Part IIA syllabuses; links to online resources

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Engineering Areas

Please note there are no Full Technical Reports associated with the following modules: all of the 3E modules, 3G1 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	Prof S Barrett	Dr S.D. Mandre Dr W.R. Graham
3A3	Fluid mechanics II (double module)	M(1), L(1)		Moodle	Dr I Dedoussi	Dr N Kateris Dr I Dedoussi
3A5	Thermodynamics and power generation	M(7)		Moodle	Dr A. White	Prof A.P. Wheeler
3A6	Heat and mass transfer	L(3)		Moodle	Dr M Onn	Dr N Kateris

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 I. Tavakkolnia	Dr I. Tavakkolnia
3B2	Integrated digital electronics	L(3)		Moodle	Dr M Tang	Prof O.B. Akan
3B3	Switch-mode electronics	M(2)		Moodle	Dr S.M.Goetz	Prof T Long
3B4	Electric drive systems	L(2)		Moodle	Prof T Long	Prof T Long
3B5	Semiconductor engineering	M(8)		Moodle	Prof A. Ferrari	Dr A. Agrawal
3B6	Photonic technology	L(7)		Moodle	Dr Q. Cheng	Dr Q. Cheng

Group C: Mechanics, Materials and Design

Module		Term (set)	Prerequisites Assumed	On-line resources	Leader	Lab Leader
3C1	Materials processing and design	M(5)		Moodle	Dr M. Seita	Prof J.H. Durrell
3C5	Dynamics	L(6)		Moodle	Prof H.E.M. Hunt	Dr A. Cicirello
3C6	Vibration	M(6)		Moodle	Dr T. Butlin	Dr T. Butlin
3C7	Mechanics of solids	M(4)		Moodle	Prof V.S. Deshpande	Dr B. Liu
3C8	Machine design	M(3)		Moodle	Prof M.P.F. Sutcliffe	Dr X. Na
3C9	Fracture mechanics of materials and structures	L(5)	3C7 assumed	Moodle	Prof N.A. Fleck	Dr G.J. McShane

Group D: Civil Engineering

Module		Term (set)	Prerequisites Assumed	On-line resources	Leader	Lab Leader
3D1	Geotechnical engineering I	M(1)		Moodle	Dr J Hambleton	Dr S. Stanier
3D2	Geotechnical engineering II	L(1)	3D1	Moodle	Dr J Hambleton	Dr S. Stanier
3D3	Structural materials and design	L(2)		Moodle	Dr R Foster	Dr R Foster
3D4	Structural analysis and stability	M(2)		Moodle	Prof S.D. Guest	Prof K.A. Seffen
3D5	Hydraulics	M(10)		Moodle	Prof D. Liang	Prof D. Liang
3D7	Finite element methods	L(4)		Moodle	Prof F Cirak	Prof D. Liang
3D9	Construction management	L(5)		Moodle	Prof I Brilakis	Prof I Brilakis

Group F: Information Engineering

Module		Term (set)	Prerequisites Assumed	On-line resources	Leader	Lab Leader
3F1	Signals and systems	M(5)		Moodle	Dr J. Sayir	TBC
3F2	Systems and control	L(5)		Moodle	TBC	TBC
3F3	Statistical Signal Processing	M(1)		Moodle	Dr G. Cantwell	Dr G. Ca
3F4	Data transmission	L(6)		Moodle	Prof A. Guillen i Fabregas	Dr J. Sa
3F7	Information Theory and Coding	M(4)		Moodle	Prof R Venkataramanan	Dr J. Sa
3F8	Inference	L(4)	3F3	Moodle	Prof R. Turner	Prof M H dez-Lob

Group G: Bioengineering

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

Group M: Multidisciplinary Modules

Module		Term (set)	Prerequisites	On-line resources	Leader	Lab Leader
Code	Title (linked to syllabus)		Assumed			
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			Moodle	Prof J.M. Cullen
4E4	Management of Technology	M(10)	Exam			Moodle	Dr L Mortara
4E6	Accounting and Finance	M(7)	Exam			Moodle	Dr L Mischchenko
4M12	Partial differential equations and variational methods	L(9)	Exam			Moodle	Prof J Biggins
4M16	Nuclear power engineering	L(9)	Exam			Moodle	Dr P Cosgrove
4M21	Software engineering	L(9)	Exam			Moodle	Dr O Punskaya

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