

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)		Course notes Moodle	Dr A. Agarwal	Prof. G. Hunt Dr J. Li
3A3	Fluid mechanics II (double module)	M(1), L(1)		Course notes Moodle	Prof. R.S. Cant	Prof. H. Babinsky Prof R. Miller
3A5	Thermodynamics and power generation	M(7)		Course notes Camtools	Dr S.A. Scott	Dr S. Scott
3A6	Heat and mass transfer	L(3)		Course notes Moodle	Prof. S. Hochgreb	Prof. S. Hochgreb Dr N. Swaminathan

[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)		Camtools	Dr P.A. Robertson	Dr P.A. Robertson
3B2	Integrated digital electronics	L(3)		Moodle	Prof. F. Udrea	Dr D. Holburn
3B3	Switch-mode electronics	M(2)		3B3 lecture notes	Dr R. McMahon	Dr P. Palmer
3B4	Electric drive systems	L(2)		Moodle	Dr T. Flack	Dr T. Flack
3B5	Semiconductor engineering	M(6)		Moodle	Dr H.J. Joyce	Dr S. Hofmann

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Module		Term	Prerequisites	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)	(set)	Assumed			
3B6	Photonic technology	L(7)		Moodle	Prof I.H. White	Prof. R. Penty

[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	Dr H. Hunt	Dr H. Hunt
3C6	Vibration	L(6)	3C5 useful	Moodle	Prof. J. Woodhouse	Prof. J. Woodhouse
3C7	Mechanics of solids	M(4)		Moodle	Prof. V. Deshpande	Dr F. Cirak
3C8	Machine design	M(3)		Moodle	Dr D. Cole	Dr D. Cole
3C9	Fracture mechanics of materials and structures	L(5)		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 F. Cirak	Mr F. McRobie
3D5	Water engineering	M(1)		Moodle	Dr D. Liang	Dr D. Liang
3D7	Finite element methods	L(4)		Moodle	Dr F. Cirak	Dr F. Cirak
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 A. Mina	Dr A. Mina
3E2	Marketing	M(10)			Dr V. Mak	Dr V. Mak
3E3	Modelling Risk	M(9)			Dr H. Jiang	Dr R. Zanjirani-Farahani

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Module		Term	Prerequisites	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)	(set)	Assumed			
3E5	Human resource management	M(10)		Moodle	Dr A. Richter	Dr A. Richter
3E6	Organisational behaviour	L(10)		Moodle	Mr R. Wiedner	Mr R. Wiedner
3E10	Operations management for engineers	L(9)		Moodle	Dr F Erhan	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(5)		Moodle	Dr J. Sayir	Prof. M.C. Smith
3F2	Systems and control	L(5)		Moodle	Dr G. Vinnicombe	Prof J.M. Maciejowski
3F3	Signal and pattern processing	L(6)	3F1	Moodle	Prof. S. Godsill	Prof. S. Godsill
3F4	Data transmission	L(4)	3F1	Moodle	Prof N Kingsbury	Dr R Venkataramanan
3F5	Computer and network systems	M(4)		Moodle	Dr A. Gee	Mr T. Love
3F6	Software engineering and design	L(1)			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 J. Ajioka	Dr J. Ajioka
3G2	Mathematical physiology	L(3)		Moodle	Dr A. Kabla	Dr A. Kabla
3G3	Introduction to neuroscience	L(2)		Moodle	Dr M. Lengyel	Dr G. Hennequin
3G4	Medical imaging and 3D computer graphics	L(11)		Moodle	Dr A. Gee	Dr A.H. Gee
3G5	Biomaterials	M(11)		Moodle	Dr A E Markaki	Dr M. Oyen

[Group M: Multidisciplinary Modules](#)

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

[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 m (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 (reintroduced 2015-16)	L(11)	Exam				Prof. C Burgoyne
4D16	Construction management (not running 2015-16)	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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