

DEPARTMENT OF MATERIALS

DIVISION OF MATHEMATICAL, PHYSICAL AND LIFE SCIENCES

Lecture List for Michaelmas Term 2022

Lectures begin on the first possible day after the beginning of Full Term (Sunday, 09 October) unless otherwise stated

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

No food or drink (except bottled water) is permitted in the lecture theatres.

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
HRMR	Hume-Rothery Meeting Room, Hume-Rothery Building
HBTL	Holder Building Teaching Labs, Holder Building
HRF	Hume-Rothery Foyer, Hume-Rothery Building
RR	Rex Richards Room 40.08, Rex Richards Building

Subject	Lecturer	Time	Place
FIRST YEAR			
Induction Course	Prof. H.E. Assender, Prof. T.J. Marrow, Ms P.J. Moss & others	F. 1.15-5.00 (<i>wk 0</i>)	HRLT
Introduction to Prelims Programme	Prof. T.J. Marrow	M. 12 (<i>wk 1</i>)	HRLT
Introduction to Maths and Computing for Materials Science	Dr J. Prentice	T. 9 (<i>wk 1</i>)	HRLT
Introduction to Practicals	Prof. P.D. Nellist	M. 9.30 (<i>wk 1</i>)	HRLT
Introduction to IT Tools	Dr P.J. Warren	W. Th. F. 2-5 (<i>wk 1</i>)	HBTL
Practical Classes	Various staff	Th. F. 2-5 (<i>wks 2-8</i>)	HBTL
Teaching, Study Skills & Learning Development	Prof. T.J. Marrow	Th. 11 (<i>wk 3</i>)	HRLT
The Institute of Materials - Benefits of Student Membership	S Boad – Institute of Materials	M. 12 (<i>wk 4</i>)	HRLT
Workshop on (i) Writing a Full Report on a Practical and (ii) Keeping a Good Laboratory Notebook	Prof. P.D. Nellist	T. 9 (<i>wk 2</i>)	HRLT
Introduction to Errors in Measurement	Prof. J.M. Smith	W. Th. 12 (<i>wk 1</i>)	HRLT
Crystal Model Make & Keep	Prof. M.R. Castell	<i>Recommended view time of online lectures</i> T. 9.00-10.30 (<i>wk 3</i>)	
Crystallography Classes	Dr A. Mostaed & tbc	T. 9-12 (<i>wks 4,6,8</i>)	LR3 Thom Building
Computing for Materials Science MATLAB Classes	Prof. J.R. Yates	T. 9-12 (<i>wks 5,7</i>)	RR and BRCR
Materials Science 1: Physical Foundations of Materials			
The Study of Crystalline Materials by Diffraction	Prof. A.I. Kirkland	<i>Recommended view time of online lectures</i> M. W. Th. F. 11 (<i>wk 1</i>) T. W. Th. F. 11 (<i>wk 2</i>)	
		Q&A workshop M. 11 (<i>wk 2</i>) F. 12 (<i>wk 4</i>)	HRLT LR8
Materials Science 2: Structure and Mechanical Properties of Materials			
Elastic Deformation	Prof. A.J. Wilkinson	M. W. Th. F. 12 (<i>wks 2,3</i>)	HRLT
Structures of Crystalline and Glassy Materials	Prof. K.A.Q. O'Reilly & Prof. M.L. Galano	M. W. Th. F. 12 (<i>wks 5-6</i>)	HRLT
Materials Science 3: Transforming Materials			
Thermodynamics	Prof. M.P. Moody	M. W. Th. F. 9 (<i>wks 3-4</i>)	HRLT
Microstructure & Processing of Materials I	Prof. C.R.M. Grovenor	F. 11 (<i>wk 4</i>) M. F. 9 (<i>wks 5-7</i>) Th. 11 (<i>wk 7</i>)	HRLT
Introduction to Nanomaterials	Prof. N. Grobert	W. Th. 11 (<i>wk 4</i>) W. Th. 9 (<i>wks 5-6</i>) Th. 9 (<i>wk 7-8</i>)	HRLT

