DEPARTMENT OF MATERIALS

DIVISION OF MATHEMATICAL, PHYSICAL AND LIFE SCIENCES

Lecture List for Michaelmas Term 2018

NOTICE: Attention is drawn to the provisions of the University's decrees, Ch. X, Sect. XI (*Statutes, Decrees, and Regulations*, 2000, pp. 761-63), under which non-members of the University, with certain stated exemptions, may not attend university lectures (unless they are announced as open to the general public) without the payment of a fee, otherwise than by the personal invitation of the lecturer concerned. Persons who are neither reading for a qualification of this University nor otherwise exempt, and who wish to attend lectures in any term, should apply to the Fees Clerk, University Offices, Wellington Square, Oxford OX1 2JD, for details of fees. Senior visiting scholars from other universities who wish to attend lectures, seminars, or classes should normally apply to the lecturer concerned, and not to the Fees Clerk.

Lectures begin on the first possible day after the beginning of Full Term (Sunday, 07 October) unless otherwise stated

All lectures begin on the hour and finish at five minutes before the next hour.

Timetable for Materials Science

Key to Teaching Venue Abbreviations:

HRLT	Hume-Rothery Lecture Theatre, Hume-Rothery Building
BRLT	Banbury Road Lecture Theatre, 21 Banbury Road
LR8 IEB	Lecture Room 8, Information Engineering Building
ETBCR	ETB Committee Room, Engineering Technology Building
BRCR	Banbury Road Conference Room, 21 Banbury Road
HBTL	Holder Building Teaching Labs, Holder Building
HRF	Hume-Rothery Foyer, Hume-Rothery Building
RR	Rex Richards Meeting Room, Rex Richards Building

Subject	***Lecturer***	***Time***	***Place***
FIRST YEAR			
Induction Course	Dr A.O. Taylor, Ms P.J. Moss & others	F. 1:15-4:30 *(wk 0)*	HRLT
Introduction to Prelims Programme	Prof. C.R.M. Grovenor	M. 12 (*wk 1)*	HRLT
Introduction to Practicals	Prof. S. Lozano-Perez	M. 11 *(wk 1)*	HRLT
Introduction to Computing	Dr P.J. Warren	W. Th. F. 2-5 *(wk 1)*	HBTL
Practical Classes	Various staff	Th. F. 2-5 *(wks 2-8)*	HBTL
Teaching, Study Skills & Learning Development	Dr A.O. Taylor & Prof. P.D. Nellist	W. 2 (*wk 6)*	HRLT
The Institute of Materials - Benefits of Student Membership	S Boad – Institute of Materials	M. 12 (*wk 4*)	HRLT
Introduction to Errors in Measurement	Prof. J.M. Smith	M. 12 *(wks 5-6)*	HRLT
Academic Admin & Exams Briefing	Ms P, Moss & Mrs S. Engela	W. 1-2 *(wk 7)*	BRCR
Feedback for JCCU	JCCU Reps	M. 12 *(wk 7)*	HRLT

Subject	*Lecturer*	*Time*	*Place*
Materials Science 1: Structure of Materials			
Introduction to Structure	Prof. A.I. Kirkland	T. 12 (*wk 1*)	HRLT
Crystallography and Diffraction	Prof. A.I. Kirkland	Th. F. 11 *(wks 1-3)* W. 12 *(wk 2)*	HRLT
Crystal Model Make & Keep	Prof. M.R. Castell	T. 10-12 *(wk 3)*	LR8 IEB
Crystallography Classes	Dr A.W. Robertson	T. 9-12 *(wks 4,6,8)*	LR8 IEB
Computing for Materials Science MATLAB Classes	Prof. J.R. Yates	T. 9-12 *(wks 5,7)*	LR8 IEB
Materials Science 2: Properties of Materials			
Introduction to Properties	Prof. A.J. Wilkinson	Th. 9 *(wk 1)*	HRLT
Elasticity and Structures	Prof. A.J. Wilkinson	M. Th. 11 *(wks 5-7)* F. 10 *(wks 6-7)*	HRLT
Materials Science 3: Transforming Materials			
Introduction to Processing	Prof. K.A.Q. O'Reilly	M. 11, W. 9 *(wks 3-4)*	HRLT
Thermodynamics	Prof. M.P. Moody	W, F.10 *(wks 1-5)*	HRLT
Kinetics	Prof. M. Pasta	W. 11, F. 11 *(wks 6-7)*	HRLT
Mathematics for Materials			
Vectors, Matrices and Determinants	Prof. S.C. Benjamin	W. 12 *(wk 1)* T. 2, Th. 12 *(wks 1-5)*	HRLT
Ordinary and Partial Differentiation	Dr J Barnes	T. 2 W. 12 Th. 12 *(wks 6-7)* T. 2 *(wk 8)*	HRLT

