentships, follow the same timings as the 3.5-year DPhil except: (i) a PMF3e is uploaded in weeks 0-1 of the eleventh term (usually HT of Year 4); (ii) PMF4 is uploaded in weeks 0-1 of the twelfth term (usually TT of Year 4), **not** in weeks 0-1 of MT; (iii) the target date to apply for appointment of examiners is July of Year 4; and (iv) unless there are exceptional circumstances the latest date for thesis submission is the end of the four-year period (usually 30th September).

MSc(Research) in Materials students follow the same pattern as years 1 and 2 for DPhil in Materials students, except that in week 5 of Trinity Term in their second year they submit Project Management Form 4. An MSc(Research) in Materials Diary is given in [Appendix IX](#).

Additional timetabled events are listed in the DPhil diary in [Section 4](#) of this handbook, where you will read an overview of the Department's DPhil programmes (please see [Appendix IX](#) for an overview of the MSc(Res) programme.

The checklist above identifies in bold typeface the compulsory requirements.

It may be helpful to understand that some of these compulsory requirements serve more than one purpose, and to be aware of the rationale behind their inclusion and their sequence. For this reason a summary of, and brief rationale for, the compulsory requirements for students following a Materials research degree programme is given in [Appendix XI](#).

Via [Appendix XII](#) you will find concise, year-by-year, timelines for each Materials Research Programme, showing the key required elements [3.5y DPhil (includes the Fusion 'CDT-lite' variant), 3y DPhil (includes Diamond and TMCS CDTs), 4y DPhil, and 2y MSc (Research)].

INDUCTION COURSE PROGRAMME (7th – 8th October 2019)

(Hume-Rothery Lecture Theatre)

Monday 7th October

- 9.00 – 9.15: **Pete Nellist (Joint Head of Department):**
Welcome and introduction to Department
- 9.15 – 9.35: **Support structure:**
Director of (Graduate) Studies (**Adrian Taylor**)
Graduate Studies Support Staff & Graduate Studies Panel
MPLS Graduate School
Head of Administration & Finance (**Ian Bishop**)
Finance, Facilities & HR Leads. Harassment Officers
- 9.35 – 9.45: **Skills Training (Adrian Taylor)**
- 9.45 – 9.55: **Sergio Lozano-Perez (Practical Courses Organiser):**
Gaining teaching experience
- 9.55 – 10.05: **Anne Miller (Enterprise Programme Manager, MPLS)**
Short talk on Enterprise provision
- 10:05 – 10.15: **Chim Chu (Oxford University Innovation)**
Intellectual property and commercialisation
- 10.15 – 10.25: **Jack Fawdon (Chair of JCCG):**
Joint Consultative Committee for Graduates - overview
Explanation of nomination procedure
- 10.25 – 10.40: **Neil Young (EM Facility Manager):**
Electron microscopy facilities: access and training
- 10:40 – 10:50 **Lapo Bogani (Chair of Equality and Diversity Committee)**
Information about equality and diversity – equal opportunities for all
- 10.50 – 11.35: **Registration and coffee with members of JCCG**
Individual photographs to be taken during coffee break
Financial details to be collected from students (if required)
- 11.35 – 12.50: **Tour of central site**
Hume Rothery Building:
Stores, Library, Admin. Offices, Small workshop (**Ash Brown**)
Thom Building:
Main, shared, mechanical workshop (**Ash Brown**)
Holder Building:
EM area, Teaching Labs (**Diana Passmore**), Common Room
Engineering & Technology Building:
IT Support (**Paul Warren/Rob Saunders/Chris Akinola**), ETB
Meeting Room, IEB LR8
21 Banbury Road:
Lecture Theatre, Conference Room
12/13 Parks Road
Note direction of Rex Richards Building
- 12.50 – 14.00 **BREAK**
- 14.00 – 17.00 **Meeting with your research group and supervisor(s)**
(students to be collected from the Hume-Rothery Building reception area at 2pm)

Tuesday 8th October

All activities will take place in the Hume-Rothery Lecture Theatre except for the tour of the Begbroke site and the tour of the Radcliffe Science Library

- 9.00 – 9.50: **Adrian Taylor (Director of Graduate Studies):**
Introduction to the Materials Research Degrees, including the key milestones
- 9.50 – 10.00: **Jayne Shaw (Access & Outreach Manager):**
Introduction to access and outreach
- 10.00 – 10.15: **Jack Fawdon (Chair of JCCG):**
Nomination of first-year candidates for the role of JCCG year representative
Election of 3 or 4 first-year representatives
- 10.15 – 10.45: **Coffee with members of JCCG**
+ Opportunity to talk with Access and Outreach Manager
- 10.45 – 11.00: Bus departs for Begbroke from outside the Hume-Rothery Building
- 11.00 – 12.30: **Tour of Begbroke site (Coordinated by Dr Vanessa Cheel):**
Begbroke Nano characterisation facilities
Sample preparation and electron microscopy
Other facilities, eg canteen, clean room, spray forming lab
Bus, key fobs
- 12.30 – 13.00: Return to the Hume-Rothery Building
- 13.00 – 14.00: BREAK
- 14.00 – 14.20: IT Services – Introduction to University IT Services (**Dave Baker**)
- 14:20 – 14.50: Introduction to Department IT and audio-visual services (**Paul Warren**)
- 14.50 – 15.20: Introduction to Library facilities in Oxford (**Grace Sewell**)
- 15.30 – 16.00: Tour of Radcliffe Science Library (RSL) (**tbc**)

Thursday 10 October

- 16:30: Department of Materials Newcomers' Party, Holder Common Room

The following lectures represent part of the Induction Course for new graduate students and you are strongly advised to attend. Those in bold are compulsory.

Tuesday 15th October, 10.00 – 11.00, HRLT
SAFETY LECTURE: Paul Bagot

Friday 25th October, 10.30 – 12.00 in RSL
INFORMATION SKILLS WORKSHOP: facilitator tbc

Monday 4th November, 12.00 – 13.00 in Hume-Rothery Lecture Theatre
BENEFITS OF MEMBERSHIP OF THE INSTITUTE OF MATERIALS, MINERALS & MINING:
Dr Sarah Boad (IoM³)

Friday 8th November, 12.00 – 13.00 in Hume-Rothery Lecture Theatre and
then 14.00-1600 in 21 Banbury Road Conference Room
PROJECT MANAGEMENT: Dr Paul D Warren - from NSG (Pilkington Glass) & Adrian Taylor

Friday 15th November, 15.00 – 16.35 in Hume-Rothery Lecture Theatre
LOOKING TO THE FUTURE: WHAT DO EMPLOYERS SEEK?
Dr Andy Norton (Rolls Royce) tbc, Dr Mohinder Saran (HSBC), Dr Rebecca Ehata (OU Careers Service), & Adrian Taylor

Monday 25th or Friday 29th November, 11.00 – 13.30, respectively in BRGR and ETBCR
WORKSHOP ON JUNIOR DEMONSTRATING: Sergio Lozano-Perez

MPLS Divisional Graduate Welcome 2019/20 – select one from various dates:
22 October, 4 November, 18 November or 26 November 2019.
The details of the Welcome course, 'Your Successful DPhil' can be found at
<https://www.mpls.ox.ac.uk/training/mpls-training/our-courses/mpls-induction-courses/your-successful-dphil>.

Michaelmas Term [dates to be confirmed, names taken on tour at Induction]

WORKSHOP INDUCTION AND SAFETY COURSE: Les Chorley or colleague.

This workshop induction course is mandatory for anyone who wishes to use the workshop and is also useful as general skills training and safety awareness – even if you never need to use workshop equipment yourself, you may well be responsible one day for people who do.

When the equipment is not in demand for department business, you are also permitted to use the workshop for other work such as urgent bicycle repairs – but only if you have done the training course!

The default position is that we recommend all new research students to attend the course but, with the permission of your supervisor, you may opt out of this by sending an e-mail to Les Chorley (copied to graduate.studies@materials.ox.ac.uk and your supervisor) in advance of the time reserved for your course.

IF YOU DO OPT OUT AND SUBSEQUENTLY FIND THAT YOU NEED TO USE THE WORKSHOP, IT WILL BE NO USE AT THIS TIME PLEADING THAT YOU DESPERATELY NEED ACCESS TO THE WORKSHOP FOR YOUR RESEARCH (OR TO MEND YOUR BIKE SO THAT YOU CAN GET HOME THAT NIGHT) – YOU SHOULD BE AWARE THAT YOU MIGHT HAVE TO WAIT FOR THREE TO FOUR MONTHS BEFORE THE WORKSHOP STAFF RUN THE NEXT TRAINING COURSE.

WELCOME

It is a pleasure to welcome you to the Department of Materials at Oxford University. We are proud to be one of the world's leading materials research laboratories and strive to continually strengthen our reputation for research excellence. You are joining a Department made remarkable by the incredibly talented people that constitute it. Graduate students play a crucial and valued role in this.

The technological world faces significant engineering grand challenges which will impact on economic, environmental, and societal progress across the globe. Materials Science is central to so much of this and the Department is rightly proud of our continuing contributions in areas such as Energy Generation (eg nuclear fusion and fission, photovoltaics), Energy Storage (eg improved batteries, super-capacitors), Transport (eg improved turbine engines, light-weighting of automobiles), Quantum Technologies (eg quantum information processing, photonics), and Healthcare (eg biomaterials, superconductors for MRI scanners).

Your work, whether in these example areas or not, will add to the wealth of knowledge and technology available. As well as contributing to the department's 300+ peer-reviewed research outputs each year, graduate students play an active part in patenting of new ideas and in many and varied activities transferring our research knowledge beyond the academic world. These activities include events to promote the public understanding of science, interactions with school students and staff, and the setting up of spin-off companies.

With so much to do, and such strongly motivated people, it is important that you strike some balance and remember to factor in some time for you. Time away from work, letting your mind reset, is good for you and in the long run benefits your productivity and creativity.

We wish you every success in your work at Oxford, and urge you to make the most of our vibrant and exciting research environment, to enjoy your time in the department, and to aim always to produce the highest quality research.



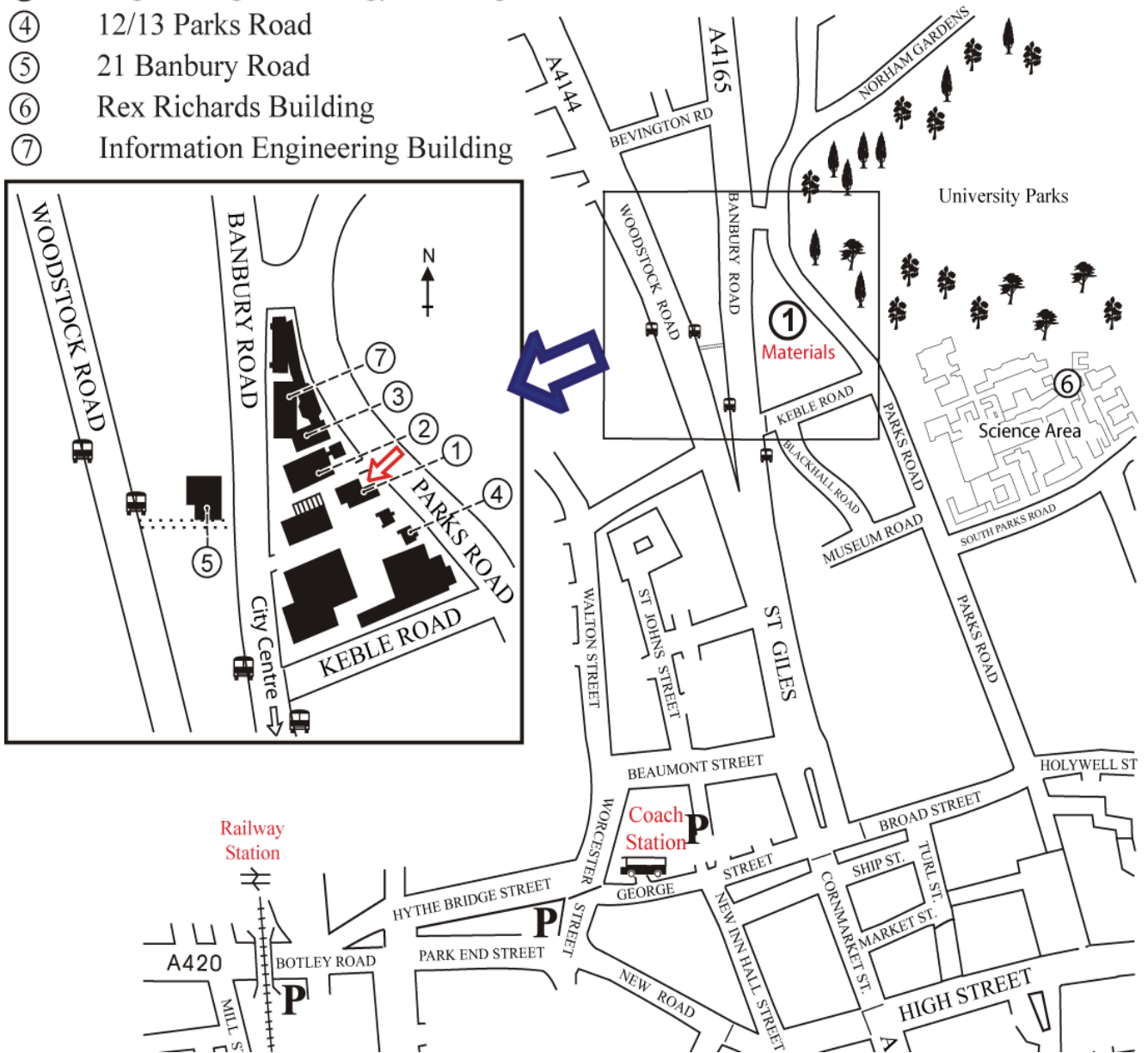
Professor Angus J Wilkinson
Joint Head of Department



Professor Peter D Nellist
Joint Head of Department

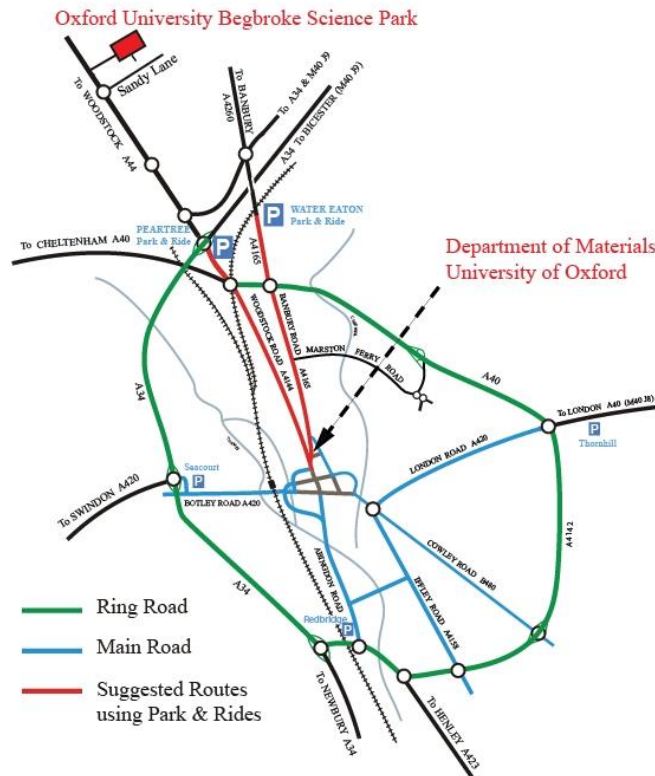
Department of Materials – Map of Central Site