Subject	Lecturer	Time	Place
		<i>Recommended view time of online lectures</i> W. 9 (wk 7)	
Mathematics for Materials Science			
Ordinary and Partial Differentiation	Dr E. Liberti	<i>Recommended view time of online lectures</i> W. Th. F. 9 (wk 1) M. W. Th. F. 9 (wk 2)	
		Live Q&A workshop F. 10 (wks 1-2)	HRLT
Vectors & Matrices	Prof. S.C. Benjamin	<i>Recommended view time of online lectures</i> M. W. F. 11 (wk 3) W. Th. 12 (wk 4) W. Th. F. 11 (wks 5&6)	
		Live Q&A workshop M. 11 (wk 5) M. 11 (wk 6) M. 11 (wk 7)	LR8 HRLT LR8

SECOND YEAR			
GP1: Lifecycle, Processing & Engineering of Materials			
Selection & Production of Engineering Materials I	Prof. H.E. Assender & Prof. M.L. Galano	Th. 10 (wk 1) M. 10, W. 12, Th. 10 (wk 2)	BRLT
GP2: Electronic Properties of Materials			
Electronic Structure of Materials	Dr C.E. Patrick	M. 12 (wks 1-2) F. 12 (wks 1-4) Th. 12 (wks 1,3-4) M. 10 (wks 3-4) Th. 9 (wk 2)	BRLT
GP3: Mechanical Properties of Materials			
Elastic Deformation of Materials	Prof. P.D. Nellist & Dr J. Ramirez Gonzalez	M. W. 9 (wks 3-6) Th. 9 (wks 3,5)	BRLT
GP4: Structure & Thermodynamics of Materials			
Statistical Mechanics and Thermal Properties	Prof. J.M. Smith	Th. F. 12 (wks 5-7) W. 12 (wks 6-7)	BRLT
Phase Transformations	Prof. C.R.M. Grovenor	T. W. 10 (wks 2-7) Th. 10 (wks 3-6)	BRLT
Other Lectures			
Introduction to the Part I Materials Programme	Prof. T.J. Marrow	M. 10 (wk 1)	BRLT
Introduction to Practicals	Prof. P.D. Nellist	M. 9.00-9.30 (wk 1)	HRLT

Subject	Lecturer	Time	Place
Workshop on (i) Writing a Full Report on a Practical and (ii) Keeping a Good Laboratory Notebook	Prof. P.D. Nellist	W. 9 (<i>wk 2</i>)	BRLT
Mathematics – Partial Differential Equations & Fourier Series, and Tensors	Prof. S.C. Benjamin & Dr B. Koczor	T. F. 9 (<i>wks 1-6</i>)	BRLT
Entrepreneurship/Business Plan – workshop on ‘Teams’	Dr E. Williams	F. 2–4 (<i>wk 3</i>)	Via Zoom
Engineering & Society: Entrepreneurship/Business plan briefing	Dr S.M. Wilkinson	Th. 2–3.30 (<i>wk 8</i>)	BRLT
Presentation by Johnson-Matthey	Dr E Liotti & Johnson-Matthey representative	Th. 1-2.30 (<i>wk 6</i>)	LR8
Introduction to Industrial Visits	Dr E. Liotti	W. 9 (<i>wk 1</i>)	BRLT
Practical Classes	Various staff	M. T. W. 2-5 (<i>wks 1-8</i>)	HBTL
Industrial Visit	Dr E. Liotti	F. 1-6 (<i>wk 4</i>) AND/OR Th. 1-6 (<i>wk 5</i>)	HRF
Supplementary Subjects			
² History and Philosophy of Science: The Origins of Science	Prof. C. Jackson	T. 12 (<i>wks 1-8</i>)	Lecture Theatre History Faculty, George Street
^{1,2} Quantum Chemistry	Prof D.E. Manolopoulos & Prof S.R. Mackenzie	T. F. 11 (<i>wks 1,3-7</i>) M. F. 11 (<i>wk 2</i>)	Physical and Theoretical Chemistry Laboratory