SECOND YEAR

1. Structure and Transformation of Materials			
Surfaces and Interfaces	Prof. M.R. Castell	T. 10, Th. 11 *(wks 1-2)*	BRLT
Phase Transformations & Diffusion	Prof. C.R.M. Grovenor & Dr K. Borisenko	T. F. 9 *(wks 1-3,5-7)* Th. 12 *(wks 1,3,5,6)*	BRLT
2. Electronic Properties			
Quantum and Statistical Mechanics	Prof. J.M. Smith	W. Th. 10 *(wks 3-7)* F. 10 *(wk 5-6)*	BRLT
3. Mechanical Properties			
Elastic Behaviour in Isotropic Materials	Prof. P.D. Nellist	W. Th. 9 (*wks 1-2)*	BRLT
Microplasticity	Dr E.K.R. Tarleton & Prof. T.J. Marrow	M. T. 10 *(wks 3-7)*	BRLT
4. Engineering Applications of Materials			
Microstructural Characterisation of Materials	Prof. P.D. Nellist	W. Th. 9 *(wks 3-6)*	BRLT

Subject	*Lecturer*	*Time*	*Place*
Other Lectures			
Introduction to the Part I Materials Programme	Prof. C.R.M. Grovenor	M. 9 *(wk 1)*	BRLT
Introduction to Practicals	Prof. S. Lozano-Perez	M. 10 (*wk 1)*	HRLT
MatLab Class	Prof. S.C. Benjamin	M. 11.15 *(wk 1)*	BRCR
Mathematics – Partial Differential Equations & Fourier Series	Prof. S.C. Benjamin	M. F.12 *(wks 1,3-4)* W. F. 12 *(wk 2)*	BRLT
Entrepreneurship/Business Plan – workshop on 'Teams'	Dr E. Williams	F. 2.00 – 4.00 (wk 3)	BRCR
Engineering & Society: Entrepreneurship/Business plan briefing	Dr S.M. Wilkinson & Prof. S. Newbury	F. 2.30 – 4.30 (*wk 5)*	BRLT
Presentation by Johnson-Matthey	HoD & Johnson-Matthey Representative	Th. 12-2 *(wk 2)*	BRCR
Feedback for JCCU	JCCU Reps	M. 11 (wk 7)	BRLT
Introduction to Industrial Visits	Prof. K. Porfyrakis	M. 11 *(wk 2)*	BRLT
Practical Classes	Various staff	M. T. W. 2-5 *(wks 1-8)*	HBTL
Industrial Visit	Prof. K. Porfyrakis	Th. 1.30-6pm *(wk 5)*	HRF
Poster Presentation Skills Workshop	Dr A.O. Taylor & Mr D. Baker	F. 2-3.30 (w*k 6)*	HRLT
Supplementary Subjects			
[2]History and Philosophy of Science: The Origins of Science	Dr J. Lidwell-Durnin	T. 12 *(wks 1-8)*	Lecture Theatre History Faculty, George Street
[1,2]Quantum Chemistry	Prof D.E. Manolopoulos & Prof S.R. Mackenzie	T. F. 11 *(wks 1-3)* T. F. 11 *(wks 4-8)*	Inorganic Chemistry Lab Physical and Theoretical Chemistry Laboratory

