

Appendix A: Engineering Modules for Postgraduate Students

Modules for 2026-2027

Explanation of the terms below are on the second page.

	Number and title of module		Term	Mode	Contact	CRSID
Group A: Energy, Fluid Mechanics, and Turbomachinery	4A2	Computational Fluid Dynamics	M	C	Dr J. Taylor	jvt24
	4A3	Turbomachinery I	M	C + E	Prof R. Miller	rjm76
	4A4	Aircraft Stability and Control	M & L	C	Dr M. Vera-Morales	mv234
	4A7	Aerodynamics	M	C	Dr J. Jarrett	jpj1001
	4A9	Molecular Thermodynamics	M	E	Dr A. White	ajw36
	4A12	Turbulence and Vortex Dynamics	M	E	Dr J. Li	jl305
	4A13	Combustion and Engines	L	E	Prof S. Swaminathan	ns341
Group B: Electrical Engineering	4A15	Acoustics	L	E	Prof A. Agarwal	aa406
	4B2	Power Microelectronics	M	E	Prof F. Udrea	fu10000
	4B5	Quantum and Nano-Technologies	M	E	Dr L. Sapienza	ls2052
	4B11	Photonic Systems	M	E	Prof T. Wilkinson	tdw13
	4B19	Renewable Electrical Power	M	E	Prof H. Joyce	hjj28
	4B23	Optical Fibre Communication	L	C + E	Prof S. Savory	sjs1001
	4B24	Radio Frequency Systems	L	C + E	Dr M. Crisp	mjc87
	4B28	Very Large Scale Integration (VLSI)	M	C + E	Dr M. Tang	wct26
Group C: Mechanics, Materials, and Design	4B29	Wireless Communication		C + E	Prof O. Akan	oba21
	4C2	Designing with Composites	M	C + E	Prof A. Markaki	am253
	4C3	Advanced Functional Materials and Devices	M	E	Prof J. Durrell	jhd25
	4C4	Design Methods	M	E	Prof J. Cullen	jmc99
	4C5	Design Case Studies	L	C	Prof N. Crilly	nc266
	4C6	Advanced Linear Vibrations	M	C + E	Dr J. Talbot	jpt1000
	4C8	Vehicle Dynamics	L	C + E	Dr X. Na	xnhn2
Group D: Civil, Structural, and Environmental Engineering	4C11	Data-driven and Learning Based Methods in Mechanics and Materials	L	C	Dr B. Liu	bl377
	4D2	Advanced Structural Design	L	C	Prof S. Guest	sdg13
	4D3	Environmental Engineering	L	E	Prof A. Al-Tabbaa	aa22
	4D5	Deep Foundations and Underground Construction	M	E	Prof S. Haigh	skh20
	4D7	Concrete Structures	M	C + E	Prof J. Orr	jjo33
	4D9	Offshore Geotechnical Engineering	L	E	Dr S. Stanier	sas229
	4D10	Structural Steelwork	M	C + E	Dr R. Foster	rmf41
	4D13	Architectural Engineering	M	C	Prof R. Choudhary	rc488
	4D15	Water Management Under Climate Change	L	C	Dr E. Borgomeo	eb973
Group E: Management and Manufacturing	4D17	Plate and Shell Structures	L	E	Prof K. Seffen	kas14
	4E4	Management of Technology	M	E	Dr L. Mortara	lm367
	4E11	Strategic Management	L	C	Dr C. Coleridge	cc905
	4E14	Organisational Behaviour and Change	L	C	Dr C. Eredi	ce470
	4E15	Environmental Sustainability and Business	M	E	Prof L. Reisch	lr540