THIRD YEAR			
Options Paper 1			
² Materials & Devices for Optics & Optoelectronics	Prof. L. Bogani & Prof. A.A.R. Watt	M. 10, T. 12, Th. 12 (<i>wk 4</i>) M. 10, T. 12, Th. 11 (<i>wk 5</i>) M. 2, T. 12, Th. 2 (<i>wks 7&8</i>)	HRLT
² Prediction of Materials Properties	Dr C.E. Patrick	W. 10, Th. 2 (<i>wk 3</i>) M. 2, T. 3, W. 10 (<i>wk 4</i>) T. 3, W. 10, F. 2 (<i>wk 5</i>) T. 11, W. 10 (<i>wks 7-8</i>)	HRLT
² Magnetic and Superconducting Materials	Prof. S.C. Speller & Prof. L. Bogani	T. 2, Th. 10, F. 10 (<i>wks 4-5</i>) M. 10, Th. 12, F. 3 (<i>wks 7-8</i>)	HRLT
² Engineering Ceramics: Synthesis & Properties	Prof. R.I. Todd	W. 2 (<i>wk 3</i>) T. 9, W. 2 (<i>wk 8</i>)	HRLT
		<i>Recommended view time of online lectures</i> Th. 11, F. 11 (<i>wk 3</i>) T. 9, F. 4 (<i>wk 4</i>) T. 9, W. 2, Th. 2 (<i>wk 5</i>) T. 9, W. 2 (<i>wk 7</i>)	
² Microstructural Control in Engineering Alloys	Prof. K.A.Q. O'Reilly & Dr E. Liotti	W. 11, Th. 10, F. 10 (<i>wk 3</i>) M. 3, T. 11 (<i>wk 4</i>) M. 11 (<i>wk 5</i>) M. 11, W. 11, Th. 10 (<i>wks 7&8</i>)	HRLT

Subject	Lecturer	Time	Place
Options Classes			
^{2,3} Materials & Devices for Optics & Optoelectronics	Class Lecturer		
Class 1	Dr M. Slota	W. 12, F. 9 (<i>wk 7</i>)	ETBCR
Class 2	Dr M. Slota	T. 9, T. 4 (<i>wk 8</i>) F. 9 (<i>wk 8</i>)	BRCR ETBCR
Class 3	Dr M. Slota	tbc (<i>wk 2 HT</i>)	tbc
^{2,3} Prediction of Materials Properties	Class Lecturer		
Class 1	Dr C.E. Patrick	M. 3, T. 4, Th. 3 (<i>wk 7</i>)	ETBCR
Class 2	Dr C.E. Patrick	T. 4, W. 3, Th. 3 (<i>wk 8</i>)	ETBCR
Class 3	Dr C.E. Patrick	tbc (<i>wk 2 HT</i>)	
^{2,3} Magnetic & Superconducting Materials	Class Lecturer		
Class 1	Dr G. Matthews	T. 2, W. 3, F. 11 (<i>wk 8</i>)	BRLT
Class 2	Dr M. Slota	tbc (<i>wk 2 HT</i>)	
^{2,3} Engineering Ceramics: Synthesis & Properties	Class Lecturer		
Class 1	Prof. R.I. Todd	M. 3, T. 2, Th. 3 (<i>wk 7</i>)	BRCR
Class 2	Prof. R.I. Todd	M. 3, T. 2, F. 11 (<i>wk 8</i>)	BRCR
Class 3	Prof. R.I. Todd	tbc (<i>wk 2 HT</i>)	tbc
^{2,3} Microstructural Control in Engineering Alloys	Class Lecturer		
Class 1	Prof K.A.Q. O'Reilly & Dr E. Liotti	F. 9 (<i>wk 7</i>) Th. 3, F. 9 (<i>wk 8</i>)	BRCR
Class 2	Prof. K.A.Q. O'Reilly & Dr E. Liotti	HT Week 2	tbc
Other Lectures			
Introduction to Characterisation/Atomistic Modelling Option Modules	Prof. M.P. Moody, Dr C.E.P. Patrick & Prof. J.R. Yates	M. 2.00 (<i>wk 5</i>)	HRLT
Introduction to Modelling in Materials	Prof. J.R. Yates, Prof. R. Drautz and Dr J. Gong	M-F 9-5 (<i>wk 6</i>) Detailed schedule to be circulated in advance	LR8/RR
Introduction to Team Design Project	Prof. A.A.R. Watt	M. 9.30-10.30 (<i>wk 1</i>)	LR8
TDP Workshop on Markets and Market Disruptors	Prof. S. Newbury	M. 2 (<i>wk 1</i>)	HRLT
Team Design Project Presentations	2x Examiners	F. 1-6 (<i>wk 3</i>)	ETBCR
External Part II Project Briefing	Prof. J.T. Czernuszka	M. 12 (<i>wk 4</i>)	BRLT
Industrial Visit	Dr E. Liotti	F. 1-6 (<i>wk 4</i>) AND/OR Th. 1-6 (<i>wk 5</i>)	HRF
'Supercollection' Feedback GP1/2	Various	W. 2-4 (<i>wk 4</i>)	BRLT
'Supercollection' Feedback GP3/4	Various	Th. 2-4 (<i>wk 4</i>)	BRLT

