

## Part IIA Modules 2021-2022

The Faculty Board of Engineering give notice that the modules prescribed for examination in 2022, and the mode of examination for each module, will be as listed below. Candidates must offer 10 modules for examination. Candidates may offer only one module from any one of the sets. Students must take at least one, but not more than two, modules from Group E 'Management and Manufacturing'.

Candidates are advised to take note of the conditions of exemption which are set by the professional engineering institutions that accredit the course: <http://teaching.eng.cam.ac.uk/content/accreditation-meng#coe>.

Unit	Title	Set	Mode	Notes
<b>Group A: Energy, Fluid Mechanics, and Turbomachinery</b>				
3A1	Fluid Mechanics I	IIM8&L7	p	Double module
3A3	Fluid Mechanics II	IIM1&L1	p	Double module
3A5	Thermodynamics and Power Generation	IIM7	p	
3A6	Heat and Mass Transfer	IIL3	p	
<b>Group B: Electrical Engineering</b>				
3B1	Radio Frequency Electronics	IIM3	p	
3B2	Integrated Digital Electronics	IIL3	p	
3B3	Switch-Mode Electronics	IIM2	p	
3B4	Electric Drive Systems	IIL2	p	
3B5	Semiconductor Engineering	IIM8	p	
3B6	Photonic Technology	IIL7	p	
<b>Group C: Mechanics, Materials, and Design</b>				
3C1/3P1	Materials Processing and Design (Engineering)	IIM5	p	Offered by MET as 3P1
3C5	Dynamics	IIM6	p	
3C6	Vibration	IIL6	p	3C5 useful
3C7	Mechanics of Solids	IIM4	p	
3C8	Machine Design	IIM3	p	
3C9	Fracture Mechanics of Materials and Structures	IIL5	p	3C7 assumed
<b>Group D: Civil, Structural, and Environmental Engineering</b>				
3D1	Geotechnical Engineering I	IIM1	p	
3D2	Geotechnical Engineering II	IIL1	p	3D1 assumed
3D3	Structural Materials and Design	IIM2	p	
3D4	Structural Analysis and Stability	IIL2	p	
3D5	Water Engineering	IIM10	p	
3D7	Finite Element Methods	IIL4	p	
3D8	Environmental Geotechnics	IIL7	p	
<b>Group E: Management and Manufacturing</b>				
3E1	Business Economics	IIL8	p	
3E2	Marketing	IIM9	p	
3E3	Modelling Risk	IIL8	p	
3E6	Organisational Behaviour	IIM9	p	
3E10	Operations Management for Engineers	IIL8	p	
3E11	Environmental Sustainability & Business	IIM9	p	
<b>Group F: Information Engineering</b>				
3F1	Signals and Systems	IIM4	p	
3F2	Systems and Control	IIL5	p	
3F3	Statistical Signal Processing	IIM1	p	3F1 assumed
3F4	Data Transmission	IIL6	p	3F1 assumed
3F7	Information Theory and Coding	IIM5	p	
3F8	Inference	IIL4	p	3F3 assumed
<b>Group G: Bioengineering</b>				
3G1	Molecular Bioengineering I	IIM7	p	
3G2	Mathematical Physiology	IIL3	p	
3G3	Introduction to Neuroscience	IIL2	p	
3G4	Medical Imaging and 3-D Computer Graphics	IIL1	p	
3G5	Biomaterials	IIM8	p	

<b>Group M: Multidisciplinary modules</b>				
3M1	Mathematical Methods	IIL10	p	
<b>Group S: Modules shared with Part IIB</b>				
4C4	Design Methods	IILAM7	p	Shared module
4M12	Partial Differential Equations and Variational Methods	IILAL9	p	Shared module
4M16	Nuclear Power Engineering	IILAL9	p	Shared module

### Part IIA Sets Michaelmas Term 2021-22

Set	Unit	Title	Mode	Notes
IIAM1	3A3	Fluid Mechanics II	p	Double module
	3D1	Geotechnical Engineering I	p	
	3F3	Statistical Signal Processing	p	3F1 assumed
IIAM2	3B3	Switch-Mode Electronics	p	
	3D3	Structural Materials and Design	p	
IIAM3	3B1	Radio Frequency Electronics	p	
	3C8	Machine Design	p	
IIAM4	3C7	Mechanics of Solids	p	
	3F1	Signals and Systems	p	
IIAM5	3C1	Materials Processing and Design	p	Offered by MET as 3P1
	3F7	Information Theory and Coding	p	
IIAM6	3C5	Dynamics	p	
IIAM7	3A5	Thermodynamics and Power Generation	p	
	3G1	Molecular Bioengineering I	p	
	4C4	Design Methods	p	Shared with IIB
IIAM8	3A1	Fluid Mechanics I	p	Double module
	3B5	Semiconductor Engineering	p	
	3G5	Biomaterials	p	
IIAM9 (PM lectures)	3E6	Organisational Behaviour	p	
	3E2	Marketing	p	
	3E11	Environmental Sustainability & Business	p	
IIAM10 (PM)	3D5	Water Engineering	p	

### Part IIA Sets Lent Term 2021-22

Set	Unit	Title	Mode	Notes
IIAL1	3A3	Fluid Mechanics II	p	Double module
	3D2	Geotechnical Engineering II	p	3D1 assumed
	3G4	Medical Imaging & 3-D Computer Graphics	p	
IIAL2	3B4	Electric Drive Systems	p	
	3D4	Structural Analysis and Stability	p	
	3G3	Introduction to Neuroscience	p	
IIAL3	3A6	Heat and Mass Transfer	p	
	3B2	Integrated Digital Electronics	p	
	3G2	Mathematical Physiology	p	
IIAL4	3D7	Finite Element Methods	p	
	3F8	Inference	p	3F3 assumed
IIAL5	3C9	Fracture Mechanics of Materials & Structures	p	3C7 assumed
	3F2	Systems and Control	p	
IIAL6	3C6	Vibration	p	3C5 useful
	3F4	Data Transmission	p	3F1 assumed
IIAL7	3A1	Fluid Mechanics I	p	Double module
	3B6	Photonic Technology	p	
	3D8	Environmental Geotechnics	p	
IIAL8 (PM lectures)	3E3	Modelling Risk	p	
	3E1	Business Economics	p	
	3E10	Operations Management for engineers	p	
IIAL9	4M12	Partial Differential Equations and Variational Methods	p	Shared with IIB
	4M16	Nuclear Power Engineering	p	Shared with IIB
IIAL10	3M1	Mathematical Methods	p	