THIRD YEAR

Options Paper 1			
[2]Materials & Devices for Optics & Optoelectronics	Prof. J.M. Smith	M. 10, F. 12 *(wks 4-7)* T. 12 *(wks 4-7)*	LR8 BRLT
[2]Prediction of Materials Properties	Prof. F. Giustino	W. Th. F. 9 *(wks 3-6)*	LR8
[2]Nanomaterials	Prof. N. Grobert, Prof. K. Porfyrakis & Prof. H. Bhaskaran	W. F. 12 *(wk 3)* M. W. 12 *(wk 4)* M. 9, W. 12 *(wks 5-8)*	LR8
[2]Engineering Ceramics: Synthesis & Properties	Prof. R.I. Todd	Th. 12, F. 10 *(wks 3-6)* T. 11 *(wks 4-7)*	LR8 BRLT
[2]Advanced Manufacture with Metals and Alloys: Processing, Joining & Shaping	Prof. K.A.Q. O'Reilly & Dr B-S Li	W. Th. 11 *(wks 3-7)* M. 12 *(wks 6-7)*	LR8
Options Classes			
[2,3]Materials & Devices for Optics & Optoelectronics	Class Lecturer		
Class 1	Prof. J.M. Smith	T. 4, Th. 9, Th. 4 *(wk 7)*	ETBCR
Class 2	Prof. J.M. Smith	T. 9, T. 2, Th. 9 *(wk 8)*	ETBCR
Class 3	Prof. J.M. Smith	M. 9, T. 2, Th. 4 *(wk 3 HT)*	BRCR

Subject	*Lecturer*	*Time*	*Place*
[2,3]Advanced Manufacture with Metals & Alloys	Class Lecturer		
Class 1	Prof. K.A.Q. O'Reilly	Th. 2, F. 9, F. 2 *(wk 7)*	ETBCR
Class 2	Dr B-S Li	T. 9, W. 11, W. 4 *(wk 3 HT)*	BRCR
[2,3]Prediction of Materials Properties	Class Lecturer		
Class 1	Prof. F. Giustino	W. 4, F. 4 *(wk 5)*	BRLT
Class 2	Prof. F. Giustino	W. 4, F. 4 *(wk 6)*	BRLT
Class 3	Prof. F. Giustino	W. 4, F. 4 *(wk 7*	BRLT
[2,3]Nanomaterials	Class Lecturer		
Class 1	Prof N. Grobert	W. 2, F. 4 *(wk 6)* T. 9 *(wk 7)*	ETBCR
Class 2	Prof K. Porfyrakis	T. 11, T. 4, Th. 11 *(wk 8)*	ETBCR
Class 3	Prof H. Bhaskaran	M. 4, W. 2, F. 4 *(wk 3 HT)*	BRCR
[2,3]Engineering Ceramics: Synthesis & Properties	Class Lecturer		
Class 1	Prof. R.I. Todd	W. 4, F. 2 *(wk 6)* T. 2 *(wk 7)*	ETBCR
Class 2	Prof. R.I. Todd	M. 10, M. 4, W. 9 *(wk 8)*	ETBCR
Class 3	Prof. R.I. Todd	T. 4, Th. 2, F. 2 *(wk 3 HT)*	BRCR
Other Lectures			
Introduction to Characterisation/Modelling Modules	Prof. M.P. Moody & Prof. J.R. Yates	T. 10 *(wk 5)*	HRLT
Feedback for JCCU	JCCU Reps	F. 11 (wk 6)	IEB LR8
Presentation by Johnson-Matthey	HoD & Johnson-Matthey Representative	Th. 12-2 *(wk 2)*	BRCR
Introduction to Team Design Project	Dr A.O. Taylor	M. 9.30-10.30 *(wk 1)*	BRCR
TDP Workshop on Markets and Market Disruptors	Prof. S. Newbury	M 2-3.30 *(wk 1)*	BRCR
Team Design Project Presentations	2x Examiners	F. 1-6 *(wk 3)*	ETBCR
External Part II Project Briefing	Prof. K.A.Q. O'Reilly	M. 12 *(wk 5)*	BRLT
Industrial Visit	Prof. K. Porfyrakis	Th. 1-6pm *(wk 5)*	HRF
'Supercollection' Feedback GP1/2	Various	T. 2-4 (wk 4)	BRLT
'Supercollection' Feedback GP3/4	Various	W. 2-4 (wk 4)	BRLT