- Reception
- ① Hume-Rothery Building
- ② Holder Building
- ③ Engineering Technology Building
- ④ 12/13 Parks Road
- ⑤ 21 Banbury Road
- ⑥ Rex Richards Building
- ⑦ Information Engineering Building

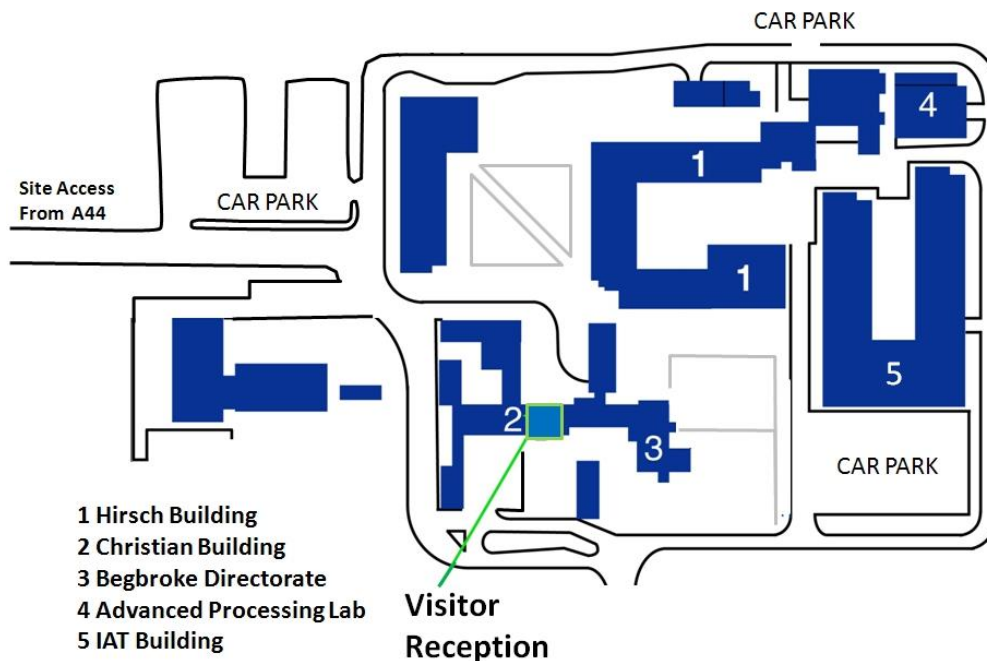


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 Parks Road, Oxford, OX1 3PH
 Phone: (44) 1865 283226
 Email: graduate.studies@materials.ox.ac.uk
<http://www.materials.ox.ac.uk/teaching/pg.html>

Department of Materials – Maps of Begbroke Site



Oxford University Begbroke Science Park



A minibus operates from the central site (stop outside the Hume-Rothery Building) to the Begbroke site several times a day. The journey takes approximately 15-20 minutes. Timetables are posted on the Departmental notice boards and are circulated to all members of Department via the 'notices' mail list and are available on the Begbroke webpage <http://www.materials.ox.ac.uk/local/begbroke.html>. Research students who finish a piece of work at Begbroke after the last bus may, if approved by their supervisor, take a taxi back to Oxford and claim reimbursement.

1. INTRODUCTION

Your years as a graduate student are an exciting time when you will explore the challenges of performing creative research with the accompanying dreams, frustrations, and fulfilment. This '[Materials Graduate Student Handbook](#)' is provided to help you make the most of these few years by describing the structure of the DPhil and MSc by Research programmes within the Department of Materials. **It is essential that you read this handbook; it is your initial resource in the event of any queries and it gives much helpful guidance on the Materials research degree programmes.** The Handbook is supplemented by the MPLS Graduate School's 'Researcher Training & Development Opportunities' booklet and is complemented by three other handbooks at which you should take a quick look, referring to them in more detail as appropriate during your studies:

(i) The Mathematical, Physical and Life Sciences Division's on-line '[MPLS Graduate Student Handbook](#)' can be found on the MPLS website in sections. This is produced by the Graduate School of the Mathematical, Physical and Life Sciences Division (MPLSD) which comprises the Departments of Mathematics, Statistics, Computing, Engineering Science, Chemistry, Earth Sciences, Plant Sciences, Physics, Zoology and Materials. It describes in detail the structure of postgraduate training at Oxford University that is common to all the Mathematical, Physical and Life Science departments. It explains in an informal way the rules and regulations that govern the pursuit and award of research degrees. **THERE IS ALSO A USEFUL OVERVIEW OF THE PROCEDURE FOR SUBMISSION OF YOUR THESIS AND THE EXAMINATION PROCESS.** Information on Training and Professional Development is provided too. You can find out more about the MPLS Graduate School, of which you are a member, and what it offers you <http://www.mpls.ox.ac.uk/graduate-school/>.

(ii) The Materials 'Postgraduate Lecture Synopses and Research Colloquia 2019-20' booklet can be found on the Oxford Materials website at <http://www.materials.ox.ac.uk/teaching/pg/pghandbooks.html> . This details the courses available to graduate students and lists the Departmental Colloquia that will be given during Michaelmas Term. It is important that you peruse this carefully before you decide which courses you would like to attend during your first year. We will return to courses and colloquia in sections 6 and 9 of this Handbook.

(iii) The Materials 'Department Handbook 2019-20'. This describes the many facilities within the Department such as the library, mechanical workshops, computing laboratories, and electron/optical microscopes that are available to all graduates. It also describes the procedures needed, for example, in ordering consumables and equipment both from the main stores and from external suppliers, getting logged onto the University Computing network and arranging for work to be carried out in the mechanical workshops. It also includes information and links on how to claim re-imburement for expenses and payment for casual employment such as teaching. You should familiarise yourself with its contents (<http://www.materials.ox.ac.uk/local/DH.html>).

Finally, in Appendix VII of the present handbook there is a summary of the minimum provision for research students in the Department of Materials.

Timetables for lecture courses, research-specific skills training and transferable career skills training offered by the Department of Materials can be found at

<http://www.materials.ox.ac.uk/teaching/lecturelists.html>.

To book a place on a Materials lecture or training course please contact the person teaching the course, inform them you are a Materials research student wishing to undertake their course, and ask them if you may attend the course and if you need to book a place or may simply attend informally.

The timetable for MPLS Graduate School transferable career skills training courses can be found at <https://www.mpls.ox.ac.uk/training/pgr>.

There are some 400 academic lecture courses, research-specific skills training courses and transferable career skills training courses available to you across the MPLS Division; you can find out about these via the individual [MPLS department websites](#) .

2. SAFETY AND RESEARCH INTEGRITY

The Department takes safety matters very seriously. It is compulsory, and part of the Induction Course, that you attend the **Safety Lecture** by Dr Paul Bagot, the Departmental Safety Officer (DSO), at 10.00 am on Tuesday of Week 1 (15th October 2019). You will not be allowed to undertake any experimental work until you have attended the briefing and received adequate safety training. Soon after the safety lecture you and your supervisor must complete, and submit to the DSO, a project risk assessment form; the form is available at

<http://www.materials.ox.ac.uk/local/documents.html>.

Extract from the Head of Department's 'Statement of Health & Safety Organisation' (see the 'Department Safety Policy' document, available at <http://www.materials.ox.ac.uk/local/documents.html?panel=6#SafetyForms> and which should be read by all new research students):

"Note that the Department has a "no-fault" policy. I shall be supportive of those who report incidents or problems, even when they themselves made mistakes. I will take a far graver view of anyone who conceals a safety incident, or who fails to report a potential problem".

An important policy of the University Health and Safety Committee is that a **Deputy Supervisor** must be appointed to cover for times when your sole supervisor or your 'responsible' co-supervisor is (i) ill or (ii) absent, either in the short-term at conferences and holidays or in the long-term on sabbatical. Their responsibilities when providing this cover include the approval of any novel experimental work

or to stop it if worried by the safety aspects. If you have three or more supervisors you must agree with your Responsible Supervisor which of the other supervisors is to be your formal Deputy Supervisor. If you have a sole supervisor then your Department Advisor will be your Deputy Supervisor. The role of your Department Advisor is explained in [Section 3](#).

Travel, and working in a laboratory external to the University of Oxford

Students who are travelling beyond the UK in connection with their studies **must** take out travel insurance through the University scheme, even if this travel is solely for attendance at a conference. In all cases where a student intends to work in a laboratory external to the University, whether overseas, at another university or company in the UK or even just at a company based at the Begbroke Science Park, and whether just for a few hours or an extended period of time, it is **compulsory** for the student together with their supervisor to carry out risk assessments for this work and to ensure that all appropriate insurances are in place including those to cover both liability **of** the student and liability **to** the student (for example in the case of a work-related injury).

Further guidance is available from the Department Safety Officer (Dr Paul Bagot). Risk assessment forms can be found at <http://www.materials.ox.ac.uk/local/documents.html>. Travel insurance forms can be found at

<https://finance.admin.ox.ac.uk/travel-insurance>. These forms need to be signed by you and counter signed by **both** your supervisor and the Head of Administration and Finance.

Research integrity and ethics

The University of Oxford is dedicated to the highest standards of research integrity. As set out in its Academic Integrity in Research: Code of Practice and Procedure, it expects all members of the University including staff and students, and those who are not members of the University but who are conducting research on University premises or using University facilities, to observe the highest standards in the conduct of their research.

The following website provides links to the relevant University policies, guidelines and procedures which are intended to promote the responsible conduct of research in the University's ongoing research activities.

You are asked to reflect on how this applies to your own research

<https://researchsupport.admin.ox.ac.uk/governance/integrity>.

Before you apply to Transfer Status, at the end of year one, from Probationer Research Student (PRS) to DPhil or MSc(R) student it is mandatory that you have completed the University's on-line course on '[Research Integrity Training](#)'. More information on Research Integrity can be found in Appendix XIII.

3. RESEARCH SUPERVISION AND SUPPORT STRUCTURE

An effective relationship and good communication between you and your supervisor(s) is key to the smooth progress of your DPhil. You will be supervised by a single Supervisor or two or more Co-supervisors (for the case where projects involve expertise in more than one area). One of these supervisors will be designated as your 'Responsible Supervisor' with primary responsibility to the Department for guiding your academic progress and providing pastoral care. You may also have an Associate Supervisor (typically a researcher with less than 3 years' experience at post-doctoral level). You could have an External Supervisor, for example if your project involves collaboration with another university or an industrial company or laboratory. Your supervisor(s) will be your main source of information and advice throughout the course of your research. Their responsibilities include:

- (i) planning the framework of your research programme (in the light of the programme structure discussed in [section 4](#));
- (ii) advising you about lecture courses, both specialist and broadening (see [section 6.1](#));
- (iii) advising you about transferable 'career skills' and more generally about skills-training courses, including those on research techniques (see [section 6.2](#));
- (iv) advising you about safety;
- (v) advising you about literature sources;
- (vi) regularly meeting with you to discuss your work;
- (vii) keeping you informed of your progress (both informally and through the formal report submitted to the Graduate Studies Office at the end of each term, taking into account the project management forms submitted at regular intervals to the Department by you (see [section 5](#));
- (viii) advising you about the content of written submissions such as your first year progress report, literature review, 2nd year talk, 3rd year poster and your thesis;
- (ix) advising you about the progression examinations (transfer of status and confirmation of status);

- (x) offering informal guidance on careers;
- (xi) providing pastoral care.

Continuation on the course depends on your satisfactory progress, so you should take very seriously any warnings expressed by your supervisor(s) that you are not working as well as you ought. You should also bring to their attention, in good time, any problems that are significantly affecting your progress whether academic or personal, before the situation becomes too serious. The University, Department and College carefully monitor the progress you make with your project, and copies of your supervisor(s) reports will be sent to the Director of Graduate Studies (DGS) and to your College Tutor for Graduates and your College Advisor. **If you have significant concerns, of any kind, do not just tick a box on the GSR report, in addition please arrange to meet the DGS (Dr Adrian Taylor) by making an appointment with his PA, Marion Beckett. Remember too that you can meet with Adrian at any time during your DPhil / MSc(Res), not just at the time of the quarterly GSR reports.**

It occasionally happens during the course of a research degree that relations between the student and the supervisor(s) can become strained, perhaps due to differences in opinion as to the direction in which the research should proceed. You will, therefore, be assigned a **Department Advisor** who is reasonably familiar with the field of your research and to whom you can turn for independent advice. Remember that your Department Advisor should be someone other than any of your supervisors: during your first two weeks in the Department you need to agree with your supervisor(s) who should be your Advisor and who should be your Deputy Supervisor (see [Section 2](#)); if you have a sole supervisor then your Department Advisor also takes the role of Deputy Supervisor. Of course, your **Director of Graduate Studies** (DGS) and members of the Graduate Studies Panel (see [section 15](#)) are also always available for a confidential chat. In addition, you might like to seek advice from your **College Advisor** (who will be assigned by College) or your College Tutor for Graduates. Please note that your College Advisor must not be one of your supervisors. The Department and Colleges all work together to ensure that your time here in Oxford is as trouble free as possible. It is a good idea to meet your advisors during your first term as a probationary research student. Informal advice is available from your **JCCG representatives**. Finally, as explained at Induction, the Department has a zero tolerance policy towards harassment and several members of staff are designated, trained, **Harassment Advisors** who will treat any issues you raise with them in strict confidence.

As described in subsequent sections of this Handbook, during your research programme there are two formal progress assessments, the Transfer of Status exam (DPhil and MSc) and the Confirmation of Status Exam (DPhil only). Your supervisor must name four members of the Faculty of Materials

who could act as your Lead Assessor for these exams – the DGS will select one of these to take on the role.

Once you have agreed, in consultation with your supervisor(s), on your Department Advisor, Deputy Supervisor and candidates for the role of your Lead Assessor, you must inform the **Materials Graduate Studies Office**. You do this by entering the names on the 'New Graduate Student' Questionnaire, a copy of which is included as an appendix to this handbook. Make sure you complete all the items on this form and return it by the end of Week 2 (25th October 2019) for review by the Materials Graduate Studies Office.

If you become concerned that your working relationship with your Responsible Supervisor has shortcomings and matters do not improve in the course of a few weeks you are encouraged to discuss your concerns with the DGS, Adrian Taylor, without delay. This discussion may be in strict confidence if you wish.

Information on the expectations and responsibilities of research supervision, and guidance on fulfilling these, is available as follows:

1. The Mathematical, Physical and Life Sciences Divisional Code of Practice on the Supervision of Research Students can be found via the link within the webpage

<http://www.mpls.ox.ac.uk/graduate-school/information-for-postgraduate-research-students/supervision> and in Appendix VIII of the present Handbook.

2. Very helpful guidance to both students and supervisors can be found at:

(i) The Oxford Centre for Teaching and Learning (CTL, formerly OLI) on-line course and guidance on Research Supervision (<https://www.ctl.ox.ac.uk/online-courses>).

(ii) The Vitae guides on 'Supervising a Doctorate' at <https://www.vitae.ac.uk/doing-research/supervising-a-doctorate> and 'Doing a Doctorate' (supervision and key relationships) at <https://www.vitae.ac.uk/doing-research/doing-a-doctorate/starting-a-doctorate/supervision-and-key-relationships>.

(iii) The Materials JCCG (the staff - graduate student liaison committee) run an annual course in Michaelmas Term, 'Owning a Successful DPhil', which includes guidance on the supervisory relationship. All probationer research students in Materials are strongly recommended to attend this course.