	4E16	Operations Management	L	C	Dr N. Oraopoulos	no245
	4E17	Managing Engineering Risks in Real Life	L	E	Prof T. Minshall	thwm100
	4F1	Control System Design	M	C + E	Dr M. Filo	mf916
Group F: Information Engineering	4F2	Robust and Nonlinear Control	L	C	TBC	
	4F3	An Optimisation Based Approach to Control	L	E	Prof I. Lestas	icl20
	4F5	Advanced Information Theory and Coding	L	E	Prof A. Guillen i Fabregas	ag495
	4F8	Image Processing and Image Coding	L	E	Prof J. Lasenby	jl221
	4F10	Deep Learning and Structured Data	M	E	Prof M. Gales	mjfg100
	4F12	Computer Vision	M	E	Prof R. Cipolla	rc10001
	4F13	Probabilistic Machine Learning	M	C	Dr H. Ge	hg344
	4F14	Computer Systems	L	C + E	Prof A. Gee	ahg13
	4G1	Mathematical Biology of the Cell	M	C	Dr T. Savin	ts573
	4G2	Bioelectronics	L	C	Prof G. Malliaras	gm603
Group G: Bioengineering	4G8	Engineering Living Systems		E	Dr S. Bakshi	sb2330
	4G9	Biomedical Innovation	L	C	Dr T. Bashford	tb508
	4G10	Brain Machine Interface	M	C	Dr Y. Ahmadian	ya311
	4I8	Medical Physics	L	E	Prof G. Treece	gmt11
	4I10	Nuclear Reactor Engineering	M	E	Prof E. Shwageraus	es607
Group I: Imported modules	4I11	Advanced Fission & Fusion Systems	L	C	Prof E. Shwageraus	es607
	4M1	French	L	C	Prof D. Tual	dhpt2
	4M2	German	L	C	Mr J-M. Bogdanovic	jmb310
Group M: Multidisciplinary modules	4M3	Spanish	M	C	Mr S. Bianchi	asb49
	4M12	Partial Differential Equations and Variational Methods	L	E	Prof J. Biggins	jsb56
	4M16	Nuclear Power Engineering	L	E	Dr P. Cosgrove	pmc55
	4M17	Practical Optimization	M	C	Prof G. Parks	gtp10
	4M19	Advanced Building Physics	M	C	Prof G. Hunt	grh20
	4M21	Software Engineering and Design	L	E	Dr E. Punskeya	op205
	4M22	Climate Change Mitigation	M	C	Prof J. Allwood	jma42
	4M23	Electricity and Environment	L	C	Prof M. Pollitt	mgp20
	4M24	Computational Statistics and Machine Learning	M	C + E	Prof M. Girolami	mag92
	4M26	Algorithms and Data Structures	L	E	Dr A. Tewari	at2164
	4M29	Designed to Lead	M	C	Ms K. Lanucha	kl333

Additional Borrowing Modules made available by other courses. Note that permission from the module leader is needed to take these modules. Note: If you are interested in NT01, please contact the Postgraduate Office immediately	ESD150	Driving Change Towards Sustainability	M	C	Dr D. C. Morgan	dcm32
	ESD200	Sustainability Methods and Metrics	M	C	Dr A. Cabrera Serrenho	ag806
	ESD380	Resilience of Infrastructure Systems	L	C	Dr D. C. Morgan	dcm32
	ESD560	Innovations in Sustainable Manufacturing	L	C	Dr D. C. Morgan	dcm32
	ESD650	International Development	M	C	Dr D. C. Morgan	dcm32
	ESD950	Water Management for Development in a Changing Climate	L	C	Dr E. Borgomeo	eb973
	ETB1	Future Fuels	M	C	Dr S. A. Scott	sas37
	ETB2	Renewable Energy 1: Wind, Wave, Tidal and Hydro	L	C	Dr S. A. Scott	sas37
	ETB3	Renewable Energy 2: Solar and Biofuels	M + L	C	Prof N. Swaminathan	ns341
	NT01	Nanocharacterisation	M	C	[Contact PG Office]	graduate-studies@eng.cam.ac.uk

	NT04	Nanofabrication	M	C	[Contact PG Office]	graduate-studies@eng.cam.ac.uk
	NT09	Nanoelectrochemistry	L	C	[Contact PG Office]	graduate-studies@eng.cam.ac.uk
	5R20	Designed to Lead (equivalent to 4M26)	L	C	Ms Kasia Lanucha	kl333
Reading Groups Can replace one module (if two modules would otherwise be taken)	RC4	Manufacturing Management	L	C	Dr F. Tietze	ft263
	RC15	Engineering Design	L	C	Dr T. Bashford	tb508
	RC18	Nuclear	L	C	Prof G. T. Parks	gtp10

- ‘M’ refers to the Michaelmas (Winter) term; ‘L’ refers to the Lent (Spring) term.
- ‘Mode’ refers to mode of assessment: either by coursework (C), by written examination (E), or both (C&E). Note that the expected mode of examination is the Module Research Essay, but you are able to take the normal assessment by informing the Postgraduate Office before the METEOR deadline.
- The email addresses of contacts consist of that person’s CRSID, ending with @cam.ac.uk. For example, if somebody’s CRSID is rwdc2, that person’s email address is rwdc2@cam.ac.uk.
- Syllabuses for all modules borrowed from Part IIB of the Engineering Tripos can be found here: [Part IIB syllabuses; links to online resources | CUED undergraduate teaching site](#)
- Please note that some written examinations may clash with others. These are the examinations for modules which have been placed in the same ‘set’. Please do not take more than one module from the same ‘set’ if both modules are assessed, wholly or partly, by written examination (the rules applying to undergraduate students do not otherwise apply). A list of sets can be found here: [Part IIB syllabuses; links to online resources | CUED undergraduate teaching site](#)