Subject	*Lecturer*	*Time*	*Place*
FOURTH YEAR			
Part II Induction Course	Prof. K.A.Q. O'Reilly & others	M. 9.30 – 12.30 *(wk -3)*	HRLT
Part II Project Management	Prof. K.A.Q. O'Reilly & others	Th. 1.30 – 5 *(wk -3)*	HRLT
Workshops on Ethics & Sustainability, in the context of Part II	Co-ordinated by Prof. S. Newbury	W. 2–5 *(wk 3)*	HRLT
DPhil Open Day	Dr A.O. Taylor & tbc	W. 2.30-4 *(wk 2) tbc*	ETBCR
Information Skills & Managing Your References	L. Ristic (RSL)	M. 09.30-11.30 *(wk -1)*	RSL Seminar Room
Patent Literature	L. Ristic (RSL)	W. 2-4 *(wk 6)*	RSL Seminar Room
Careers and Networking Evening with Alumni (for Yr 3+ postgraduates, post-doctoral researchers, & Part II students)	Dr A.O. Taylor & others	F. 4-6.30 (*wk 1)*	HRLT then HB Café
The OU Careers Service – Active Job Hunting	Dr A. Evans	T. 1 (*wk 1)*	ETBCR
Industrial Visit	Prof. K. Porfyrakis	Th. 1-6pm *(wk 5 or 6) tbc*	HRF
MATLAB Workshop - Refresher	*tbc*	*tbc*	HBTL
MATLAB Workshop – Next Level	*tbc*	*tbc*	HBTL
LabVIEW workshop	Dr N. Youngblood & Dr Z. Cheng	T. 9.30-12.00 *(wk 3)*	HBTL
Presentation by Johnson-Matthey	HoD and Johnson-Matthey Representative	Th. 12-2 (wk 2)	BRCR

POSTGRADUATES

Please also see the Researcher Training sub-site on WebLearn, https://weblearn.ox.ac.uk/portal/hierarchy/grad

Postgraduate training			
Induction course for Postgraduate students	Dr A.O. Taylor & others	M. T. 9-5 *(wk 0)*	HRLT
Safety (Compulsory for all new research workers)	Prof. A.A.R. Watt	T. 10 *(wk 1)*	HRLT
Hydrofluoric Acid Safety	Prof. A.A.R. Watt	T. 11 *(wk 1)*	HRLT
OU Introduction to Laser Safety	Safety Office	T. 11 *(wk 6)*	Wolfson Seminar Room, Chemistry Research Lab, Mansfield Road
The OU Careers Service – Active Job Hunting	Dr A. Evans	T. 1 (*wk 1)*	ETBCR
Looking to the Future – What Do Employers Seek? (for 1st year postgraduates)	Dr R. Bray (OUCaS), Dr A.O. Taylor, Dr A. Norton (Rolls-Royce), Dr M. Saran (Royal Bank of Scotland)	F. 3-4.30 *(wk 5)*	HRLT