Subject	Lecturer	Time	Place
FOURTH YEAR			
Part II Induction Course	Prof. J.T. Czernuszka & others	M. 9.30 – 1.30 (<i>wk -3</i>)	HRLT
Part II Project Management	Prof. J.T. Czernuszka & others	Th. 1.30 – 5 (<i>wk -3</i>)	HRLT
Workshops on Ethics & Sustainability, in the context of Part II	Co-ordinated by Prof. S. Newbury	W. 1.30 - - 5 (<i>wk 5</i>)	HRLT
Workshop on Engineering/Scientific Context in respect of Part II Projects	Prof. R.C. Reed	M. 9 (<i>wk 7</i>)	BRLT
DPhil Open Day	Dr A.O. Taylor & HoD	W. 2.30-4 (<i>wk 3</i>)	BRCR
Information Skills & Managing Your References	A. Vetrugno (RSL)	M. 10 (<i>wk -1</i>)	HRLT
Reference Management Workshop	A. Vetrugno (RSL)	F. 2,30 (<i>wk 5</i>)	BRCR
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 (<i>wk 2</i>)	HB Café
The OU Careers Service – Active Job Hunting	Dr A. Evans	T. 12 (<i>wk 1</i>)	HRLT
Industrial Visit	Dr E. Liotti	F. 1-6 (<i>wk 4</i>) <i>tbc</i> AND/OR Th. 1-6 (<i>wk 5</i>) <i>tbc</i>	HRF
LabVIEW workshop	Prof. A.A.R. Watt	W. 9.30-12.30 (<i>wk 4</i>)	HBTL

POSTGRADUATES

Please also see the Researcher Training area on the MPLS website:
<https://www.mpls.ox.ac.uk/training/pgr/PGR>

Postgraduate training			
Induction course for Postgraduate students	Dr A.O. Taylor & others	M. T. 9-5 (<i>wk 0</i>)	HRLT
Safety (Compulsory for all new research workers)	D R. Passmore & C. Foldbjerg-Holdway	T. 10 (<i>wk 1</i>)	HRLT
⁵ Hydrofluoric Acid Safety	C. Foldbjerg Holdway	T. 11 (<i>wk 1</i>)	Via Teams
⁵ Safe Handling of Compressed Gas Cylinders	C. Foldbjerg Holdway	W. 10 (<i>wk 1</i>)	Via Teams
OU Introduction to Laser Safety	contact the University Safety Office	M. 2 (<i>wk 1</i>)	Basement Training Room, 10 Parks Road
The OU Careers Service – Active Job Hunting	Dr A. Evans	T. 12 (<i>wk 1</i>)	HRLT
Looking to the Future – What Do Employers Seek? (for 1 st year postgraduates)	OUCaS, Dr A.O. Taylor	F. 3-4.30 (<i>wk 5</i>)	HRLT
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 (<i>wk 2</i>)	HB Café
Introductory Meeting with Departmental Advisors	Dept Advisors	W. 11-11.30 (<i>wk 7</i>)	BRCR