(iv) The University of Oxford Education Committee's (EdC) 'Policy on Research Degrees' (<http://www.admin.ox.ac.uk/edc/policiesandguidance/policyonresearchdegrees>). Within this document please see in particular the '**Responsibilities of the Student**' section, which you can read at the end of Appendix VIII of the present Handbook.

(v) The Quality Assurance Agency's Assuring and Enhancing Academic Quality (<https://www.qaa.ac.uk/quality-code>), see Quality Code, Chapter B11: Research Degrees.

(vi) The EPSRC Statement of Expectations for Research Council funded students (<http://www.epsrc.ac.uk/skills/students/help/expectation>).

(vii) The following training courses are run at least annually:

Students: In addition to the Materials JCCG course on 'Owning a Successful DPhil', the MPLS Division run an induction course 'Your Successful DPhil'.

Supervisors: CTL (formerly OLI) will probably continue to run the OLI annual 'Introduction to Academic Practice at Oxford' course (tbc), which includes a half-day session on Research Supervision; a series of seminars (tbc), including 'Supervising DPhil Students' and 'Examining DPhil Students'; and on-line courses on (i) the Admission of Research Students and (ii) the Supervision of Research Students.

4. OVERVIEW OF DPHIL PROGRAMME

The present section provides an overview of the 777 working days that make up a 3.5 year DPhil project. An illustrative DPhil diary is provided together with a year-by-year outline. More detail on the key topics mentioned in the Diary and the Outlines is then given in sections 5 onwards. The present section also provides an introduction to (i) our 'Materials: PGR Progression' Weblearn site and (ii) the University's 'GSO forms'.



[Section 4.7](#) identifies the variations on the 3.5 year programme that apply to the 4-year EPSRC CDT DPhil programmes.


An equivalent overview and diary for our MSc (Research) Programme are given in Appendix IX.

The University rules stipulate that unless dispensation has been granted you must be resident within a 25 mile radius of the city centre for at least 6 terms (2 academic years) before you can submit your DPhil thesis (unless you already hold an Oxford MSc degree, when the residence requirement is reduced to 3 terms). The rules also stipulate that the maximum time normally allowed for a student to complete the research and write the thesis is 12 terms (4 academic years). However, funding for research studentships is usually only for 3 or 3½ years. Thus, the Department aims for DPhil students to submit their theses within 3-3½ years (4 years for a CDT DPhil, reckoned from the date you embark on the CDT programme). A schedule for keeping to this timetable is illustrated below under the title 'A DPhil Diary'.

A DPhil Diary

1st Year	
Michaelmas Term, October - January	
Week 0	First year Induction Course, including meeting with Responsible Supervisor, Assignment of Deputy Supervisor, Department Advisor and propose Lead Assessor Department Newcomers' Party
Week 1	Safety Lecture
Week 2	Deadline for completed 'New Graduate Student' Questionnaire Information Skills workshop
Wk 2, 4, 6 or 7	MPLS Graduate School Welcome Event and 'Your Successful DPhil' workshop
Week 3	Latest date for submission of Personal Registration and Risk Assessment Form and DSE Form
Week 4	Institute of Materials, Minerals & Mining Talk Project Management workshop
Week 5	Looking to the Future workshop
Weeks 7-9	GSR Report
Week 7, tbc	Patent Information Workshop, tbc
Week 7	Training Workshop for prospective Teaching Assistants on 'Junior Demonstrating' in the UG Teaching Lab
Week 8	Poster Presentation Skills workshop
date tbc	Attend Workshop Induction
date tbc	Owning a Successful DPhil Workshop
Weeks 1-8	Attend graduate lecture courses (including 2 assessed) Thursday Departmental colloquia
Hilary Term, January - April	
Week 0-1	Upload Project Management Form 1 (with Gantt Chart) to Weblearn
Week 2	Presentation Skills and Powerpoint workshops
Week 3, tbc	Writing Skills, Lab Notebooks, IPR and Patents workshop
Weeks 7-9	GSR Report
Week 7, tbc	Managing your References Workshop
Week 9, tbc	Research Impact and Open Access (Chemistry and Materials)
Weeks 1-8	Attend graduate lecture courses (including 2 assessed) Thursday Departmental colloquia
TBC	Intensive one-week Academic Writing Course (for non-UK students)

Trinity Term (including the Long Vacation), April - October	
Weeks 1-4	Thursday Departmental colloquia
Week 2, tbc	Knowledge & Technology Transfer Workshop, tbc
Weeks 2-4	Arrange informal meeting with your Lead Assessor
Weeks 7-9	Submit 'Preparing for Transfer of Status' form to GSR and submit GSR Report
Week 8	Upload Literature Review to WebLearn
Before July	Application for Transfer of Status and complete on-line course on 'Research Integrity Training'
July	Upload Project Management Form 2 (with Gantt Chart) to WebLearn Apply for Transfer of Status
Mid-September	GSR Report
	
2nd Year	
Michaelmas Term, October - January	
Friday, Week 1	Normal latest date for Materials Transfer of Status Interviews
Weeks 1-8	Thursday Departmental colloquia
Weeks 7-9	GSR Report
Hilary Term, January - April	
Week 0-1	Upload Project Management Form 3a (with Gantt Chart) to Weblearn
Weeks 7-9	GSR Report
Week 7	2nd Year Talks, Tuesday, Wednesday, Thursday & Friday, 9.00 am – 6.00 pm, KEEP ALL DATES FREE! Hetherington Prize
date tbc	Academic Writing Course (for non-UK students)
Weeks 1-8	Thursday Departmental colloquia
Trinity Term (including the Long Vacation), April - October	
Weeks 1-4	Thursday Departmental colloquia
Weeks 7-9	GSR Report
July	Upload Project Management Form 3b (with Gantt Chart) to WebLearn
Mid-September	GSR Report
	
3rd Year	
Michaelmas Term, October - January	
Week 1	Active Job Hunting - Introduction to Oxford University Careers Service
Week 1	Careers and Networking Evening with Alumni
Week 7-9	GSR Report
Weeks 1-8	Thursday Departmental colloquia
Hilary Term, January - April	
Week 0-1	Upload Project Management Form 3c (with Gantt Chart) to WebLearn
Week 3	Deadline for submission of poster for Competition
Week 6	3rd Year Poster Presentation Session (Rolls Royce and Ironmongers' Prizes)
Weeks 7-9	Submit 'Preparing for Confirmation of Status' form to GSR and submit GSR Report
Weeks 1-8	Thursday Departmental colloquia

Week 6 HT to Week 6 TT	Apply for Confirmation of Status (GSO.14.MPLS + appendices)
Trinity Term (including the Long Vacation), April - October	
Weeks 0 to 8	Confirmation of Status interview
Week 2	Upload to WebLearn Project Management Form 4 (3 year projects only), to include thesis outline and Gantt Chart
Weeks 1-4	Thursday Departmental colloquia
July	Upload Project Management Form 3d (with Gantt Chart) to WebLearn (3½ year projects only) GSR Report
Week 8	Latest date for Materials Confirmation of Status Interviews
July	Apply for Appointment of Examiners (form GSO.3) – 3 year projects
Mid-September	GSR Report
September	Submission of thesis via on-line portal – 3 year projects
	
4th Year (3½ Year Projects Only)	
Michaelmas Term, October - January	
Weeks 0-1	Upload to WebLearn Project Management Form 4 (3.5y projects) to include thesis outline and Gantt Chart
Week 1	Active Job Hunting - Introduction to Oxford University Careers Service
Week 1	Careers and Networking Evening with Alumni
Weeks 7-9	GSR Report
Weeks 1-8	Thursday Departmental colloquia
Hilary Term, January - April	
Jan-Feb	Application for Appointment of Examiners (form GSO.3) - 3½ year projects
March	Submission of thesis via on-line portal - 3½ year projects

Materials students following one of the EPSRC CDT DPhil programmes have different timings for some of these required elements – details are given in [Section 4.7](#) of this Handbook. Via Appendix XII, for each Materials Research degree programme [3.5y DPhil (includes the Fusion ‘CDT-lite’ variant), 3y DPhil (includes Diamond CDT and, in part, TMCS CDT), 4y DPhil, and 2y MSc(R)], you will find convenient year-by-year timelines for the key required elements.

Materials students following a standard DPhil in Materials programme **and who have full funding for forty-eight months**, for example EPSRC Industrial CASE studentships and Faraday Institution studentships, follow the same timings as the 3.5-year DPhil diary except: (i) a PMF3e is uploaded in weeks 0-1 of the eleventh term (usually HT of Year 4); (ii) PMF4 is uploaded in weeks 0-1 of the twelfth term (usually TT of Year 4), **not** in weeks 0-1 of MT; (iii) the target date to apply for appointment of examiners is July of Year 4; and (iv) unless there are exceptional circumstances the latest date for thesis submission is the end of the four-year period (usually 30th September).

Note: The JCCG will meet every term at 12.00 pm on Wednesday of Week 1.

4.1. THE 'MATERIALS: PGR PROGRESSION' WEBLEARN SITE

During the course of your DPhil or MSc (Res) programme there are several formal requirements that you have to meet, for example six-monthly project management reviews, Transfer and Confirmation of Status and presenting a research talk. All the paperwork associated with these requirements is uploaded by you to the named folder we create for you on our '[Materials: PGR Progression](#)' WebLearn site. Guidance on how to upload a document is given on the site.

Thus you, your supervisors, your Department Advisors, the DGS, and your assessors for Transfer and Confirmation of Status all have easy access to these documents, all in one place. In a small number of cases the University requires signed paper copies of the documents – in these cases once you have scanned and uploaded a pdf version to your WebLearn folder you will provide the paper copy to our Materials Graduate Studies Office. You will first use this WebLearn site to upload your 'New Graduate Student' Questionnaire.

4.2. GRADUATE STUDIES OFFICE (GSO) FORMS

(See also [Section 13](#) for more guidance on the forms relating to thesis submission and the DPhil or MSc(R) examination.)

Throughout your studentship you will need to complete various graduate forms (known as GSO forms), including transfer of status, confirmation of status and an application for the DPhil examination. Most of the forms and associated notes can be found on the website Graduate Forms Online at <http://www.ox.ac.uk/students/academic/guidance/graduate/progression>. If you find yourself in "exceptional circumstances" you may well need to complete an exceptional circumstance form, such as a deferral or extension of time form which can be found at <https://www.ox.ac.uk/students/academic/guidance/graduate/progression/exceptional>.

The forms should be completed by you, by your supervisor(s) and then taken to your College for signature. The form should only then be sent to the Materials Graduate Studies Office for Dr Adrian Taylor to give his final approval. The forms then will be sent by the Materials Graduate Studies Office to the Graduate Studies Assistant at MPLSD.

There are TWO exceptions to this procedure:

GSO.3 (Application for appointment of examiners) – an on-line form

Usually as above, but if your thesis exceeds the word limit the procedure with this form is modified. In this case in addition to completing the form and obtaining a signature from your supervisor, you must obtain a letter of support from your supervisor to justify the need to exceed the word limit. Then obtain approval from your College and finally bring the form and supervisor's letter to Dr Taylor.

GSO.25 (Change of supervisor or appointment of additional supervisor) – a hardcopy paper form

Once you have completed this form and your supervisor has signed it, the form should be handed in to the Materials Graduate Studies Office. This form does NOT go to your College.

Over a period of several years the University is gradually moving the GSO forms to a paperless on-line system. When you access a particular form via the on-line links you will be directed to the appropriate paperless or paper-based form.

4.3. THE FIRST YEAR

(The specific timings given are for a student who commenced the programme in Michaelmas Term 2019)

You have arrived at the start of your postgraduate degree as a Probationer Research Student (PRS). The University rules allow you to hold this status normally for up to 4 terms. PRS students who arrive intending to pursue a Materials doctorate, are expected to transfer to DPhil status near to the end of their first year. Permission to apply to transfer is subject to the approval of your Supervisor, College and Director of Graduate Studies, normally following the completion of three threshold requirements:

- (i) passes in two assessed courses (see [Section 6](#));
- (ii) attendance at a minimum of seven Colloquia during the first two terms (see [Section 9](#));
- (iii) completion of the University's mandatory on-line course on 'Research Integrity Training' (see [Appendix XIII](#))

Two members of staff, other than your Supervisor(s), College Advisor or Departmental Advisor, will be appointed as the Assessors for your Transfer of Status application, which is normally submitted in your tenth month as a PRS.

In the period of weeks two to four of your third term you will meet with your Lead Assessor for an independent, informal discussion of your progress to date. Further information on this meeting, which **you** must arrange, is given in [Section 10](#).

By the end of Trinity full-term of your first year or its equivalent if you started in HT or TT, you are required to have completed a substantial Literature Review ([Section 10.3](#)). This should ensure that you are familiar with the prior work in your area of study before you progress too far with your research. Your Literature Review must be submitted by Friday of week 8 of Trinity Term (19 June 2020). After your Transfer of Status interview you will receive written feedback on this Review from your Lead Assessor.

Having attended the Writing Skills workshop, completed your literature review, **ensured that you understand what is the new science it is anticipated your project will reveal**, engaged appropriately with your project management and held regular discussions with your supervisor, you should be beginning to have some sense of what are the requirements for a thesis (see also [Section 13](#)) and what might be the content of your thesis.

Once you have met the three threshold criteria and submitted your literature review:

In your tenth month, and normally no later than the end of that month (usually 31 July), you should complete and submit to the Materials Graduate Studies Office an 'Application Form for Transfer of a Graduate Student from One Status to Another' (form GSO.2.MPLS). In considering your application your Supervisor, College and Director of Graduate Studies will take into account your progress over the whole of your first year to date.

Noting that many students, academic staff and support staff take their main annual leave during the summer, it really is important that you submit the paper copy GSO.2.MPLS to the Graduate Studies Secretary by 31 July in order that everything is in place for your transfer interview in mid-September to early October. If your GSO.2.MPLS is not submitted by 31 July do not be surprised if there are delays in your Transfer of Status process. Other than in exceptional circumstances your transfer interview cannot take place until the DGS (Dr Taylor) has approved your GSO.2.MPLS application.

[Section 10](#) of this Handbook provides more detail on the transfer of status process and examination.

The purpose of the transfer of status process is to ensure that you have a convincing research proposal, that you are making satisfactory progress in its development, and to satisfy the assessors that the work is potentially of DPhil or MSc by Research quality.

Submission of the GSO.2.MPLS form will, if approved, initiate arrangements for your **transfer of status examination**, which will be conducted by two assessors (neither of whom may be your Supervisor, your Department Advisor or your College Advisor). This examination will include a 15 to

30 minute interview with the assessors, normally to be held within the period of weeks -3 to +1 of your 4th term. Please see [Section 10.4](#) for information on who is responsible for arranging the date for this interview.

Further information about transfer of status and other 'progression' matters can be found in subsequent sections of the present Handbook and on the MPLS Graduate School webpages at <http://www.mpls.ox.ac.uk/graduate-school/information-for-postgraduate-research-students/progression>.

During your first year you are required to ensure that you have a clear understanding of what is plagiarism, and when and how to reference prior work. Please read [Section 21](#) of the present Handbook very carefully, and consult your Responsible Supervisor if you need any clarification. In addition you may find it helpful to complete the University's on-line course on [Plagiarism](#).

4.4. THE SECOND YEAR

Your project should now be proceeding apace, you should be making good progress with your research and you should feel increasing ownership of this research.

During week 7 of Hilary term of your second year you will present to all members of the Department a short talk on your research (see [Section 11](#)). By Tuesday of week 6 you should upload to WebLearn an abstract of your talk. A senior member of the Department will Chair the talk and will judge whether or not your progress as demonstrated by the talk is satisfactory. Thus you and your supervisor are provided with an informal, independent opinion on your progress.

