Part IIA syllabuses; links to online resources

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Interactive booklists for Part IIA are available on Moodle.

Please note there are no Full Technical Reports associated with the following modules: all of the 3E modules, 3G1, 3G5 and 3M1. Full details are given in the coursework section of the syllabus page.

Group A: Energy, Fluid Mechanics and Turbomachinery

Module		Term (set)	Prerequisites Assumed	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)					
3A1	Fluid mechanics I (double module)	M(8), L(7)		Moodle	Dr A. Agarwal	Dr A. Agarwal Prof. P.A. Davidson
3A3	Fluid mechanics II (double module)	M(1), L(1)		Moodle	Prof. R.S. Cant	Prof. H. Babinsky Dr L Xu
3A5	Thermodynamics and power generation	M(7)		Moodle	Dr A.J. White	Prof. R.S. Cant
3A6	Heat and mass transfer	L(3)		Moodle	Prof. W.N. Dawes	Dr L. Xu

Group B: Electrical Engineering

Module		Term (set)	Prerequisites Assumed	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)					
3B1	Radio frequency electronics	M(3)		Moodle	Dr P.A. Robertson	Dr P.A. Robertson
3B2	Integrated digital electronics	L(3)		Moodle	Dr O.B. Akan	Dr O.B. Akan
3B3	Switch-mode electronics	M(2)		Moodle	Dr T. Long	Dr T. Long
3B4	Electric drive systems	L(2)		Moodle	Dr T. Flack	Dr T. Long
3B5	Semiconductor engineering	M(8)		Moodle	Dr H. Joyce	Prof. S. Hofmann
3B6	Photonic technology	L(7)		Moodle	Prof. R. Penty	Prof. R. Penty

Group C: Mechanics, Materials and Design

Module		Term (set)	Prerequisites Assumed	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)					
3C1	Materials processing and design	M(5)		Moodle	Dr H. Shercliff	Dr J. Durrell
3C5	Dynamics	M(6)		Moodle	Prof. H.E.M. Hunt	Prof. H.E.M. Hunt
3C6	Vibration	L(6)	3C5 useful	Moodle	Prof. D. Cebon	Prof. D. Cebon
3C7	Mechanics of solids	M(4)		Moodle	Prof. V. Deshpande	Prof. A. McRobie
3C8	Machine design	M(3)		Moodle	Dr D.J. Cole	Dr D.J. Cole
3C9	Fracture mechanics of materials and structures	L(5)	3C7 assumed	Moodle	Prof. N.A. Fleck	Dr B. Liu

Group D: Civil Engineering

Module		Term (set)	Prerequisites Assumed	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)					
3D1	Geotechnical engineering I	M(1)		Moodle	Dr S.A. Stanier	Prof. G. Madabhushi
3D2	Geotechnical engineering II	L(1)	3D1	Moodle	Prof. G. Viggiani	Prof. G. Viggiani
3D3	Structural materials and design	M(2)		Moodle	Dr R. Foster	Dr R. Foster
3D4	Structural analysis and stability	L(2)		Moodle	Dr F. Cirak	Prof. A. McRobie
3D5	Water engineering	M(10)		Moodle	Dr D. Liang	Dr D. Liang
3D7	Finite element methods	L(4)		Moodle	Dr F. Cirak	Dr F. Cirak
3D8	Geo-Environmental engineering	L(7)		Moodle	Prof. S.P.G. Madhabhushi	Prof. S.P.G. Madhabhushi

Group E: Management and Manufacturing

Module		Term (set)	Prerequisites Assumed	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)					
3E1	Business economics	L(8)		Moodle	Dr J Kozak Rogo	Dr J Kozak Rogo
3E2	Marketing	M(9)		Moodle	Dr O. Merlo	Dr O. Merlo
3E3	Modelling Risk	L(8)		Moodle	Dr N. Taneri	Dr F. Erhun-Oguz
3E6	Organisational behaviour	M(9)		Moodle	Dr Y.J. Kim	Dr Y.J. Kim
3E1	Operations management for	L(8)		Moodle	Dr T. Masood	tbc

Module		Term (set)	Prerequisites Assumed	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)					
0	engineers					
3E11	Environmental sustainability & business	M (9)		Moodle	Prof. J.A. Howard-Grenville	Prof. J.A. Howard-Grenville

Group F: Information Engineering

Module		Term (set)	Prerequisites Assumed	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)					
3F1	Signals and systems	M(4)		Moodle	Dr J. Sayir	Prof. M.C. Smith
3F2	Systems and control	L(5)		Moodle	Prof. G. Vinnicombe	Prof. G. Vinnicor
3F3	Statistical Signal Processing	M(1)	3F1	Moodle	Prof. S.J. Godsill	Prof. S.J. Godsill
3F4	Data transmission	L(6)	3F1	Moodle	Dr A. Guillen i Fabregas	Dr A. Gu Fabrega
3F7	Information Theory and Coding	M(5)		Moodle	Dr A. Guillen i Fabregas	Dr J. Sa
3F8	Inference	L(4)	3F3	Moodle	Prof. R.E. Turner	Dr D. Kr

Group G: Bioengineering

Module		Term (set)	Prerequisites Assumed	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)					
3G1	Molecular bioengineering I	M(7)		Moodle	Prof. G. Micklem	Prof. G. Micklem
3G2	Mathematical physiology	L(3)		Moodle	Dr A.J. Kabla	Dr A.J. Kabla
3G3	Introduction to neuroscience	L(2)		Moodle	Dr G. Hennequin	Dr G. Hennequin
3G4	Medical imaging and 3D computer graphics	L(1)		Moodle	Prof. A.H. Gee	Dr G.M. Treece
3G5	Biomaterials	M(8)		Moodle	Dr S. Huang	Dr A. Markaki

Group M: Multidisciplinary Modules

Module		Term (set)	Prerequisites Assumed	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)					
3M1	Mathematical methods	L(10)		Moodle	Prof. M. Girolami	Prof. M. Girolami

Group S: Modules Shared with Part IIB

Note that these modules do not have supervisions, or any IIA coursework associated with them.

4M16 is a prerequisite for further nuclear power courses in part IIB. It is recommended that those who wish to take further nuclear power courses in part IIB should take 4M16 as part of IIA.

Module		Term (set)	Form of assessment	Prerequisites		On-line resources	Leader
Code	Title (linked to syllabus)			Assumed	Useful		
4C4	Design methods	M(7)	Exam				Dr J.M.Cullen
4M12	Partial differential equations and variational methods	L(9)	Exam			Moodle	Dr J.S. Biggins
4M16	Nuclear power engineering	L(9)	Exam			Moodle	Dr G. Parks