Subject	Lecturer	Time	Place
Project Management	Dr P.D. Warren, NSG (ex Pilkington), & Dr A.O. Taylor	F. 12-1 (wk 4) F. 2-4 (wk 4)	HRLT HRLT
The Institute of Materials – Benefits of Student Membership	S Boad, Institute of Materials	M. 12 (wk 4)	HRLT
Owning a successful DPhil	JCCG	<i>tbc</i>	<i>tbc</i>
X-ray Diffractometry	Prof. S.C. Speller	<i>Recommended view time of online lectures</i> M. 10 (wks 3-4)	
Optical Microscopy	Prof. P.D. Nellist	M. 2.30-4.30 (wk 2)	HRLT
Poster Presentation Skills	Dr A.O. Taylor	T. 3.30-5 (wk 8) <i>tbc</i>	HRLT
Teaching Skills: Tutoring Maths Classes	Prof. J.R. Yates	F. 2-5 (wk 1)	BRCR
Teaching Skills: Tutoring Materials Science	<i>tbc</i>	Th. 2-5 (wk 2)	BRCR
Teaching Skills: Delivering a UG Lecture Course	Prof. T.J. Marrow	W. 2-5 (wk 4)	BRCR
Teaching Skills: Junior Demonstrating in the Materials Teaching Lab	Prof. P.D. Nellist & D.R. Passmore	M. 11.30-1 (wk 6) <i>OR</i> F. 11.30-1 (wk 6)	BRCR ETBCR
Information Skills	A. Vetrugno, RSL	T. 10 (wk 3)	HRLT
LabVIEW workshop	Prof. A.A.R. Watt	W. 9.30-12.30 (wk 4)	HBTL
Industrial Visit	Dr E. Liotti	F. 1-6 (wk 4) <i>AND/OR</i> Th. 1-6 (wk 5)	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 (wks 2-3)	BRLT
Microscopy and Analysis of Surfaces	Dr C.S. Allen	T. Th. 11 (wks 6-8) F. 10 (wks 6-7)	BRLT
Atomistic Modelling	Dr C.E. Patrick & Prof. J.R. Yates	<i>Recommended view time of online lectures</i> M. T. 9 (wks 3-7)	
		<i>Live Q&A workshops</i> Detailed schedule to follow	Via Teams
Options Lectures			
^{2,4} Materials & Devices for Optics & Optoelectronics	Prof. L. Bogani & Prof. A.A.R. Watt	M. 10, T. 12, Th. 12 (wk 4) M. 10, T. 12, Th. 11 (wk 5) M. 2, T. 12, Th. 2 (wks 7&8)	HRLT
² Prediction of Materials Properties	Dr C.E. Patrick	W. 10, Th. 2 (wk 3) M. 2, T. 3, W. 10 (wk 4) T. 3, W. 10, F. 2 (wk 5) T. 11, W. 10 (wks 7-8)	HRLT
^{2,4} Magnetic and Superconducting Materials	Prof. S.C. Speller & Prof. L. Bogani	T. 2, Th. 10, F. 10 (wks 4-5) M. 10, Th. 12, F. 3 (wks 7-8)	HRLT
^{2,4} Engineering Ceramics: Synthesis & Properties	Prof. R.I. Todd	W. 2 (wk 3) T. 9, W. 2 (wk 8)	HRLT
		<i>Recommended view time of online lectures</i> Th. 11, F. 11 (wk 3) T. 9, F. 4 (wk 4) T. 9, W. 2, Th. 2 (wk 5) T. 9, W. 2 (wk 7)	

Subject	Lecturer	Time	Place
^{2,4} Microstructural Control in Engineering Alloys	Prof. K.A.Q. O'Reilly & Dr E. Liotti	W. 11, Th. 10, F. 10 (<i>wk 3</i>) M. 3, T. 11 (<i>wk 4</i>) M. 11 (<i>wk 5</i>) M. 11, W. 11, Th. 10 (<i>wks 7&8</i>)	HRLT
Research colloquia			
Materials Colloquia		Th. 3:30-5pm (<i>wks 3,4,6,8</i>)	HRLT

¹Students 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.

²The lecture courses each have three hours of associated classes

³Y3 UG students attend one class in each week and need to register for a specific class via [Canvas](#)

⁴This 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 Contact Christina Foldbjerg Holdway for details and an invitation:

christina.foldbjerg@materials.ox.ac.uk

UNDERGRADUATE TEACHING LAB PRACTICAL SCHEDULES FOR MICHAELMAS TERM 2022

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 Tues-Fri]
1	1P1a, Intro to Computing (PJW , M.T. Ansari)
2	1P1b, Intro to Microscopy (KAQOR , SLP)
3 4	1P2, Intro to MatLab (AARW/RSB)
5 6	1P3, Young's Modulus (TJM/PDN)
7 8	1P4 Metallography (tbc , AJW)

MT Wk	YEAR 2 (Mon, Tue, Wed)
1 2	2P1, Materials Selection (DEJA , SCS)
3 4	2P2, Steels (tbc , MPM)
5 6	2P3, Extrusion (M Danaie , MLG)
7 8	2P4, Casting (KAQOR , MLG)