Your supervisor(s) will attend this talk. If the second year talk is unsatisfactory you may be required to give another talk during week 7 of Hilary Term of your third year.

During your second year you will continue to devote a small proportion of your time to the development of transferable career skills.

Among other courses, you might wish to engage with the "MPLS Graduate Summer School" (see [Section 6.3](#)). This is designed to help graduates further develop their awareness of key transferable skills and enhance their career development.

Some of you may wish to engage further with the excellent and varied suite of 'Enterprise & Entrepreneurship' courses offered by the MPLS Division.

4.5. THE THIRD YEAR

Your DPhil project should now be coming together nicely and if you continue to make good progress with your research you will be on track to have your status as a DPhil student confirmed in the 3rd full term of Year 3. To remain on target for completing within the allotted time you should most probably be starting to write-up your thesis by Easter (3 year projects), or October (3½ year projects), allowing yourself six months to the finished final copy (see [Section 13](#)). The Project Management Form that you submit approximately 6 months before your funded period ends must include an outline plan for your thesis.

During your third year, **and no later than Week 6 of your third term in this year** (for a Michaelmas term starter with no periods of suspension this will be Trinity Term), you will need to complete form GSO.14.MPLS to apply to be considered for **Confirmation of Status** as a Student for the Degree of Doctor of Philosophy. This will initiate the arrangements for the formal assessment of your application to confirm DPhil status. **It is suggested that you and your supervisor aim to apply for Confirmation at the end of the second term of your third year, that is 2½ years after you commenced your DPhil research.** If your GSO.14.MPLS is not submitted by the end of Week 6 of Trinity Term of your 3rd year, do not be surprised if there are delays in your Confirmation of Status process. Other than in exceptional circumstances your confirmation interview cannot take place until the DGS (Dr Taylor) has approved your GSO.14.MPLS application.

[Section 12](#) of this Handbook provides more detail on the confirmation of status process and assessment.

The purpose of confirmation of status is to enable research students to receive an assessment of their work by two assessors other than their supervisor(s). It is intended to provide an important indication of progress towards submission of a thesis.

Normally the two independent assessors who conducted your Transfer of Status Examination will also assess your Confirmation of Status application. This assessment will include a 15 to 30 minute interview with the Assessors, normally to be held during the third full term of your third year (and no later than 30th September of your third year, or the final day of your third year if you did not commence your research degree during a Michaelmas term). Please see [Section 12.2](#) for information on who is responsible for arranging the date for this interview.

Further information about confirmation of status and other 'progression' matters can be found on the MPLS Graduate School webpages at <http://www.mpls.ox.ac.uk/graduate-school/information-for-postgraduate-research-students/progression>

Four to six weeks BEFORE you are ready to submit your thesis, you should apply for the 'Appointment of Examiners' (on-line form GSO.3). This form requires certification by you that the thesis is your own work except where otherwise indicated, by your supervisor that you have satisfied residency requirements, and by your college. This form can be accessed from the website <http://www.ox.ac.uk/students/academic/guidance/graduate/progression>. Once two copies of your thesis and abstract have been submitted to the Examination Schools, your Internal Examiner will arrange the date for your oral examination (*viva voce*) (see [Section 13](#)).

Poster Competition

In the third year you are required to present a poster in the Department's DPhil Poster Symposium and Competition that is held in Hilary Term. One poster per student should be submitted, on a topic associated with your research, either in the category of 'public understanding of science' or in the category of a 'standard scientific conference'. For each category there will be a prize of £200 for the best poster, sponsored by the Ironmongers' Company and by Rolls Royce respectively. The poster competition also provides an opportunity to socialise with your peers whilst finding out more about their latest research. If you wish you may submit a poster which you have displayed at a conference as long as it is appropriate (please check with your supervisor if you have any doubts). Your poster can be portrait or landscape, though portrait is preferable as it will fit the poster boards better.

You will be asked to participate in peer review of two posters authored by your fellow students and in return will receive comments on your poster from two other students. The thought that you give to presenting some or all of your work as a clear scientific story in your poster should aid you when you come to write your thesis.

By noon on Monday of 3rd week HT you must submit to Materials Graduate Studies Office four copies of your poster on A3 size paper. **At the same time a pdf copy of this A3 version should be uploaded to the Weblearn Progression website.** The paper copies will be sent to the judges to shortlist 10 finalists for the prizes in advance of the poster session itself. The winners will be decided on the day, after the judges have looked at the full-size A0 posters. (If you miss the 3rd week deadline you will not be eligible for the competition, but **will** be required to show a poster in 6th week.)

Remember that the content of your poster will be seen by the external judge, who is a senior scientist at Rolls Royce, and that after the competition some of the posters will be displayed in the Materials

Section at Rolls Royce Derby. **Hence consult carefully with your supervisor regarding the intellectual property revealed in your poster.**

4.6 CAVEAT

A hard and fast timetable for the successful completion of a DPhil project is, of course, not possible, given the unpredictability of creative research. The DPhil Diary suggests that you should have applied for confirmation of DPhil status during your third year and that you should have started writing six months before your 3 or 3½ year funded period has expired. These times should be taken as a guide illustrating what is generally required in order to submit within time. Part of the purpose of the Project Management Scheme is to enable students themselves to monitor their own progress and to flag to their supervisor and the Department a warning signal as soon as possible if they feel that their DPhil schedule is slipping (see [Section 5](#)). **If you are not devoting most of your effort to thesis writing at the 36 month milestone, you should arrange to meet with the Director of Graduate Studies to discuss your progress.**

4.7 OXFORD MATERIALS DPHIL STUDENTS FOLLOWING AN EPSRC CDT (4 year) PROGRAMME

Provided they have led to an evidenced pass result, lectures undertaken during the first year of a 4-year EPSRC CDT programme, including those during the MSc phase of the Diamond or TMCS CDT programmes and academic lecture courses taught as part of the Year one Fusion 'CDT-lite' 3.5-year programme, are acceptable in lieu of the two assessed lecture courses required for the Materials Transfer of Status process. CDT students **are** expected to attend at least seven colloquia during the first two or three terms for which they are based mainly in the Department of Materials at Oxford.

Students on the **4-year EPSRC CDT** programmes have slightly different timetables for their progression and project management requirements. For the 'TMCS CDT' and 'Diamond CDT' these are as follows:-

DIAMOND CDT

Year 1	MSc programme
Year 2-4	3-year DPhil programme; primarily as for the 3-year DPhil in Materials programme, but with a small number of additional CDT-specific requirements

TMCS CDT

Year 1	MSc programme
Year 2-4	3-year DPhil programme; primarily as for the 3-year DPhil in Materials programme, but with a small number of additional CDT-specific requirements. For your Transfer of Status and Confirmation of Status you follow the TMCS processes, <u>NOT</u> the Materials processes. Thus, for example, you do not submit a Literature Review to Materials because you have already produced a similar document during your MSc stage. You will however still have an informal meeting with the <u>Materials</u> Assessor, appointed by TMCS for your transfer of status, early in the third term of your DPhil stage.

If you are unsure which programme you are following, then please contact the Graduate Studies Secretary (graduate.studies@materials.ox.ac.uk) for clarification.

5. PROJECT MANAGEMENT

A Project Management scheme is included in our graduate programme structure. The forms can be found at <http://www.materials.ox.ac.uk/teaching/pg/pgprojectmanagement.html>. This allows and encourages you as the student to take responsibility for the successful outcome of your research by assessing expectations and progress throughout the duration of your programme (see the 'project management form' entries in the relevant timeline provided via Appendix XII. It will enable you to flag up any concerns you might have that your research is not keeping to schedule, so that your supervisor and, if necessary, the Graduate Studies Panel can consider whether to take remedial action. **If you are expressing such concerns on a particular Project Management Form, you must also send a short e-mail to the Director of Graduate Studies to warn him of this.** He will then consider your Project Management Form as a priority matter. In all other cases unless we become concerned over your progress your PMFs are reviewed only by you and your supervisor(s). You upload most of your project management forms to Weblearn in weeks 0-1 of HT and at the start of the 'Long Vacation' (in July). Integral to each PMF is a 'training needs analysis' and appended to your PMF there will always be an updated Gantt Chart. NOTE: The Gantt Chart should show a timeline for your WHOLE studentship.)

It is compulsory that you attend the Project Management workshop on Friday of Week 4 MT during which initial training is provided and the workings of the scheme will be explained. In advance of this workshop you are requested to prepare a first draft of your Project Management Form 1 (excluding

the Gantt Chart where there will be specific training). To enable this you will need to discuss your project, its overall scientific objectives, your objectives for the next six months, your training needs, and your resources needs with your supervisor. There are some helpful prompts in the MPLS Division's ['Project Initiation Plan'](#) and ['Training Needs analysis documents'](#).

Experience of basic project management, a useful generic skill, is valued by graduate recruiters, and for those of you who remain in academia Gantt charts are often a requirement when academics apply for research funding.

6. GRADUATE COURSES (ACADEMIC LECTURE COURSES, RESEARCH-SPECIFIC SKILLS TRAINING, AND TRANSFERABLE 'CAREERS SKILLS' TRAINING)

6.1. ASSESSED LECTURE COURSES

The examiners of your DPhil or MSc thesis will be asked to state whether they are satisfied that 'the candidate possesses a good general knowledge of the particular field of learning within which the subject of the thesis falls'. The role of lectures is therefore not only to deepen your knowledge in your own specialist area of research but also to broaden your general knowledge within materials science and engineering. Accordingly, the first requirement for transfer from PRS to DPhil/MSc status is that you have passed two assessed courses, at least one of which must fall in an area **not** directly related to your own research topic. The extensive programmes of colloquia offered by the Department and its research groups fulfil a similar broadening role.

To pass an assessed course you must (i) normally have attended a significant proportion of the complete course of lectures (some lecturers will define this more specifically in the synopsis for the course) and (ii) obtain a grade of at least 50% on the written work set by the lecturer (this is equivalent to a 'Pass' at MSc level and is regarded as satisfactory for the purpose of transfer of status).

The on-line handbook on ['Postgraduate Lecture Synopses and Research Colloquia'](#) lists the assessed courses on offer under the title 'Postgraduate Teaching'. These include the third year M-level undergraduate options, which you may attend and offer for assessment by participating in the appropriate tutorials or classes – provided of course that you have not already taken the course as an undergraduate! Other courses are assessed by a series of mathematical problems or written questions that you must complete and submit to the lecturer for marking. You should agree your choice of assessed courses with your supervisors, to make sure they are acceptable for your transfer requirement.

Due to the diverse range of students' academic backgrounds and the increasingly interdisciplinary nature of modern research, your supervisor might advise you to attend courses other than those listed; either others given within the Department (eg the first year Crystallography course) or from outside. Listings of all lecture courses that are being given within the Mathematical, Physical and Life Sciences Division can be found via each department's website. Links to these websites can be found at [MPLS Department Websites](#).

If you wish to offer a course from another department as one of your **two assessed courses**, then you should first discuss with your supervisor whether this is appropriate and then request approval from the Director of Graduate Studies (DGS). Once approval is given, you can book a place on the course with the host department or course lecturer as appropriate. Provided your performance on the course can be properly assessed the DGS will be sympathetic to your request because the Department's policy is to make graduate provision responsive to the needs of the individual student.

Academic lecture courses taught as part of the Year one Fusion 'CDT-lite' 3.5-year programme, are acceptable in lieu of the two assessed lecture courses required for the Materials Transfer of Status process.

Please let the Materials Graduate Studies Office know which assessed courses you are taking by week 7 MT.

If you attend a Materials undergraduate lecture course as one of your assessed courses, please let the lecturer know so that he/she is aware of the need to provide an assessment for you. On any work submitted please put your name followed by 'postgraduate' in brackets so the assessor knows you are a postgraduate and not an undergraduate.

Usually in Hilary term the lecturer will inform the DGS (via the Materials Graduate Studies Office) if your performance in the assessed work was satisfactory. The lecturer will also provide you with feedback on your performance. Normally this will be provided within four working weeks of your submission of the work for assessment, may be verbal or written, and will comprise more than just a grade or a short sentence. If you do not receive this feedback, please remind the lecturer and if the remainder has no effect then please inform the Materials Graduate Studies Office.

Note that the on-line handbook on 'Postgraduate Lecture Synopses and Research Colloquia' gives only the list of lectures and the term in which they are given. The lecture times and venues will be available at the start of each term and can be found on the Department web site under

<http://www.materials.ox.ac.uk/teaching/lecturelists.html>. Information on courses and workshops offered by the MPLS Division is available at <https://www.mpls.ox.ac.uk/training>. Timetables for lecture courses and workshops offered by other departments can be found via each department's website. Links to these websites can be found at [MPLS Department Websites](#).

6.2 SKILLS-TRAINING COURSES (Research-Specific Skills and Transferable Career Skills) (For Teaching Skills see Sections 8 and 17 of this Handbook)

Graduates need to be skilled not only in the experimental and/or theoretical techniques relevant to their own research, but also in skills for communicating their results to a wider audience and for managing their own research programme and future career development. The Materials handbook of 'Postgraduate Lecture Synopses and Research Colloquia' lists the different skills training courses on offer under the title 'Postgraduate Training'. **You should keep a log-book or portfolio to record the various training that you undertake**, of all kinds, formal and informal, since you may be asked to summarise this by your research sponsor or by a prospective employer and you will be required to summarise it on your applications for transfer of status and confirmation of status. There is an expectation by some sponsors and by the University that you will engage in approximately 100 hours per annum of transferable career skills training during years one to three of your research degree. Included in the 100 hours is skills training and feedback provided by your supervisor, for example on presentation skills, report writing or writing a scientific paper.

Transferable career skills are those in addition to your academic and research skills that employers both inside and outside academia value. The UK Government and funding agencies believe that these skills are essential for maintaining employability in a global economy which is increasingly requiring people to respond to and anticipate change.

If you wish to attend a 'course' external to the Department of Materials for which there is a modest charge and which is important for your research, including a 'summer school', then your supervisor is permitted to cover the costs from the 'baseline research costs' allowance she/he receives for each research student whose project is not funded directly by a sponsor.

MPLS Graduate Training Framework

You might find it helpful to use the framework set out in the table below as a tool for planning and recording your training needs as you progress through your DPhil programme. It has been pre-populated with the small number of courses that are compulsory for Materials research students.

Phase Category	Foundations Phase (0-12 months)	Intensive Research Phase (12-30 months)	Completion Phase (24+ months)
Transferable Career Skills	Project Management Career Planning Teaching (JD)	Research Talk	
Research Skills	Safety Induction Talk Colloquia The University's on-line 'Research Integrity Training' course		Poster Presentation
Academic Skills	Two assessed lecture courses		

Notes:

1. The phases are for guidance rather than rigid timescales.
2. The skills categories are defined as follows: **Academic skills** are lecture courses/ subjects that form an extension to, and fill gaps in, undergraduate level knowledge; **research skills** are those needed to actually carry out research, for example safety, equipment use, programming; **transferable career skills** are those which are core to every student's development and are genuinely transferable, although they may have a subject nuance.
3. Therefore Academic skills and Research skills sit in departments. Transferable career skills sit in both Department and Division (and other providers as appropriate)

University College London on their website <http://www.ucl.ac.uk/ppd/> present a table of key transferable career skills with links to further information on each topic:

Academic Learning Actively Using Sources	Analysing Data Solving Problems	Thinking Critically Managing Projects
Self-Management Reflecting on Learning Assessing Oneself	Managing Time Being Independent	Being Creative/Innovative Managing Resources
Communicating Writing Presenting	Listening Communicating Globally	Using Information Technology Planning and Making Decisions
Working with Others Working in Teams Understanding Others	Negotiating Assessing Self and Peers	Leading Managing Change

The Vitae organisation has compiled a **Researcher Development Framework** (RDF) which you are strongly encouraged to browse:

The Vitae 'Researcher Development Statement' (<https://www.vitae.ac.uk/vitae-publications/rdf-related/researcher-development-statement-rds-vitae.pdf>).

