

Part IIA syllabuses; links to on-line 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: 3B4, 3C7, all of the 3E modules, only one lab from 3F2, 3G1 and 3M1. Full details are given in the coursework section of the syllabus page.

[Group A: Energy, Fluid Mechanics and Turbomachinery](#)

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

[Group B: Electrical Engineering](#)

Module		Term	Prerequisites	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)	(set)	Assumed			
3B1	Radio frequency electronics	M(3)		Moodle	Dr M.J. Crisp	Dr M.J. Crisp
3B2	Integrated digital electronics	L(3)		Moodle	Prof. F. Udrea	Dr D. Holburn
3B3	Switch-mode electronics	M(2)		Moodle	Prof G. Amaratunga	Dr P. Palmer
3B4	Electric drive systems	L(2)		Moodle	Dr T. Flack	Dr T. Coombs
3B5	Semiconductor engineering	M(1) 1)		Moodle	Dr H.J. Joyce	Prof S. Hofmann
3B6	Photonic technology	L(7)		Moodle	Prof I.H. White	Prof. R. Penty

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Group C: Mechanics, Materials and Design

Module		Term	Prerequisites	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)	(set)	Assumed			
3C1	Materials processing and design	M(5)		Moodle	Dr H. Shercliff	Dr J. Durrell
3C5	Dynamics	M(6)		Moodle	Prof R.S. Langley	Prof J. Woodhouse
3C6	Vibration	L(6)	3C5 useful	Moodle	Prof D. Cebon	Dr T. Butlin
3C7	Mechanics of solids	M(4)		Moodle	Prof. V. Deshpande	Prof. V. Deshpande
3C8	Machine design	M(3)		Moodle	Dr D. Cole	Dr D. Cole
3C9	Fracture mechanics of materials and structures	L(5)	3C7 assumed	Moodle	Prof. V. Deshpande	Dr G.R. McShane

Group D: Civil, Structural and Environmental Engineering

Module		Term	Prerequisites	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)	(set)	Assumed			
3D1	Geotechnical engineering I	M(1)			Dr G. Biscontin	Dr G. Biscontin
3D2	Geotechnical engineering II	L(1)	3D1	Moodle	Dr S.K. Haigh	Dr S.K. Haigh
3D3	Structural materials and design	M(2)		Moodle	Dr M. Overend	Dr C. Morley
3D4	Structural analysis and stability	L(2)		Moodle	Dr C.J. Burgoyne	Prof S.D. Guest
3D5	Water engineering	M(11)		Moodle	Dr D. Liang	Dr D. Liang
3D7	Finite element methods	L(4)		Moodle	Dr J Li	Dr J Li
3D8	Building physics and environmental geotechnics	M(3)		Moodle	Prof G. Madabhushi	Prof G. Madabhushi

Group E: Management and Manufacturing

Module		Term	Prerequisites	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)	(set)	Assumed			
3E1	Business economics	L(9)		Moodle	Dr K. Soufani	Dr K. Soufani
3E2	Marketing	M(10)		Moodle	Dr V. Mak	Dr V. Mak
3E3	Modelling Risk	M(9)		Moodle	Dr F. Erhun-Oguz	Dr R. Zanjirani-Farahani
3E5	Human resource management	M(10)		Moodle	Dr A. Richter	Dr A. Richter
3E6	Organisational behaviour	L(10)		Moodle	Dr A. Richter	Mr R. Wiedner

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Module		Term	Prerequisites	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)	(set)	Assumed			
3E10	Operations management for engineers	L(9)		Moodle	Dr F Erhan-Oguz	Dr R McKenzie

[Group F: Information Engineering](#)

Module		Term	Prerequisites	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)	(set)	Assumed			
3F1	Signals and systems	M(4)		Moodle	Dr F. Forni	Prof. M.C. Smith
3F2	Systems and control	L(5)		Moodle	Dr G. Vinnicombe	Dr T Hughes
3F3	Statistical Signal Processing	M(1)	3F1	Moodle	Prof. S. Godsill	Prof. S. Godsill
3F4	Data transmission	L(6)	3F1	Moodle	Prof N Kingsbury	Prof N Kingsbury
3F7	Information Theory and Coding	M(5)		Moodle	Dr R. Venkataramanan	Dr J. Sayir
3F8	Inference	L(4)	3F3	Moodle	Dr R. Turner	Dr R. Turner

[Group G: Bioengineering](#)

Module		Term	Prerequisites	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)	(set)	Assumed			
3G1	Introduction to molecular bioengineering	M(7)		Moodle	Dr G. Micklem	Dr G. Micklem
3G2	Mathematical physiology	L(3)		Moodle	Dr A. Kabla	Dr A. Kabla
3G3	Introduction to neuroscience	L(2)		Moodle	Dr G. Hennequin	Dr G. Hennequin
3G4	Medical imaging and 3D computer graphics	L(11)		Moodle	Dr G.M. Treece	Dr G.M. Treece
3G5	Biomaterials	M(9)		Moodle	Dr A E Markaki	Dr M. Oyen

[Group M: Multidisciplinary Modules](#)

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

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[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.

4D16 is offered every other year, and will not be available in IIB in 2015-16.

Module		Term (set)	Form of assessment	Prerequisites		On-line resources	Leader
Code	Title (linked to syllabus)			Assumed	Useful		
4C4	Design methods	M(11)	Exam				Dr J. Cullen
4D8	Pre-stressed Concrete (not running 2016-17)	L(11)	Exam			Moodle	Prof C Burgoyne
4D16	Construction management (reintroduced 2016-17)	M(8)	Exam			Moodle	Dr I. Brilakis
4M12	Partial differential equations and variational methods	L(11)	Exam			Moodle	Prof. P. Davidson
4M16	Nuclear power engineering	L(11)	Exam			Moodle	Dr G. Parks

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