

Engineering Tripos, Part IIb, 2011-12: Notice

The Faculty Board of Engineering give notice that the modules prescribed for the examinations to be held in 2012, and the mode of examination for each module, will be as follows:

	Number and title of module		Set	Mode of examination
Group A: Energy, Fluid Mechanics, and Turbomachinery	4A2	Computational fluid dynamics	M3	Coursework
	4A3	Turbomachinery I	M7	Exam and coursework
	4A4	Aircraft stability and control	M2	Coursework
	4A7	Aerodynamics	L4	Coursework
	4A8	Environmental fluid mechanics	L2	Exam
	4A9	Molecular thermodynamics	M6	Exam
	4A10	Flow instability	L5	Exam
	4A11	Turbomachinery II	L8	Exam and coursework
	4A12	Turbulence and vortex dynamics	L3	Exam
	4A13	Combustion and IC engines	M10	Exam
	4A15	Aeroacoustics	M9	Exam
Group B: Electrical Engineering	4B5	Nanotechnology	M10	Exam and coursework
	4B6	Solid state devices and chemical/biological sensors	L3	Exam
	4B7	VLSI design, technology, and CAD	L1	Exam and coursework
	4B11	Photonic systems	M9	Exam
	4B13	Electronic sensors and instrumentation	L2	Exam
	4B14	Solar-electronic power: generation and distribution	M4	Exam and coursework
	4B18	Advanced electronic devices	L8	Exam
	4B19	Renewable electrical power	M2	Exam
	4B20	Display technology	L4	Exam
Group C: Mechanics, Materials, and Design	4C2	Designing with composites	M5	Exam and coursework
	4C3	Electrical and nano materials	M6	Exam
	4C4	Design methods	M1	Exam
	4C5	Design case studies	L3	Coursework
	4C6	Advanced linear vibrations	M4	Exam and coursework
	4C7	Random and non-linear vibrations	M8	Exam and coursework
	4C8	Applications of dynamics	L1	Exam and coursework
	4C9	Continuum mechanics	M7	Exam
	4C15	MEMS: design	L6	Exam and coursework
	4C16	Advanced machine design	L9	Exam and coursework
Group D: Civil, Structural, and Environmental Engineering	4D5	Foundation engineering	M4	Exam and coursework
	4D6	Dynamics in civil engineering	L2	Exam and coursework
	4D7	Concrete and masonry structures	L10	Exam and coursework
	4D8	Pre-stressed concrete	L9	Exam and coursework
	4D10	Structural steelwork	M8	Exam and coursework
	4D11	Building physics	M5	Exam and coursework
	4D13	Architectural engineering	M12	Coursework
	4D14	Contaminated land and waste containment	M1	Exam and coursework
	4D15	Sustainable water engineering	L4	Coursework
	4D17	Plate and shell structures	L6	Coursework

	Number and title of module		Set	Mode of examination
Group E: Management and Manufacturing	4E3	Information systems	M18	Coursework
	4E4	Management of technology	M15	Coursework
	4E5	International business economics	L12	Coursework
	4E6	Accounting and finance	M16	Coursework
	4E11	Strategic management	L13	Coursework
	4E12	Project management	L14	Coursework
Group F: Information Engineering	4F1	Control system design	M7	Exam and coursework
	4F2	Robust and non-linear control	L9	Exam
	4F3	Optimal and predictive control	L6	Exam
	4F5	Advanced wireless communications	L5	Exam
	4F6	Signal detection and estimation	M5	Exam
	4F7	Digital filters and spectrum estimation	M8	Exam
	4F8	Image processing and image coding	M6	Exam
	4F10	Statistical pattern processing	M3	Exam
	4F11	Speech and language processing	L1	Exam
	4F12	Computer vision and robotics	M2	Exam
	4F13	Machine learning	L10	Coursework
Group G: Engineering for the Life Sciences	4G1	Systems biology	L5	Coursework
	4G2	Biosensors	L8	Coursework
	4G4	Biomimetics	M9	Coursework
	4G6	Cellular and molecular biomechanics	M10	Exam
Group I: Imported modules	4I1	Strategic valuation (TPE6)	M17	Coursework
	4I7	Electricity and environment	M14	Coursework
	4I8	Medical physics;	L15	Exam
	4I9	Low power embedded systems programming	M17	Coursework
Group M: Multidisciplinary modules	4M1	French	L7	Coursework
	4M2	German	L7	Coursework
	4M3	Spanish	M11	Coursework
	4M4	Japanese	M11	Coursework
	4M6	Materials and processes for microsystems (MEMS)	M1	Exam and coursework
	4M9	Surveying field course	LV1	Coursework
	4M12	Partial differential equations and variational methods	L11	Exam
	4M13	Complex analysis and optimisation	M12	Exam
	4M14	Sustainable development	M13	Coursework
	4M15	Sustainable energy	L10	Exam and coursework
	4M16	Nuclear power engineering	L11	Exam
Group R: Research modules available to certain undergraduates	5R1	Stochastic processes and optimisation methods	L7	Coursework

Restrictions on the combinations of modules candidates may choose to offer

Candidates may not offer more than one module for examination from any one of the following numbered sets. In addition, students may take not more than three modules from the following: 4EX; 4I1 and 4I7; 4M1–4, and (when available) 4D16.