The RDF provides a framework for planning and supporting the personal, professional and career development of graduate students and research staff. It encourages individual researchers to identify strengths and prioritise their professional development. It helps them consider the skills and experiences that will enhance their career prospects and to articulate their knowledge, behaviours and attributes to employers.

The RDF and RDS are made up of four top level domains which encompass the knowledge, behaviour and attributes that are needed to be a successful researcher. These are:

- A: Knowledge and intellectual abilities
- B: Personal effectiveness
- C: Research governance and organisation
- D: Engagement, influence and impact

Further information on the Researcher Development Statement (RDS) and RDF can be found at

<https://www.vitae.ac.uk/researchers-professional-development/about-the-vitae-researcher-development-framework/> and <https://www.vitae.ac.uk/researchers-professional-development/why-focus-on-professional-development>.

The RDS is put in context by the **EPSRC's Statement of Expectations** for its students at <http://www.epsrc.ac.uk/skills/students/help/expectation>.

Some of the skills training courses available to you as a Materials graduate student are:

- (i) Project management skills (Dr A O Taylor and others, MT Week 4);
- (ii) Presentation skills (Staff of IT Services & Dr A O Taylor, HT Week 2);
- (iii) Writing skills, lab notebooks, IPR and patents (Prof H E Assender & others, HT Week 3);
- (iv) Information skills (Staff of the Bodleian, MT Week 2);
- (v) Career-planning (Alumni of Dept, OU Careers Service & Dr A O Taylor, MT Weeks 1 and 5);
- (vi) Workshop skills (workshop technicians, throughout year);
- (vii) Microscopy skills (see Materials Postgraduate Lecture & Training Course Synopses – an optical microscopy course and a very wide range of electron microscopy courses);
- (viii) Graduate Summer School [only if the MPLS Division decide to run this scheme];
- (ix) Institute of Materials – Benefits of student membership (Sarah Boad, MT Week 4);
- (x) Poster presentation skills (Dr A O Taylor, MT Week 8);
- (xi) Teaching skills (Lecturing, laboratory demonstrating, tutorials, classes, maths classes, [see lecture lists]);
- (xii) Managing your References - Bibliographic software (Staff of the Bodleian, HT);
- (xiii) Academic Writing Skills (for non-native English speakers);
- (xiv) Foreign Language Skills (register on-line with the OU Language Centre <http://www.lang.ox.ac.uk/courses/courses.html> by Wednesday of MT Week 1);
- (xv) Your successful DPhil course (see MPLS welcome event);
- (xvi) An introduction to Public Engagement and Science Communication (see MPLS courses)
- (xvii) ISIS Innovation Ltd – Knowledge and Technology Transfer (tbc);
- (xviii) Labview Workshop (MT);
- (xix) Patent Literature (Staff of the Bodleian, tbc)
- (xx) Owning a successful DPhil (run by JCCG, MT date tbc)
- (xxi) Research Integrity (on-line course at <https://weblearn.ox.ac.uk/portal/hierarchy/skills/ricourses>)
- (xxii) A suite of 'Enterprise' training courses (see MPLS courses).

The Project Management Workshop in Week 4 of Michaelmas Term is compulsory.

The Career Planning Workshop in Week 5 of Michaelmas Term is compulsory.

The Training Workshop for Junior Demonstrators (MT, tbc) is compulsory.

The University's on-line course on Research Integrity Training is compulsory before you apply for Transfer of Status. For more information on Research Integrity and the on-line course see [Appendix XIII](#).

It is also strongly recommended that you attend some of the workshop sessions in Hilary Term on 'Presentation skills' and on 'Writing skills', since you will need the former to give a good presentation at your first-year interview and second-year talk, and you will need good writing skills for your Literature Review, first-year report and your thesis. These courses assume you know the basics of word processing and use of Powerpoint, but introductory courses to these (and a wide range of other IT courses) are available from the University IT Services (<http://www.it.ox.ac.uk/do/training-and-facilities>).

Students whose first language is not English, should consider attending the courses on 'Academic Writing' and 'Advanced Communication Skills' that are offered by the Oxford University Language Centre at 12 Woodstock Road (<http://www.lang.ox.ac.uk>). For some, this attendance will have been set as a compulsory course requirement.

You should also attend the lecture in Week 2 of Michaelmas Term on 'Information Skills' as the latter is critical for accessing the research already done in your chosen field. Information on accessing and searching the materials literature can be found at <http://libguides.bodleian.ox.ac.uk/friendly.php?s=oxford>.

In Michaelmas Term of your first year two alumni/ae of the Department, together with a representative from the Oxford University Careers Service, will run a compulsory and very useful workshop on Career Planning - Looking to the Future. Further information about the Careers Service can be found on their website (<http://www.careers.ox.ac.uk/>).

Towards the end of your degree there is an opportunity to discuss career opportunities for Materials Scientists on a one-to-one basis with several alumni and alumnae of the Department. This complements the many activities available through the OU Careers Service.

The MPLS Division also offers a range of courses on enterprise and entrepreneurship, as outlined to you at Materials Induction by Dr Anne Miller, <https://www.mpls.ox.ac.uk/training/enterprise/enterprise>.

The MPLS Division runs a workshop on 'Your Successful DPhil', which to some extent complements the Department's Project Management Scheme, details can be found at <https://www.mpls.ox.ac.uk/training/mpls-training/our-courses/mpls-induction-courses/your-successful-dphil>.

As mentioned already in [Section 3](#) of this Handbook, in Michaelmas Term the JCCG run a workshop on “Owning a Successful DPhil”.

If you wish to attend a transferable, academic or research skills training course that is not offered by the Department of Materials or MPLS Division and for which a fee is charged, you may apply to the Director of Graduate Studies for funding using a copy of the form in the appendix VI of this handbook.

If you wish to use the supervised mechanical workshop, then it is mandatory that you first attend a Workshop skills course given by one of the technicians.

Similarly, if you wish to use the electron microscopes, then you should first complete an access and training request form (see [Section 7](#) of this Handbook).

You should also attend the lecture in Week 4 of Michaelmas Term by Sarah Boad on the benefits of student membership of the Institute of Materials. The receipt of their monthly magazine ‘Materials World’ and attendance at their meetings should both increase your general knowledge and improve your networking skills! The first year’s membership is paid for you by the Department if you attend this lecture.

Finally, you may wish to develop skills in ‘Public Engagement’. The ability to communicate the essence of your work to a non-scientist, to excite them, without hyperbole, about its potential applications and benefits, and to help them understand any associated societal risks is a valuable transferable skill. To find out more see the ‘Public Engagement’ pages of the MPLSD website (<http://www.mpls.ox.ac.uk/support-services>).

Further transferable skills training information and courses can be found via the MPLSD Researcher Training site at <http://www.mpls.ox.ac.uk/training-courses>.

For example in addition to the transferable skills training courses offered by the Materials Department, the MPLS Division’s Graduate School and other academic departments, Oxford University IT Services and the Bodleian Library provide a wide range of courses (for these and other courses see <http://www.skillstoolkit.ox.ac.uk>), and courses in foreign languages are offered by the Oxford University Language Centre (<http://www.lang.ox.ac.uk>).

Finally, a wide range of on-line courses and training are available via ‘Linked-in Learning’, which is accessible to you via the University IT Services site [‘Molly’](#).

6.3 VITAE and MPLS Graduate Summer School

Vitae was set up under the sponsorship of the UK's Engineering and Physical Sciences Research Council (EPSRC). The Vitae website contains an excellent section, originally designed by postgraduates, 'Postgraduate Researchers', and you are strongly advised to browse through this at your earliest convenience (<https://www.vitae.ac.uk/doing-research/doing-a-doctorate>). It contains several interlinked sections some of which we have referred to earlier in this Handbook, including:

- Managing yourself
- Planning your research project
- Developing as a researcher
- Career management
- Completing your doctorate – tips on writing your thesis, submission and viva
- Supervision and key relationships.

In their February 2001 review of the original site, Science magazine wrote: 'The great strength of this site is that it has been put together for a very specific target group (doctoral students) and has clearly been written by people who know what they are talking about.'

In some years the MPLS Division arranges an Oxford Graduate Summer School. The purpose of these schools is to help graduates develop their awareness of key transferable skills and enhance their career development. In the Materials Department we encourage all students to consider attending this Graduate Summer School, but you should seek permission from your supervisor and note that it is a voluntary transferable skills activity.

7. TRAINING IN ELECTRON MICROSCOPY

The Electron Microscopy (EM) Facility offers an extensive range of research instrumentation, and training courses that run throughout the year. The EM Facility allocates researchers to training courses that are suitable and timely for their research projects. A provisional plan for EM access and training is drawn up between EM research support and project supervisors prior to the arrival of new graduate students in order to get teaching and training off to an efficient start. Researchers normally master one technique or instrument before embarking on the next, and training is tailored to match instrument capability with the scientific objectives of user projects. There are three research support scientists, each specialising in one of the three main technique areas of scanning electron microscopy (SEM), transmission electron microscopy (TEM) and focused ion beam (FIB).

EM training courses are designed to teach new users how to obtain the required data for their research project and also use the instrumentation safely. Following successful completion of a training programme, "approved users" may book equipment themselves, operating within the booking rules detailed on the website and on-line booking form. These are designed to give a fair share of instrument time to all. Requests for additional instrument access outside the booking rules should be directed to the relevant support scientist. EM support scientists are here to make sure you get the most out of EM for your research project so do not be afraid to ask questions about EM or data analysis.

The Postgraduate Synopses booklet contains the EM training course synopses and details of associated post-graduate level lecture courses. More information can be found at <http://www-em.materials.ox.ac.uk/>. Applications for training and access normally will be made by your supervisor using the form provided in consultation with the relevant research support scientist. For further information please contact EM Facility staff at emaccess@materials.ox.ac.uk, or Dr Neil Young directly at neil.young@materials.ox.ac.uk.

8. OUTREACH TO SCHOOLS - AMBASSADOR PROGRAMMES

Oxford Materials Science has a very active access and outreach team. Each year we offer a wealth of activities and events aiming to inform schools about this exciting discipline, raise aspirations and inspire the next generation of Materials Scientists. The outreach team are supported by staff and students across the department in realising these aims and welcome your involvement as an ambassador.

What do I gain as an ambassador?

Apart from it being good for the Department as a whole if some of our research students are involved with such schemes, it is a good thing to have on a CV for jobs in industry or education: for anyone even remotely thinking of a career in teaching it can be very helpful indeed as it provides useful contacts in teaching and a good insight into what is involved. Anyone who is already involved with schools through their children, as governors etc., may also find it useful. Finally, developing communication skills with the general public, as well as communicating with other scientists and engineers, is a valuable personal skill in itself.

How do I get involved?

(i) Information on outreach ambassador programmes is outlined below and further details are available from Jayne Shaw, the Access & Outreach Manager in the Department. (Email: jayne.shaw@materials.ox.ac.uk, Tel: 73710). Jayne will be very pleased to hear from you so just drop her an email expressing interest.

- (ii) Student members of the Department are invited to use the online form <http://www.materials.ox.ac.uk/admissions/schools/ambassadors.html> to express interest in acting as ambassadors at outreach workshops and projects we are running.
- (iii) Keep an eye out for emails or Departmental Newsletter items requesting assistance with specific activities.

8.1 Outreach Ambassador

There are a wide range of opportunities to help with the Department's substantial outreach work to schools: giving short talks, assisting with laboratory-based workshops for school pupils, helping with open days, visiting schools, acting as a host for residential courses held at Oxford and supporting our wealth of collaborative events. We offer training and support to those interested in developing and delivering outreach activities and we are always looking for enthusiastic volunteers. An overview of our outreach events can be found at

<http://www.materials.ox.ac.uk/admissions/schools/schools-outreach-events.html>

8.2 Making Materials Matter Ambassador

Making Materials Matter (MMM) aims to inspire students to become the next generation of materials scientists and engineers through early and sustained engagement from Yr8 to Yr10. The project has been running since 2016/17 with support from the Ironmongers Foundation working closely with the University of Oxford in particular. The core programme is run for Yr8 students and their teachers. It is centred on independent research projects pursued by 10 students at each of 10 partner schools (7 in London, 3 in Sheffield) with guidance from materials ambassadors (from Oxford, Cambridge, Imperial and Sheffield) and support from their teachers. The projects are managed by MMM ambassadors and the students have 5 months in which to carry out the project. At least one visit to each school is made by the ambassadors and the students report their work during a "Student Conference" in Oxford. Finally, a teachers' conference is held at Ironmongers' Hall to share resources and raise awareness of materials science within the school curriculum. To sustain engagement with previous project participants, follow up events are held for Yr9 and Yr10 students that previously completed the main programme. Further details on this project including a short video clip can be found at

<http://www.materials.ox.ac.uk/admissions/schools/making-materials-matter.html>

8.3 STEM Ambassador

This important voluntary programme aims to put "real" scientists and engineers in school classrooms with the intention of motivating schoolchildren towards further study and careers in science and

engineering. STEM Ambassadors bring a fresh and inspiring perspective to STEM subjects and careers, engaging young people from around the country. They achieve this by delivering a range of activities such as career talks, mentoring, practical workshops and exhibitions.

Further information can be found at <https://www.stem.org.uk/stem-ambassadors> and you can apply online directly from this website.

9. DEPARTMENTAL COLLOQUIA

We have seen that the first requirement for transfer from PRS to DPhil/MSc status is that you have passed two assessed courses. The second requirement is that you have attended at least seven colloquia during your first two terms (or your first three terms if you are following the Fusion 'CDT-lite' programme), to include at least **three** of the Department's Thursday afternoon Colloquia during this period. A list will be circulated at each Departmental colloquium for you to sign, thus providing a record that you were present. **The Department regards attendance at the Thursday afternoon colloquia as very important in broadening your general knowledge about materials science and engineering.** The invited lecturers are asked to spend the first part of their talk in bringing up to speed graduate students with little or no expertise in the colloquium topic. Coffee and biscuits are served immediately before the colloquium in the foyer outside the Hume-Rothery lecture theatre. This is to encourage students and others to meet the speaker, if they so wish, and to discuss the topic of the talk amongst themselves and with the other academic staff attending.

At least three of your minimum of seven colloquia must be from the Department's Thursday afternoon series.

Subject to the above constraint:

- (i) some students involved in interdisciplinary projects may feel they want to attend colloquia in other departments in order to broaden or deepen their knowledge of other subjects. This is acceptable.
- (ii) some students may wish to broaden their knowledge by attending other colloquia, seminars, etc organised within the Materials Department (eg Begbroke, MML, Characterisation or QIP seminars and ad hoc colloquia). This is acceptable provided that the colloquium is NOT from the series run by your own main research grouping (normally, subject to guidance from your supervisor, you are expected to attend these anyway). For example MML students may not count the MML seminars, but may count QIP or Characterisation Seminars, etc.