Subject	*Lecturer*	*Time*	*Place*
Careers and Networking Evening with Alumni (for Yr 3+ postgraduates, post-doctoral researchers, & Part II students)	Dr A.O. Taylor & others	F. 4-6.30 (*wk 1)*	HRLT then HB Café
Project Management	Dr P.D. Warren, NSG (Pilkington), & Dr A.O. Taylor	F. 12-1 (wk 4) F. 2-4 (wk 4)	HRLT BRCR
The Institute of Materials – Benefits of Student Membership	S Boad, Institute of Materials	M. 12 *(wk 4)*	HRLT
Owning a successful DPhil	JCCG	tbc	tbc
X-ray Diffractometry	Prof. C.R.M. Grovenor	M. 10 *(wks 2-3)*	HRLT
Optical Microscopy	Prof. P.D. Nellist	M. 2.00-4.00 *(wk 2)*	HRLT
Poster Presentation Skills	Dr A.O. Taylor	T. 3.30-5 *(wk 8)*	HRLT
Presentation by Johnson-Matthey	HoD & Johnson-Matthey Representative	Th. 12-2 *(wk 2)*	BRCR
Teaching Skills: Tutoring Maths Classes	Dr J. Barnes	F. 2-5 *(wk 1)*	BRCR
Teaching Skills: Tutoring Materials Science	Prof. S.C. Speller	Th. 2-5 *(wk 2)*	ETBCR
Teaching Skills: Delivering a UG Lecture Course	Dr A.O. Taylor	M. 2-5 (wk 2)	ETBCR
Teaching Skills: Junior Demonstrating in the Materials Teaching Lab	Prof. S. Lozano-Perez & others	M. 11-1.30 *(wk 7)* *OR* F. 11-1.30 *(wk 7)*	BRCR
Introduction to RSL	Dr L. Ristic	T. 3.30-4.00 *(wk 0)*	RSL Training Room
Information Skills	Dr L. Ristic	F 10.30-12 *(wk 2)*	RSL Training Room
Patent Literature	Dr L Ristic	W. 2-4 (wk 7)	RSL Training Room
MATLAB Workshop (*if required*)	tbc	tbc	
LabVIEW workshop	Dr N. Youngblood & Dr Z. Cheng	T. 9.30-12.00 *(wk 3)*	HBTL
Industrial Visit	Prof. K. Porfyrakis	Th. 1-6 *(wk 5 or 6)*	HRF
Postgraduate lecture courses			
Foundation Topics for Electron Microscopy	Dr N.P. Young, Dr G.M. Hughes & Prof. P.D. Nellist	W. 11, Th. 2 *(wks 1-3)* T. 11 *(wk 2-3)*	HRLT
Microscopy and Analysis of Surfaces	Dr C.S. Allen	M. 9 *(wk 5-6)* Th. F. 9 *(wks 4-6)*	HRLT
Fusion CDT: Radiation Damage	tbc	M-F. 9.30-5 (wk 6)	BRCR
Fusion CDT: Materials for Application	Prof. D.E.J. Armstrong	M-F 9.30-5 (wk 5)	BRCR
Scientific Computing	Prof. N. Trefethen	T.11 (*w 2-7*) F.12 (*w 2*) Th. 11 (*w 3-7*)	Mathematical Institute, L3
[5]Modular training courses in electron microscopy			
Electron Backscattering Diffraction (EBSD)	Dr G.M. Hughes, Dr P. Karamched & J. Holter	*tbc*	Sign-up as below [8]
Focussed ion-beam milling (FIB)	Dr G.M. Hughes	*tbc*	Sign-up as below [8]