No candidate who offered any module for Part IIA may again offer the same module for Part IIB.

Group R modules are restricted to candidates who have been classed with a First in Part IIA of the Engineering Tripos; candidates may not offer more than one module from this group.

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Set	No.	Title	Notes
<u>M1</u>	4C4	Design methods	Shared
	4D14	Contaminated land and waste management	
	4M6	Materials and processes for microsystems (MEMS)	
<u>M2</u>	4A4	Aircraft stability and control	
	4B19	Renewable electrical power	
	4F12	Computer vision and robotics	
<u>M3</u>	4A2	Computational fluid dynamics	
	4F10	Statistical pattern processing	
<u>M4</u>	4B14	Solar-electronic power: generation and distribution	
	4C6	Advanced linear vibrations	
	4D5	Foundation engineering	
<u>M5</u>	4C2	Designing with composites	
	4D11	Building physics	
	4F6	Signal detection and estimation	
<u>M6</u>	4A9	Molecular thermodynamics	
	4C3	Electrical and nano materials	
	4F8	Image processing and image coding	
<u>M7</u>	4A3	Turbomachinery I	
	4C9	Continuum mechanics	
	4F1	Control system design	
<u>M8</u>	4C7	Random and non-linear vibrations	
	4D10	Structural steelwork	
	4F7	Digital filters and spectrum estimation	
<u>M9</u>	4A15	Aeroacoustics	
	4B11	Photonic systems	
	4G4	Biomimetics	
<u>M10</u>	4A13	Combustion and IC engines	
	4B5	Nanotechnology	
	4G6	Cellular and molecular biomechanics	
<u>M11</u>	4M3	Spanish	
	4M4	Japanese	
<u>M12</u>	4D13	Architectural engineering	
	4M13	Complex analysis and optimisation	
<u>M13</u>	4M14	Sustainable development	
<u>M14*</u>	4I7	Electricity and the environment	

<u>M15</u>	4E4	Management of technology	
<u>M16</u>	4E6	Accounting and finance	
<u>M17*</u>	4I1	Strategic valuation (TPE6)	
	4I9	Low power embedded systems programming	
<u>M18</u>	4E3	Information systems	

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Set	No.	Title	
<u>L1</u>	4B7	VLSI design, technology, and CAD	
	4C8	Applications of dynamics	
	4F11	Speech and language processing	
<u>L2</u>	4A8	Environmental fluid mechanics	
	4B13	Electronic sensors and instrumentation	
	4D6	Dynamics in civil engineering	
<u>L3</u>	4A12	Turbulence and vortex dynamics	
	4B6	Solid state devices and chemical/biological sensors	
	4C5	Design case studies	
<u>L4</u>	4A7	Aerodynamics	
	4B20	Display technology	
	4D15	Sustainable water engineering	
<u>L5</u>	4A10	Flow instability	
	4F5	Advanced wireless communications	
	4G1	Systems Biology	
<u>L6</u>	4C15	MEMS: design	
	4D17	Plate and shell structures	
	4F3	Optimal and predictive control	
<u>L7</u>	4M1	French	
	4M2	German	
	5R1	Stochastic processes and optimisation methods	
<u>L8</u>	4A11	Turbomachinery II	
	4B18	Advanced electronic devices	
	4G2	Biosensors	
<u>L9</u>	4C16	Advanced machine design	
	4D8	Pre-stressed concrete	Shared
	4F2	Robust and non-linear control	
<u>L10</u>	4D7	Concrete and masonry structures	
	4F13	Machine learning	
	4M15	Sustainable energy	
<u>L11</u>	4M12	Partial differential equations and variational methods	Shared
	4M16	Nuclear power engineering	Shared

<u>L12</u>	4E5	International business economics	
<u>L13</u>	4E11	Strategic management	
<u>L14</u>	4E12	Project management	
<u>L15*</u>	4I8	Medical Physics	

LONG VACATION

LV1	4M9	Surveying field course	
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* Please note that as we do not have exclusive control over all sets we cannot guarantee that those marked with a star will not clash with any other set.