In cases (i) and/or (ii) above, the Department will accept towards the 1st year course requirement attendance at up to **four** colloquia that are not part of the Thursday afternoon series. **Students will need to obtain the agreement of their supervisor in advance that such substitution is appropriate.** As there will be no signing-in sheet in these cases students should set out the title of the lecture, date and who is giving the talk in an e-mail to their supervisor asking the supervisor to forward this message to the Graduate Studies Secretary to confirm the student's attendance. If there is to be more than one colloquium attendance offered towards the requirement and not drawn from the Thursday afternoon series, it is recommended that students ask their supervisor to provide the confirmation of attendances in one go at the end of term.

Information on colloquia within the Materials Department and elsewhere can be found at <http://www.materials.ox.ac.uk/news/colloquia.html>. For colloquia in other departments see for example Engineering (<http://www.eng.ox.ac.uk/about/events>), Physics (<http://www2.physics.ox.ac.uk/research/seminars/colloquia>), Chemistry (<http://colloquia.chem.ox.ac.uk/>), Maths (Solid Mechanics) (<https://www.maths.ox.ac.uk/events>), Medical Sciences Division (MSD) (<https://www.medsci.ox.ac.uk/>).

10. TRANSFER OF STATUS

Helpful general guidance on 'Transfer of Status' may be found on the MPLS Grad School website, (<https://www.mpls.ox.ac.uk/graduate-school/information-for-postgraduate-research-students/progression>).

As outlined in [Section 4.3](#) of the present Handbook, you commence your research degree with the status of Probationer Research Student and towards the end of your first year your progress is assessed in the Transfer of Status examination that is conducted by two members of staff who we appoint as your Assessors. Remember that none of the following may act as your assessor: Your Supervisor(s), Department Advisor or College Advisor.

The purpose of the transfer of status process is to ensure that you have a convincing research proposal, that you are making satisfactory progress in its development, and to satisfy the independent assessors that the work is potentially of DPhil or MSc by Research quality.

If you are successful in the examination your assessors will recommend that you transfer to either DPhil Status or MSc(Research) Status, as appropriate.

In the normally rare event that the assessors of a Materials student are minded to recommend 'Failure to Transfer Status' the student will be asked to attend a second interview, conducted by the

two assessors together with at least three members of the Department's Graduate Panel including the DGS, and with his/her supervisor(s) in attendance. Following this second interview, which will be held as soon as practicable after the first, informed by a discussion between the Graduate Panel members, assessors and the supervisor(s), your Assessors will reach a final recommendation. In the event the two assessors cannot agree on the outcome the DGS will have a casting vote, for which purpose he would take into account the views of all present at the discussion. The primary purpose of the second interview is to allow consistency across all Materials PGR students in any 'failure to transfer' outcomes.

If the 'Failure to Transfer Status' recommendation is confirmed, then the student has a right to one, and only one, further attempt to transfer status, usually one term after the original attempt.

In the present section we provide more detail on the key stages of transfer of status.

10.1 INFORMAL MEETING WITH LEAD ASSESSOR

During the period of weeks two to four of their third term an informal meeting is held between the student and their Lead Assessor. The informal meeting with Lead Assessor procedure is as follows:

1. Student arranges directly with their Lead Assessor a mutually convenient time for the informal meeting, of duration 15 to 30 minutes. The Lead Assessor is to stipulate the venue (and, if not using the Assessor's office, will ask the student to book a meeting room).
2. One week in advance of the meeting, the student will provide to the Lead Assessor, by email, the two documents described under (i) & (ii) below.

(i) As a single, one-page, Word document

The full name of the student

The name(s) of their supervisor(s)

The name of the programme for which they are registered [normally this will be one of - DPhil in Materials, MSc(R) in Materials, 'Diamond CDT' or 'TMCS CDT']

The agreed title of their research project

A 100-word summary of the new science to which it is anticipated the project will lead.

(ii) A copy of a recent update of their Gantt Chart

In addition, the above two documents will be uploaded in pdf format by the student to their 'Transfer' subfolder on our 'Materials: PGR Progression' WebLearn site. Please read the notes you will find on the 'Overview' page of this site. **For these pdf uploads please give the documents filenames according to the following protocols:**

SURNAME Forename PRS Informal Progress Meeting New Science

SURNAME Forename PRS Informal Progress Meeting Gantt Chart

3. At the start of the meeting the Assessor will ask the student to summarise in five minutes their progress and principal achievements to date. To aid this summary the student may wish to bring to the meeting paper copies of up to five A4 'slides'.

Following the discussion between assessor and student, verbal comments will be offered on the student's progress and on their project. Should the Lead Assessor have significant concerns he or she will, in addition, communicate these to the Supervisor and DGS by email.

10.2 PREPARING FOR TRANSFER OF STATUS FORM

In weeks 7-9 of the third term of your first year (Trinity Term in most cases), as in every quarter, you are required by the University to submit a GSR report. To accompany this particular report you are expected by the MPLS Division to upload a completed copy of the 'Preparing for Transfer of Status' form. The purpose of this is to start you thinking about the requirements for a successful Transfer of Status well ahead of the actual examination. The form is available from links on the '[Materials: PGR Progression](#)' Weblearn site overview page and on the '[Progression & Key Milestones](#)' page of the MPLS Graduate School webpages.

10.3 LITERATURE REVIEW

By the end of your third full term, usually Trinity Term of your first year, you must successfully complete a Literature Review, the aim of which is to ensure that early in your project you are fully conversant with the prior research in your area of study. The Literature Review and subsequent Progress Report also provide vehicles for you to practise your scientific writing skills and for your supervisor to advise on any further training that might be necessary. Your supervisor will provide you with guidance on the content. You should ask him/her to identify one or two published review chapters (eg in a thesis) that provide good examples.

The Literature Review must be submitted as a pdf file and be formatted for double spacing with 3.5 cm left margin and 3 cm for top, bottom and right hand margins, using either Times New Roman 12

font or Arial 11 font (note: margins specified to allow for binding should you wish to print a paper copy.) This pdf review should be submitted via your 'Transfer' subfolder on our 'Materials: PGR Progression' WebLearn site by noon on Friday of week 8 of your third full term. Please read the notes you will find on the 'Overview' page of this site.

****Please make sure that you submit your review on time****

The filename for the report should be formatted as follows:

SURNAME Forename PRS Literature Review

The Review should comprise a 5,000 to 6,000 word survey of your research field (the word count excludes the title page, table of contents, acknowledgements, references and figure captions). Your survey should not omit any references to work that would crucially affect the nature or direction of research, but it should not be simply a catalogue. It should show critical judgement and discussion, and above all it should tell a scientific 'story', setting the scene for your own work. You should regard this as the preparation of an early draft for a chapter of your eventual thesis. Its structure and content are discussed further in the 'Writing Skills' workshop. Your Literature Review will be read by your lead transfer of status assessor, whose written comments on overall standard, breadth of coverage, critical judgement shown, and style and presentation of the review will be provided to you via the Weblearn site, normally after the Transfer of Status exam. A satisfactory Literature Review is a requirement for transfer of status.

NOTE: If, in exceptional circumstances, you need to ask for an extension to the Literature Review submission deadline, your supervisor needs to approve this request and e-mail graduate.studies@materials.ox.ac.uk to confirm this is appropriate.

A further incentive for writing a high-quality critical review is provided by the Materials Science and Technology (MST) Editorial Board, which offers a Materials Literature Review Prize for the best review from a graduate studying in the UK. Further information can be found on the website of [Taylor and Francis](#). Winning reviews are published in the journal, Materials Science & Technology. Students from the Department have won a number of prizes in the past, so a high standard has been set.

10.4 APPLICATION PROCESS (GSO.2.MPLS) and EXAMINATION FOR TRANSFER OF STATUS

In the tenth month of your first year, usually July, it is time for you to apply to be considered for transfer of status. Ultimately this requires you to upload to our [‘Materials: PGR Progression’](#) Weblearn site a fully signed GSO.2.MPLS form plus appendices (all combined into a single pdf document). Please read the notes you will find on the ‘Overview’ page of this Weblearn site. This overview page contains links to a number of helpful documents / webpages, including the GSO.2.MPLS proforma, a ‘Transfer Checklist’ and the present Postgraduate Handbook. In the last you can see a sample copy of the assessment proforma and associated guidelines that will be used by your Assessors (Appendix X). Remember too the ‘Preparing for Transfer of Status’ document that you have seen already.

As you will read on the GSO.2.MPLS form, within this form your supervisors have to write a short report on your progress. In this report they comment on:

- (i) Your progress, including the quality of your work, your competence and application to your project, the balance between your own input to the project and the assistance given by your supervisor and the members of the research team, your original contributions to date, and your readiness to undertake advanced, increasingly independent, research.
- (ii) The proposed research project.
- (iii) The extent to which the project forms part of a well-established research programme in the group.
- (iv) Any major factors outside your control that have significantly affected the progress of the work.

IMPORTANT GUIDANCE ON COMPLETING AND SUBMITTING THE GSO.2.MPLS FORM AND ITS APPENDICES

Please read this guidance very carefully.

Seeking guidance from your supervisor(s), you should complete the **GSO.2.MPLS** form as a Word document, and submit the signed paper copy to the DGS by 31 July in your first year (or your tenth month of Y1) for review. Normally your transfer interview should take place in mid-September to early October (i.e. near to the end of Y1).

In summary, the sequence is:

- You complete section one, including the research ethics and research integrity subsections, the supplementary sections at the end of the form, and add the two appendices described below.
- When completing the form you will be required to confirm that you have completed the University's on-line course on 'Research Integrity Training'.
- Your Responsible Supervisor completes section two, including confirming they have discussed with you the relevant principles of good research practice.

At this time you should also discuss with your supervisor which of you will make the arrangements for the transfer interview – see the detail section below for guidance on this.

- Your College completes section three.
- Your DGS (Adrian Taylor) completes section four.
- You then upload a scanned copy to the 'Materials: PGR Progression' WebLearn site. You must do this no later than one week before your transfer interview.
- Transfer Interview and Assessment take place (see detail below for the arrangement of the interview date with the Assessors)

In detail:

In addition to completing section one and the supplementary sections, Materials students are required to add the following two appendices to their GSO.2.MPLS form:

1. A 2000 to 2500 word summary of their research progress to date.
The report should be no more than 2,500 words (excluding the title page, table of contents, acknowledgements, references and figure captions). It should give an account of the background to your project (including brief references to the key literature), an outline of your research plans for the full duration (2, 3, 3.5 or 4 years) of your project (including an explicit indication of the new science it is anticipated that the project will lead to if all goes to plan – typically this new science section should be 300-500 words in length), and a description of the progress you have made so far. When writing this report please use the first person singular – that is, 'I' rather than 'we' – to distinguish clearly those parts of the report which refer to your **own** work (experiments, results, conclusions, plans for the rest of the project, etc).
2. An updated laser-printed A4 copy of their latest Gantt Chart, using a legible font size. Be sure that this chart is concise but includes sufficient task lines within the work packages, to enable your assessors to understand your current intended work plan for the duration of your project.

A note on completing the supplementary sections of GSO.2.MPLS: Materials students are asked simply to provide a bullet point list of relevant items in each section. Taking guidance from the helpful

examples provided within the form please take care to list 'research skills' in section A and transferable 'career skills' in section B. For example, since you all attended the Project Management training in year one and have practised this at six-monthly intervals thereafter you can include a bullet point for 'Project Management Training' in section B.

After completing the GSO.2.MPLS form, you then print it (plus appendices), sign it and request endorsement of this application first by your Responsible Supervisor, then by your College, and finally you submit it to the Materials Graduate Studies Office for review by the DGS (Adrian Taylor).

If you believe there are mitigating circumstances which may have had a significant impact on your progress to date you should inform the DGS in writing of these at the same time you request his endorsement of your GSO.2.MPLS form.

Please ensure you have submitted the paper copy of the GSO.2.MPLS and appendices to the Graduate Studies Secretary by the end of July (or your tenth month of Y1):

Noting that many students, academic staff and support staff take their main annual leave during the summer, it really **is** important that you submit the paper copy to the Materials Graduate Studies Office by 31 July in order that everything is in place for your transfer interview, which for most students needs to take place in mid-September to early October. If your GSO.2.MPLS is not submitted by 31 July do not be surprised if there are delays in your Transfer of Status process. Other than in exceptional circumstances your transfer interview cannot take place until the DGS (Dr Taylor) has approved your GSO.2.MPLS application.

Once the DGS is satisfied your application is complete and has signed it, our Graduate Studies Office will email you to let you know it is ready for collection and return it to you temporarily so that you can create a colour scanned copy (pdf) which you then upload to our 'Materials: PGR Progression' WebLearn site. **Please give this pdf a filename using the following protocol:** SURNAME Forename GSO.2.MPLS

Once uploaded, your completed application is available on the WebLearn site for you, the DGS, your Supervisor(s), your Department Advisor, and your Assessors to view. **Please return the original paper application to the Materials Graduate Studies Office.**

Your transfer interview and assessment can take place after the completed form has been uploaded to WebLearn. Normally the interview should be held very near to the end of your first twelve months (thus for most students in the period mid-September to early October).

At the time your Responsible Supervisor signs your GSO.2.MPLS form in July, it is important that you ask him or her to confirm that they wish **you** to contact your Assessors in order to agree a provisional date for your Transfer of Status interview. Alternatively, they might indicate that **they** will contact the Assessors about this. Either way, soon after your Responsible Supervisor has signed the GSO.2.MPLS form it is advisable to agree this provisional date so that it is in the diaries of you and your assessors. If **you** make the arrangements, do ensure your supervisor(s) are aware of your interview date too.

Please note that, other than in exceptional circumstances and with permission of the DGS or the Chair of Faculty, the interview and assessment must not proceed until you have uploaded to the 'Materials: PGR Progression' WebLearn site the scanned copy of the GSO.2.MPLS form after it has been reviewed and signed by the DGS (Adrian Taylor).

The Transfer Interview and Assessment

At the Transfer interview, which involves only you and your two assessors, you will be asked about your work and progress over the whole of your research project to date and your plans going forward. Prior to the interview your assessors will have read your GSO.2.MPLS form and the Lead Assessor will have assessed your Literature Review and uploaded a report on the latter to the confidential Supervisor/Assessors sub-folder within your folder on our WebLearn site. The duration of the interview will be between 15 to 30 minutes; the first five minutes for you to summarise your work to date and your intended next steps, and the remainder of the time for your Assessors to ask questions and engage in discussion with you. For your five-minute introduction you may use up to five slides. At the end of this five-minute introduction you should display an additional final slide to summarise the new science to which it is anticipated your project may lead.

After the interview the Assessors complete a report form and make a recommendation on the outcome of the assessment (as mentioned already, you can see a blank copy of this form in Appendix X of the present Materials Graduate Course Handbook – do have a look at this form as it gives a good idea of what the assessors will be taking into account).

Finally, you will receive an e-mail direct from the MPLS Division once your Transfer outcome has been processed.

11. SECOND-YEAR TALK

Tuesday, Wednesday, Thursday & Friday (10.00 am – 6.00 pm) of Week 7 in Hilary Term are reserved for the second-year talks, in which the students present their current research findings. **In your second year you must keep all of these days free.** If you have a clash, in the majority of cases your timetabled talk will take priority. In certain circumstances it may be agreed you can postpone your talk for a year or in exceptional circumstances such as family bereavement or hospital appointment, we will make best efforts to try and re-organise the talk schedule. Please e-mail graduate.studies@materials.ox.ac.uk and give an outline of the position if you fall into either category to seek postponement for a year or reschedule of talk.