Subject	*Lecturer*	*Time*	*Place*
Options Lectures			
[2,4]Materials & Devices for Optics & Optoelectronics	Prof. J.M. Smith	M. 10, F. 12 *(wks 4-7)* T. 12 *(wks 4-7)*	LR8 BRLT
[2,4]Prediction of Materials Properties	Prof. F. Giustino	W. Th. F. 9 *(wks 3-6)*	LR8
[2,4]Nanomaterials	Prof. N. Grobert, Prof. K. Porfyrakis & Prof. H. Bhaskaran	W. F. 12 *(wk 3)* M. W. 12 *(wk 4)* M. 9, W. 12 *(wks 5-8)*	LR8
[2,4]Engineering Ceramics: Synthesis & Properties	Prof. R.I. Todd	Th. 12, F. 10 *(wks 3-6)* T. 11 *(wks 4-7)*	LR8 BRLT
[2,4]Advanced Manufacture with Metals and Alloys	Prof. K.A.Q. O'Reilly & Dr B-S Li	W. Th. 11 *(wks 3-7)* M. 12 *(wks 6-7)*	LR8
Options Classes			
[2,3,4]Materials & Devices for Optics & Optoelectronics	Class Lecturer		
Class 1	Prof. J.M. Smith	T. 4, Th. 9, Th. 4 *(wk 7)*	ETBCR
Class 2	Prof. J.M. Smith	T. 9, T. 2, Th. 9 *(wk 8)*	ETBCR
Class 3	Prof. J.M. Smith	M. 9, T. 2, Th. 4 *(wk 3 HT)*	BRCR
[2,3]Advanced Manufacture with Metals & Alloys	Class Lecturer		
Class 1	Prof. K.A.Q. O'Reilly	Th. 2, F. 9, F. 2 *(wk 7)*	ETBCR
Class 2	Dr B-S Li	T. 9, W. 11, W. 4 *(wk 3 HT)*	BRCR
[2,3,4]Prediction of Materials Properties	Class Lecturer		
Class 1	Prof. F. Giustino	W. 4, F. 4 *(wk 5)*	BRLT
Class 2	Prof. F. Giustino	W. 4, F. 4 *(wk 6)*	BRLT
Class 3	Prof. F. Giustino	W. 4, F. 4 *(wk 7*	BRLT
[2,3,4]Nanomaterials	Class Lecturer		
Class 1	Prof N. Grobert	W. 2, F. 4 *(wk 6)* T. 9 *(wk 7)*	ETBCR
Class 2	Prof K. Porfyrakis	T. 11, T. 4, Th. 11 *(wk 8)*	ETBCR
Class 3	Prof H. Bhaskaran	M. 4, W. 2, F. 4 *(wk 3 HT)*	BRCR
[2,3,4]Engineering Ceramics: Synthesis & Properties	Class Lecturer		
Class 1	Prof. R.I. Todd	W. 4, F. 2 *(wk 6)* T. 2 *(wk 7)*	ETBCR
Class 2	Prof. R.I. Todd	M. 10, M. 4, W. 9 *(wk 8)*	ETBCR
Class 3	Prof. R.I. Todd	T. 4, Th. 2, F. 2 *(wk 3 HT)*	BRCR
Research colloquia			
Materials Colloquia		Th. 3:30-5pm (*wks 1,3,4,8)*	HRLT
QIP Seminars		tbc	Phrontisterion
Modelling Seminars		F. 2-4 (wks 2-4, 7-8)	HRLT

[1]Students who wish to attend the Supplementary Subject lectures should be aware that due to timetabling constraints, some of the lectures may overlap with core lectures.
[2]The lecture courses each have three hours of associated classes
[3]Students attend one class in each week and need to register for a specific class via WebLearn
[4]This course is also offered to undergraduates as a 3rd year option. All postgraduates are welcome to take the course. They may select it as one of the two assessed courses in the first year provided they have not already taken the course as an undergraduate.
[5]Places on these courses are limited. Please apply to emaccess@materials.ox.ac.uk at least 2 weeks before the scheduled start date (this reflects the minimum provision – alternative arrangements may be available by contacting Dr Neil Young at emaccess@materials.ox.ac.uk.

UNDERGRADUATE TEACHING LAB PRACTICAL SCHEDULES FOR MICHAELMAS TERM 2018

Senior Demonstrators and their Deputies are reminded that they are required to be in the Department on the days their practicals are scheduled

MT Wk	YEAR 1 (Thur, Fri) [except Week1, when it is Weds-Fri]
1	1P1a, Intro to Computing (**PJW**, Rob Saunders)
2	1P1b, Intro to Microscopy (**KAQOR**, SLP)
3 4	1P10, Intro to MatLab (**AARW**, tbc)
5 6	1P9, Polymers (**AARW + tbc**, HEA)
7 8	1P2, Young's Modulus (**JaMS**, TJM)

MT Wk	YEAR 2 (Mon, Tue, Wed)
1 2	2P2, Dislocations & Deformation (**B-S Li**, JTC)
3 4	2P9, Steels (**C Salter**, TJM)
5 6	2P10, Materials Selection (**DEJA**, tbc)
7 8	2P3, Casting (**KAQOR**, tbc)