You are required to include in the introduction section of your talk one slide which explicitly identifies the key new science to which the project has led and/or is expected to lead. The talk should include an appropriate introduction for a mixed audience of Materials Scientists, but focus mainly on your own results, the interpretation of these results and how they relate to other work in the field. The talks are each allocated 20 minutes, which comprises 15 minutes for presentation and 5 minutes for questions. Please take care to time your talk carefully. You are requested to load your slideshow onto the desktop of the PC in the lecture theatre in advance of your session – remember to include your name in the filename! Your progress as indicated by this talk provides a useful informal guide on your trajectory towards Confirmation of DPhil Status. If the senior member of staff who chairs the session in which you give your talk has concerns over your progress the DGS will alert you and your supervisor to these concerns, giving you ample time to address these in advance of your Year 3 Confirmation of Status assessment.

In advance of the talks please upload to our 'Materials: PGR Progression' WebLearn site an abstract for your talk, of length 100 to 150 words, as a pdf, **using the following protocol for the filename: SURNAME Forename Y2 talk abstract. Please remember to include in the abstract your name and talk title!**

And immediately after giving your talk please upload your slides under the filename:
SURNAME Forename Y2 talk slides.

The best talk in terms of preparation and presentation is awarded the Hetherington – Armourers & Brasiers' Prize. This provides a prize of £200 and the winner's name is added to the list on the award board in the foyer to the library. The talks will be judged by the DGS and by the senior members of academic staff that chair the sessions. They will be looking at the quality of the visual aids; the pace and diction; the structure of the talk; the ability to get points across to a mixed audience at peer-group level; self-confidence and the handling of questions; effectiveness of your presentational style; and

timing. The DGS will give **collective** written feedback to all speakers within a week of the talks and in any cases where significant improvement is needed will write individually to the students concerned.

The members of each research group are requested to make arrangements such that for each speaker from your group one or more group members will take notes during the talk in order to provide constructive feedback on strengths and weaknesses. You will be able to provide this feedback soon after the talks and in the light of the generic feedback provided by the DGS.

The Head of Department and the DGS wish to strongly encourage all research students and supervisors to support the individual speakers and the event by attending at least one of the several sessions. Further, we encourage the speakers to attend their own session and **at least** one other session. Unless they have made special alternative arrangements, normally at least one of a student's supervisors is required to attend a student's talk. Unless there are exceptional reasons please show courtesy to your fellow scientists by attending a whole session and not just "parachuting in" for one talk within a session.

12. CONFIRMATION OF DPHIL STATUS

Helpful general guidance on 'Confirmation of Status' may be found on the MPLS Grad School website, (<https://www.mpls.ox.ac.uk/graduate-school/information-for-postgraduate-research-students/progression>).

As outlined in [Section 4.5](#) of the present Handbook, towards the end of your third year your progress is reviewed in the Confirmation of Status assessment that normally is conducted by the two members of staff who were appointed in Year One as your Assessors.

The purpose of Confirmation of Status is to enable research students to receive an independent assessment of their work by two assessors other than their supervisor(s). It is intended to provide an important indication of progress towards submission of a DPhil thesis.

If you are successful in the assessment your assessors will recommend that your DPhil Status is confirmed.

In the normally rare event that the Confirmation of Status assessors of a Materials student are minded to recommend 'Failure to Confirm Status', if the 'Failure to Confirm Status' recommendation is confirmed upon review by the DGS, then the student has a right to one, and only one, further attempt to confirm DPhil status, usually one term after the original attempt.

If after a **2nd attempt** at Confirmation of Status the assessors of a Materials student are minded to recommend 'Failure to Confirm Status' the student will be asked to attend a second interview, conducted by the two assessors, together with at least three members of the Department's Graduate Panel including the DGS and with his/her supervisor(s) in attendance. Following this second interview, which will be held as soon as practicable after the first, informed by a discussion between the Graduate Panel members, assessors and the supervisor(s), your Assessors will reach a final recommendation. In the event the two assessors cannot agree on the outcome the DGS will have a casting vote, for which purpose he would take into account the views of all present at the discussion. The primary purpose of the second interview is to allow consistency across all Materials PGR students in any 'failure to confirm' outcomes.

In the present section we provide more detail on the key stages of confirmation of status.

12.1 PREPARING FOR CONFIRMATION OF STATUS FORM

In weeks 7-9 of the second term of your third year (Hilary Term in most cases), as in every quarter, you are required by the University to submit a GSR report. To accompany this particular report you are expected by the MPLS Division to upload a completed copy of the 'Preparing for Confirmation of Status' form. The purpose of this is to start you thinking about the requirements for a successful Confirmation of Status ahead of the actual assessment. The form is available from links on the '[Materials: PGR Progression](#)' Weblearn site overview page and on the '[Progression & Key Milestones](#)' page of the MPLS Graduate School webpages.

12.2 APPLICATION PROCESS (GSO.14.MPLS) and ASSESSMENT FOR CONFIRMATION OF STATUS

Towards the end of the second term of your third year, usually Hilary Term, it is time for you to upload a set of documents pertaining to confirmation of status to the 'Materials: PGR Progression' WebLearn site. Please read the notes you will find on the 'Overview' page of this site. This overview page contains links to a number of helpful documents / webpages, including a 'Confirmation Checklist' and the present Graduate Handbook. In the latter you can see a sample copy of the assessment proforma and associated guidelines that will be used by your Assessors (Appendix X). Remember too the 'Preparing for Confirmation of Status' document that you have seen already.

- In Materials, your application to be considered for confirmation of status is **submitted** by means of uploading a completed form **GSO.14.MPLS** to our WebLearn site.

WHAT MUST YOU INCLUDE IN YOUR GSO.14.MPLS FORM?

Please read this guidance very carefully:

1. Within the GSO.14.MPLS form, under 'Progress Report (i)': In this section Materials students are required to provide a **500 to 1000 word summary of their research achievements to date**. This summary should outline in particular the key new science which the project has achieved and/or is on target to achieve, and should include a list of any refereed publications or patents that have arisen from their work to date.
 2. Also as part of GSO.14.MPLS you are required to provide a **timeline to submission**: in the box under 'Progress Report (ii)' Materials students should just type 'See appended Gantt Chart' and then append as a final page to the GSO.14.MPLS form an updated laser-printed A4 copy of your latest Gantt Chart, using a legible font size. Be sure that this chart is concise but includes sufficient task lines within the unfinished work packages, including that for thesis writing, to enable your assessors to understand in outline your timeline to submission.
 3. Finally please complete the **supplementary information** section of GSO.14.MPLS. Materials students are asked simply to provide a bullet point list of relevant items in each section. Taking guidance from the helpful examples provided within the form please take care to list 'research skills' in section A and transferable 'career skills' in section B. For example, since you all attended the Project Management training in year one and have practised this at six-monthly intervals thereafter you can include a bullet point for 'Project Management Training' in section B. Similarly you all presented a third year poster, and had the opportunity to attend training on preparing a poster, so you can include a bullet point for 'Communication Skills – Poster Presentation'.
- Seeking your supervisor's guidance you should complete this form as a Word document, sign it, and then request your supervisor to complete and sign section 3 of the form. In this section, to aid the DGS and your assessors, your supervisor is required to write a short report on your progress.
 - Next print the form and Gantt chart and request endorsement of this application first by your college then, via the Materials Graduate Studies Office, by your DGS (Adrian Taylor).
 - If you believe there are mitigating circumstances which may have had a significant impact on your progress to date you should inform the DGS in writing of these at the same time you request his endorsement of your GSO.14.MPLS form.

- Once the DGS is satisfied your application is complete and has signed it, our Graduate Studies Office will email you to let you know it is ready for collection and return it to you temporarily so that you can create a colour scanned copy (pdf) which you then upload to our 'Materials: PGR Progression' WebLearn site. **Please use the following protocol for the filename:**
SURNAME Forename GSO.14.MPLS

- Once uploaded your completed form is available for you, the DGS, your supervisor(s), your Department advisor, and your assessors to view. Only once this is done may your confirmation interview and assessment take place. **Please return the original paper application to the Materials Graduate Studies Office.** If your GSO.14.MPLS and appended Gantt chart are not provided to the DGS by week 4 of TT, prior to your uploading it to WebLearn by Week 6 of TT, do not be surprised if there are delays in your Confirmation of Status process.

At the time your Responsible Supervisor completes the relevant section and signs your GSO.14.MPLS form it is important that you ask him or her to confirm that they wish **you** to contact your Assessors in order to agree a provisional date for your Confirmation of Status interview. Alternatively, they might indicate that **they** will contact the Assessors about this. Either way, soon after your Responsible Supervisor has signed the GSO.14.MPLS form it is advisable to agree this provisional date so that it is in the diaries of you and your assessors. If **you** make the arrangements, do ensure your supervisor(s) are aware of your interview date too. Normally, for a Materials student, this interview should take place no later than Friday of week 8 of Trinity Term of your third year (or two years and nine months after your start date).

Please note that, other than in exceptional circumstances and with permission of the DGS or the Chair of Faculty, the interview and assessment must not proceed until you have uploaded to the 'Materials: PGR Progression' WebLearn site the scanned copy of the GSO.14.MPLS form after it has been reviewed and signed by the DGS (Adrian Taylor).

The Confirmation interview

At the Confirmation interview, which involves only you and your two assessors, you will be asked about your work and progress over the whole of your research project to date and your plans going forward. Prior to the interview your assessors will have read your GSO.14 form including your supervisor's report within this form. The duration of the interview will be between 15 to 30 minutes; the first five minutes for you to summarise your work to date and your intended next steps, and the remainder of the time for your Assessors to ask questions and engage in discussion with you. For

your five-minute introduction you may use up to five slides. At the end of this five minute introduction you should display an additional final slide to show in outline your vision at present of the table of contents for your thesis (chapter headings only, not sections within chapters).

After the interview the Assessors complete a report form and make a recommendation on the outcome of the assessment (you can see a blank copy of this form in Appendix X of the present Graduate Handbook – do have a look at this as it gives a good idea of what the assessors will be taking into account).

Finally, you will receive an e-mail direct from the MPLS Division once your Confirmation outcome has been processed.

13. THESIS WRITE-UP, SUBMISSION AND VIVA

The 'Postgraduate Researchers' section of the Vitae website <https://www.vitae.ac.uk/doing-research/doing-a-doctorate/completing-your-doctorate/writing-and-submitting-your-doctoral-thesis> contains an excellent section on 'Writing-up', with many helpful tips. Some of these will be covered during the 'Writing skills' lecture in Week 4 of Hilary Term, which will also deal with the practicalities of producing the thesis.

The primary source of advice on the structure and scientific content of your thesis is your supervisor. Before you first discuss this with her/him you should look at a recently published thesis from your research group.

Proof-reading

It is your responsibility to ensure your thesis has been adequately proof-read before it is submitted. Your supervisor may alert you if they feel further proof-reading is needed, but it is not their job to do the proof-reading for you. You should proof-read your own work, as this is an essential skill in the academic writing process. However, for longer pieces of work it is considered acceptable for students to seek the help of a third party for proof-reading. Such third parties can be professional proof-readers, fellow students, friends or family members (students should bear in mind the terms of any agreements with an outside body or sponsor governing supply of confidential material or the disclosure of research results described in the thesis). Proof-reading assistance may also be provided as a reasonable adjustment for disability or special educational needs. **Your thesis may be rejected by the examiners if it has not been adequately proof-read.**

The MPLS Division offers training in proof-reading as part of its [Scientific Writing](#) training programmes.

Please note the University Guidance and Regulations covering the use of 3rd Party proof-readers for pieces of work of 10,000 words or more (<http://www.admin.ox.ac.uk/edc/policiesandguidance/>).

Following a successful examination and once 'leave to supplicate' has been granted, you will need to prepare at least four hard-bound copies of the thesis: one for the University's Bodleian Library, one for the Department's Library, one (or more) for your supervisor(s), and one for yourself. You are also required to submit an electronic copy of your thesis to the Oxford Research Archive (you should check what, if any, automatic period of embargo is applied – only after this period will it be accessible via the ORA). For this purpose you will need to provide copies of permissions granted for the use of any copyrighted material that may be within your thesis (see [Section 21](#), under 'copyright'). It is up to you to cover the cost of hard-binding your thesis. However, you can claim a contribution of £35 towards the cost of DPhil or MSc theses when you submit one final hardbound copy to the Department Librarian.

Further detailed information on the examination process may be found in:

(i) **the notes of guidance**

<http://www.ox.ac.uk/students/academic/guidance/graduate/progression>) from the University Graduate Studies Office. You should look at these notes early on during the writing of your thesis and make sure that you are in a position to **submit the on-line form GSO.3 and, if needed, GSO.3c, also on-line, four to six weeks prior to submitting your thesis.** If you do not submit these forms within the timeline recommended above, do not be surprised if your examination is delayed. In form GSO.3 you are asked to state the date by which you will submit your thesis. It is OK to submit sooner than this date, but you are expected to submit by or very soon after this date. If you do over-run please contact the Research Degrees Exams & Assessment Office so that they are aware.

(ii) the 'Mathematical, Physical and Life Sciences Division's on-line Graduate Handbook (<https://www.mpls.ox.ac.uk/graduate-school/information-for-postgraduate-research-students>). This contains useful sections on the preparation and submission of theses, the appointment of examiners and examination arrangements, and the notification of the results of the viva and the conferring of the degree.

(iii) the on-line University Examination Regulations, look at chapters on General Regulations Governing Research Degrees, General Regulations Governing ... MSc(Res) and DPhil, and

Research Degrees in the MPLSD and Research Degrees in Physical Science and Doctoral Training Programme in MPLS - see <http://www.admin.ox.ac.uk/examregs/information/contents/>.

It suffices to note here that for the award of a DPhil you will need not only to have demonstrated a good general knowledge of your research discipline but also to have presented **‘a significant and substantial’ piece of research of a kind which might ‘reasonably be expected of a capable and diligent student after three or at most four years of full-time study’** (from Oxford University’s ‘Examination Regulations’). Typically, external examiners will interpret this phraseology to mean that the DPhil thesis exhibits **‘substantial evidence of original scholarship and contains material worthy of publication (in a peer-reviewed international journal)’**. For the award of an MSc the standard required is that the candidate should have made **‘a worthwhile contribution to knowledge or understanding of a kind which might reasonably be expected after two years of full-time study’**.

Note the word limits for Materials Science theses (<http://www.admin.ox.ac.uk/examregs/2014-15/rdinphysscie/>):

- (i) MSc (by Research) 25,000 words;
- (ii) DPhil 40,000 words.

Only in exceptional circumstances will your supervisor be able to make a case to the Director of Graduate Studies for an increased word limit. There is no limit on references, diagrams, tables, photographs, computer programmes, etc.

Materials Science theses must be A4 size and formatted with double line spacing. Further details can be found in document GSO.20a. You are advised to use a font size of Arial 11 or Times Roman 12.

For the purpose of the examination, you must submit a **digital copy** of your thesis via the ‘Research Thesis Digital Submission’ (RTDS) portal (in addition you are advised to make a softbound paper copy of this digital submission for yourself). Normally the thesis is submitted a few weeks after the form GSO.3 for Application for Appointment of Examiners, and no later than the date you indicated in your GSO.3 form. Your soft-bound copy can be printed and bound in the Department. Materials IT Support can offer guidance on the most appropriate way to do this. Staff at researchexams@admin.ox.ac.uk may be contacted for further information and tracking of progress. Once appointed, the internal examiner (usually a senior member of the Department) will contact you to arrange a date for the viva. This is usually 2-3 months after submission of your thesis, but special arrangements can be made for an early examination if you have good reason to need this. In this

case, you should contact the Department's Graduate Studies Office well in advance of submission to ensure all the paperwork is handled quickly.

If all goes well at the viva you will be granted 'leave to supplicate', a quaint Oxford term dating back to 1691. You will then submit to the Examination Schools forms GSO.3a and GSO.26 (with an additional copy of the abstract of your thesis and a hard-bound copy of your thesis incorporating any amendments required by the examiners for deposit in the Bodleian Library) and wait for a suitable Saturday when you may have your degree conferred at the Sheldonian Theatre. Good luck!

Guidance about the additional requirement to deposit a digital copy of the final version of your thesis can be found at <http://ora.ox.ac.uk>.

Useful Books:

W E Russey, H F Ebel and C Bliefert, How to Write a Successful Science Thesis (Wiley, 2006);

R Arshady, Science and Medical Style Guide, Volume 1 (Kentuo, 2006);

H Kirkham, R C Dumas, The Right Graph: A Manual for Technical and Scientific Authors (Wiley, 2009).

FINALLY, JUST BEFORE YOU LEAVE THE DEPARTMENT FOR PASTURES NEW (OR START ON A POST-DOC CONTRACT WITH US) IT IS A COMPULSORY REQUIREMENT THAT YOU SUBMIT A HARD COPY THESIS TO THE MATERIALS GRADUATE STUDIES OFFICE (OR GRACE IN THE MATERIALS LIBRARY) FOR DEPOSIT IN THE DEPARTMENT LIBRARY. AT THE SAME TIME WE REQUEST THAT YOU COMPLETE A LEAVER'S FORM: THE INFORMATION IN THIS IS VERY IMPORTANT TO US, INCLUDING INFORMATION ON YOUR ROLE NOW THAT YOU HAVE FINISHED YOUR DOCTORATE.

14. EXTENSIONS OF TIME

Students undertaking a DPhil in Materials are expected to submit their thesis within 3 to 3.5 years of full-time study [2 years for MSc(Res), 4 years for an EPSRC CDT DPhil, and 4 years for projects under the EPSRC Industrial CASE scheme, EPSRC NPIF scheme and Faraday Institution Studentship scheme]. As indicated in Section 2 and 3 of this Handbook, if you do not think you will meet this expectation you should arrange to meet with the DGS to discuss your progress. If you are unable to complete your research within the maximum period normally allowed by the University (9 terms for MSc by Research, 12 terms for the DPhil), then you may apply for an extension of time. Approval for extensions will be granted only if you and your supervisor can justify the request. The maximum total periods of extension are up to 6 terms for DPhil candidates and MSc by Research

candidates. Students are allowed to apply for a maximum of three terms at any one time. However, it is MPLS policy that where a request for an extension is approved normally this be only one term at a time, so that your progress can be kept under close review.

To make a request to extend you need to complete an on-line form GSO.15, which can be found on the Graduate Progression Forms webpage

<http://www.ox.ac.uk/students/academic/guidance/graduate/progression>. You must give full reasons for your request, and these must also be supported in writing by your supervisor and College. On the form you need to indicate the present state of your thesis, ie how much has been completed and how much remains to be done, include a new Gantt Chart which should contain a timetable for completion and also when you expect to apply for confirmation of status (if this is yet to be done), and the expected submission date for your thesis. Your application must be submitted before your status lapses. See also [Section 20](#) (Continuation Bursaries & Continuation Charges).

15. SUPPORT STRUCTURE

The Department of Materials is a medium sized and relatively cohesive unit so that you will find support as a graduate student from many quarters, not only from your own immediate research group and supervisor. In addition, of course, you have a second line of support from your College, not only for personal and academic matters, but also often for help with travel, conference attendance and hardship. In [Appendix VII](#) you will find a list of people in the Department you might need to approach for personal, financial, technical or academic advice; you should have been given a corresponding list for your College.

16. FACILITIES

The Department and University provide a range of general facilities to which you will have access during the course of your research:

- Libraries (books, journals, literature searching, study space)
- Mechanical workshop (shared with Engineering, tools, construction of components)
- Heat treatment workshop (furnaces for a variety of needs)
- Specimen preparation (cutting, grinding, polishing)
- Electron microscopes (SEMs, TEMs, microprobes)
- Optical microscopes
- X-ray diffraction facilities
- Stores (supply of chemicals, components, stationery etc.)

- IT Support (hardware, software, modelling, advice and help)
- Digital Print Room (A4/A3 colour printing, scanning, laminating)
- Binding can be carried out in Reception and plastic covers can be obtained from Stores
- A wide range of analytical instruments (see <http://www-omcs.materials.ox.ac.uk>).

You will find full details of the facilities and how to obtain access and training in the Department Handbook <http://www.materials.ox.ac.uk/local/DH.html> and at <http://www-omcs.materials.ox.ac.uk>.

The Department Handbook describes the many facilities within the Department such as the library, mechanical workshops, computing laboratories, and electron/optical microscopes that are available to all graduates. It also describes the procedures needed, for example, in ordering consumables and equipment both from the main stores and from external suppliers, getting logged onto the University Computing network and arranging for work to be carried out in the mechanical workshops. It also includes information and links on how to claim re-imbusement for expenses and payment for casual employment such as teaching.

Research students may request access to the facilities in the teaching laboratory. Access should always be arranged in advance with the Teaching Laboratory Technician. Users must provide their own consumables, and supervisors should endorse the request having judged whether or not the researcher is competent in using the necessary equipment. Pre-arranged and planned access should negate the need for out-of-hours access, and access during afternoon undergraduate practicals is actively discouraged. All usage is subject to having satisfied the Teaching Laboratory Technician that adequate training has been received. A well-equipped metallographic outfit, including resources, is available at Begbroke and when access to the teaching laboratory is not possible or convenient suitably trained researchers should use the equipment there.

The provision of appropriate COMPUTING FACILITIES for your particular research project is the responsibility of the individual research group. It is very important that you discuss this provision with your supervisor soon after induction (**in this respect see [Section 25.5](#) of the present Handbook**). Research students may also use the computers in the teaching laboratory computer room, but undergraduates have priority use of this resource. Outline guidance on software (recommendations and availability) can be found on the Departmental website at <http://www.materials.ox.ac.uk/local/it/itsoftware.html>, and excellent support and guidance is available on hardware and software both from the Departmental IT Support team (<http://www.materials.ox.ac.uk/local/it>) located in the ETB building room 10.14 and also from Oxford University IT Services (<http://www.it.ox.ac.uk>) located beside our 21 Banbury Road laboratories.

17. GAINING TEACHING EXPERIENCE

Some experience of teaching, whether as a Junior Demonstrator in our Teaching Laboratory, as a tutor, or assisting with activities provided for school pupils, is a very useful transferable skill. Also, such teaching is paid work. As part of your skills training you are encouraged to volunteer for teaching and/or outreach duties. Unless your sponsor forbids it, the Department expects its graduate research students to participate in a minimum of 30 hours per annum teaching if so requested by the Department. This teaching is paid at standard University rates and is subject to 'right-to-work' checks.

UK students: please note that earnings from sources such as teaching and demonstrating may be taxable and should be aggregated with income from any other employment when assessing income tax liability for a given tax year (your EPSRC maintenance grant is counted as a training award and not normally regarded as income for UK income tax purposes, a small number of exceptions include certain European Commission-funded studentships, where you are paid a salary).

Overseas students: please note that whether or not we are able to employ you will depend on the terms of your visa. In some cases your visa may still permit you to take a teaching role but unpaid.

17.1 JUNIOR DEMONSTRATING IN THE TEACHING LABORATORY

An essential part of the undergraduate courses is practical work which is undertaken in the Teaching Laboratories. This provides an opportunity for graduate students to gain experience of teaching by acting as Teaching Assistants (TA) and at the same time earn a useful supplement to their subsistence grant.

Each year the Department requires about 15 TAs to help with the Undergraduate Practical Classes. The TA appointments are for one year, with the expectation of renewal for a second and perhaps a third year subject to satisfactory performance, and provided the Department continues with the scheme. Students will be remunerated at the appropriate rate **for work done**.

Normally all new research students are required to attend our Junior Demonstrating Training Workshop (usually held in MT). This means that you all become eligible to apply for a Practical Course Teaching Assistantship.

Each Teaching Assistant on Practical Class duty will be in the teaching laboratory for, typically, 4-6 afternoons (2.00 - 5.00 pm) for each of two terms. Second year students should ensure that any

commitments they agree to do not clash with the 2nd Year Talks in Hilary Term. There will also be some training time, including a requirement to assist with setting up equipment and a requirement to attend experiment specific training, and to carry out the full experiment and to produce a set of model results. Each TA will be expert in one particular undergraduate practical being done during the term. The contract is for up to 120 hours per year, but in most years for most TA's the actual requirement is much less. As ever, good verbal communication skills and a reasonable amount of practical expertise will be essential requirements. You should also have the agreement of your supervisor from whom we will seek a reference. Further details on junior demonstrating can be obtained from the Practical Courses Organiser.

17.2 TUTORING

A special feature of undergraduate courses at Oxford is the college tutorial. Every week students prepare work for 1-2 tutorials, which they then discuss (usually in pairs) with a college tutor. Tutoring undergraduates is valuable experience and an excellent way of consolidating your knowledge. It also provides extra income. If opportunities arise, in an area where you feel confident, you are encouraged to take on a moderate amount of teaching (discuss it with your supervisor). You should be aware though that the ratio of staff and postdoctoral researchers to undergraduates is high in the Materials Department and relatively few postgraduate students actually have the opportunity to act as tutors. If you attend the 'Tutoring Materials Science' Workshop your name will be added to the list of potential tutors that we make available to the Materials Tutorial Fellows at the Colleges.

Some demonstrators are needed for Y1 UG crystallography classes, Y1 UG computing for materials science classes, Y3 UG materials modelling and materials characterisation modules, and some tutors for Y1 & Y2 UG mathematics classes.

Further details (i) on tutoring materials science can be obtained from the Chair of the Tutors' Committee, Professor Michael Moody or from Professor Susie Speller, and (ii) on tutoring Maths Classes from Professor Jonathan Yates.

17.3 TRAINING TO TEACH

A number of training workshops are organized for those new to teaching. Details are announced by e-mail and appear in the termly lecture lists, <http://www.materials.ox.ac.uk/teaching/lecturelists.html> .

17.4 SCHOOLS OUTREACH WORK

There are a wide range of opportunities to help with the Department's substantial outreach work to schools: giving short talks, assisting with laboratory-based workshops for school pupils, helping with open days, visiting schools, acting as a host for residential courses held at Oxford and acting as a

MMM or STEM Ambassador (see Section 8 of this booklet). We offer training and support to those interested in developing and delivering outreach activities and we are always looking for enthusiastic volunteers. For more details, please contact our Access & Outreach Manager, jayne.shaw@materials.ox.ac.uk at any time in the year and also look out for emails seeking help with specific outreach events.

The Oxford Week numbering system for Michaelmas, Hilary and Trinity Terms

2019

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
S	. 6 13 20 27	. 3 10 17 24	. 3 10 17 24 31	. 7 14 21 28	. 5 12 19 26	. 2 9 16 23 30
M	. 7 14 21 28	. 4 11 18 25	. 4 11 18 25 .	1 8 15 22 29	. 6 13 20 27	. 3 10 17 24 .
T	1 8 15 22 29	. 5 12 19 26	. 5 12 19 26 .	2 9 16 23 30	. 7 14 21 28	. 4 11 18 25 .
W	2 9 16 23 30	. 6 13 20 27	. 6 13 20 27 .	3 10 17 24 .	1 8 15 22 29	. 5 12 19 26 .
T	3 10 17 24 31	. 7 14 21 28	. 7 14 21 28 .	4 11 18 25 .	2 9 16 23 30	. 6 13 20 27 .
F	4 11 18 25 .	1 8 15 22 .	1 8 15 22 29 .	5 12 19 26 .	3 10 17 24 31	. 7 14 21 28 .
S	5 12 19 26 .	2 9 16 23 .	2 9 16 23 30 .	6 13 20 27 .	4 11 18 25 .	1 8 15 22 29 .
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	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
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M	1 8 15 22 29	. 5 12 19 26	2 9 16 23 30	. 7 14 21 28	. 4 11 18 25 .	2 9 16 23 30
T	2 9 16 23 30	. 6 13 20 27	3 10 17 24 .	1 8 15 22 29	. 5 12 19 26 .	3 10 17 24 31
W	3 10 17 24 31	. 7 14 21 28	4 11 18 25 .	2 9 16 23 30	. 6 13 20 27 .	4 11 18 25 .
T	4 11 18 25 .	1 8 15 22 29	5 12 19 26 .	3 10 17 24 31	. 7 14 21 28 .	5 12 19 26 .
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2020

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T	. 7 14 21 28	. 4 11 18 25	3 10 17 24 31	. 7 14 21 28	. 5 12 19 26 .	2 9 16 23 30
W	1 8 15 22 29	. 5 12 19 26	4 11 18 25 .	1 8 15 22 29	. 6 13 20 27 .	3 10 17 24 .
T	2 9 16 23 30	. 6 13 20 27	5 12 19 26 .	2 9 16 23 30	. 7 14 21 28 .	4 11 18 25 .
F	3 10 17 24 31	. 7 14 21 28	6 13 20 27 .	3 10 17 24 .	1 8 15 22 29 .	5 12 19 26 .
S	4 11 18 25 .	1 8 15 22 29	7 14 21 28 .	4 11 18 25 .	2 9 16 23 30 .	6 13 20 27 .
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	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
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M	. 6 13 20 27	. 3 10 17 24 31	. 7 14 21 28	. 5 12 19 26	2 9 16 23 30	. 7 14 21 28
T	. 7 14 21 28	. 4 11 18 25 .	1 8 15 22 29	. 6 13 20 27	3 10 17 24 .	1 8 15 22 29
W	1 8 15 22 29	. 5 12 19 26 .	2 9 16 23 30	. 7 14 21 28	4 11 18 25 .	2 9 16 23 30
T	2 9 16 23 30	. 6 13 20 27 .	3 10 17 24 .	1 8 15 22 29	. 5 12 19 26 .	3 10 17 24 .
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T	. 5 12 19 26 .	2 9 16 23 .	2 9 16 23 30	. 6 13 20 27	. 4 11 18 25 .	1 8 15 22 29
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T	. 7 14 21 28 .	4 11 18 25 .	4 11 18 25 .	1 8 15 22 29	. 6 13 20 27 .	3 10 17 24 .
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S	2 9 16 23 30 .	6 13 20 27 .	6 13 20 27 .	3 10 17 24 .	1 8 15 22 29 .	5 12 19 26 .
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	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
S	. 4 11 18 25	1 8 15 22 29	. 5 12 19 26	. 3 10 17 24 31	. 7 14 21 28	. 5 12 19 26
M	. 5 12 19 26	2 9 16 23 30	. 6 13 20 27	. 4 11 18 25 .	1 8 15 22 29	. 6 13 20 27
T	. 6 13 20 27	3 10 17 24 31	. 7 14 21 28	. 5 12 19 26 .	2 9 16 23 30	. 7 14 21 28
W	. 7 14 21 28	4 11 18 25 .	1 8 15 22 29	. 6 13 20 27 .	3 10 17 24 .	1 8 15 22 29
T	1 8 15 22 29	. 5 12 19 26 .	2 9 16 23 30	. 7 14 21 28 .	4 11 18 25 .	2 9 16 23 30
F	2 9 16 23 30	. 6 13 20 27 .	3 10 17 24 .	1 8 15 22 29 .	. 5 12 19 26 .	3 10 17 24 31
S	3 10 17 24 31	. 7 14 21 28 .	4 11 18 25 .	2 9 16 23 30 .	. 6 13 20 27 .	4 11 18 25 .
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