EEE Modules List 2020/21

Year	Term	Theme 1: Circuits, Optical and Semiconductor Devices – Analogue	Theme 1 – Fields	Theme 1 – Devices	Theme 2: Control and Power – Power	Theme 2 – Control	Theme 3: Intelligent Systems and Networks – Image	Theme 3 – Software/AI/Networks	Theme 4: Systems, Communications and Signal Processing – Digital	Theme 4 – Communications	Theme 4 – Maths	Theme 4 – Signals	Theme 5: Professional Skills – Professional
Year 1	Autumn / Spring	Analysis and Design of Circuits (Professor Holmes; Professor Mitcheson)	Topics in Electrical Engineering (Dr Fobelets; Professor Green; Professor Yeatman)					Digital Electronics and Computer Architecture (Dr Clarke; Dr Durrani) Programming for Engineers (Dr Cattafi)		Mathematics 1A Mathematics 1B (Dr Nucinkis)			Electronics Design Project 1 (Dr Stott; Mrs Perea, done in Summer term)
Year 2	Autumn		Electromagnetism (EEE) (Dr Sydoruk; Prof Syms)					Discrete Mathematics (EIE) (Dr Goodman) Software Systems (EIE) (Dr Thomas) Instruction Architectures and Compilers (EIE) Dr Wickerson; Dr Thomas	Circuits and Systems (EEE) Professor Cheung		Maths for Engineers IIA Maths for Engineers IIB (Dr Clerckx; Professor Pike) Information Processing (EIE) Dr Bouganis; Professor Naylor	Signals and Systems (EEE) Professor Naylor	Engineering Design Project II (EEE) (Dr Akhtar; Mrs Perea, done in Summer Term) Computer Engineering Design Project (EIE) (Mrs Perea, done in Summer Term)
Year 2	Spring				Power Electronics and Power Systems (EEE) (Prof Green)	Control Systems (Professor Parisini)				Communications (Professor Gunduz)			
Year 3	Autumn	Analogue Integrated Circuits and Systems (Prof Tomazou; Dr Georgiou) Biomedical Electronics (Dr Georgiou; Dr Constandinou)	Optoelectronics (Prof Syms) Microwave Technology (Prof Lucyszyn)		Electrical Energy Systems Dr Chaudhuri; Dr Teng	Control Engineering II Professor Astolfi	Machine Learning Dr Mikolajczyk; Professor Gunduz	Artificial Intelligence Professor Pitt		Communication Systems II (Professor Manikas) Communication Networks (Dr Barria)	Mathematics for Signals and Systems (Professor Dragotti)	Digital Signal Processing (Dr Stathaki)	EEE BEng Project Industrial Placement or Group Project (Managing Engineering Projects)
Year 3	Spring	Instrumentation Dr Papavassiliou		Advanced Electronic Devices Dr Fobelets	Power Electronics Professor Mitcheson		Deep Learning Dr Mikolajczyk; Dr Ciliberto	High Level Programming Dr Clarke	Digital System Design (Dr Bouganis) Embedded Systems (Dr Stott)	Principles of Classical and Modern Radar Systems Professor Manikas		Advanced Signal Processing (Professor Mandic) Real-time Digital Signal Processing (Dr Junyent-Ferré)	EEE BEng Project EIE BEng Project
Year 4	Autumn	Full-Custom Integrated Circuit Design Dr Constandinou		Optical Communication Professor Yeatman	HVDC Technology and Control Dr Chaudhuri; Dr Junyent-Ferre	Stability and Control of Nonlinear Systems (Dr Angeli) Systems Identification and Learning (Prof Parisini) Modelling and Control of Multi-body Mechanical Systems Dr Evangelou	Digital Image Processing Dr Stathaki	Self-Organising Multi-Agent Systems (Prof Pitt) Hardware and Software Verification (Dr Wickerson; Prof Harrod) Topics in Large Dimensional Data Processing Dr Dai		Advanced Communication Theory Professor Manikas	Probability and Stochastic Processes (Dr Ling) Coding Theory (Dr Dai) Optimisation Professor Astolfi		Individual Project
Year 4	Spring	High Performance Analogue Electronics Professor Rodriguez-Villegas	Radio Frequency Electronics Professor Lucyszyn	MEMS and Nanotechnology Dr Durrani; Professor Holmes	Power System Dynamics, Stability and Control Professor Pal Sustainable Electrical Systems Professor Strbac; Dr Chaudhuri	Predictive Control (Dr Kerrigan) Design of linear multivariable control systems (Dr Jaimoukha) Digital Control Systems (Dr Scarciotti) Discrete-event Systems (Dr Angeli)	Computer Vision and Pattern Recognition Dr Mikolajczyk; Dr Ciliberto; Dr Spiers	Human-Centered Robotics Professor Demiris (cancelled due to COVID)		Wireless Communications (Dr Clerckx) Traffic Theory and Queuing Systems Dr Barria CO422-Computational Finance has prerequisite CO343-Operations Research	Information Theory Dr Ling CO422-Computational Finance has prerequisite EE4-29-Optimisation	Analogue Signal Processing (Dr Georgiou) Digital Signal Processing and Digital Filters (Dr Bhandari) Speech Processing (Professor Naylor) Wavelets, Representation Learning and their Applications (Prof Dragotti) Signal Processing and Machine Learning for Finance (Mandic) Adaptive Signal Processing and Machine Intelligence (Mandic)	

This information is correct to the best of our knowledge. There may be errors: it is important that you refer to the Programme Specification for your specific programme and year of entry for final details.

	Number of Autumn Modules	Number of Spring Modules	Extra Comments
3rd Year BEng EEE	4	2	*^
3rd Year EEE MEng Technical	4	3	*
3rd Year EEE MEng Management	3 Technical + 2 Management	2 Technical + 1 Management	
4th Year EEE Technical	See Extra Comments		You must take 7 modules minimum (6 EEE + 1 Horizons/BPES/MEP). From those 6 modules you have the choice of either 6 4th year modules or 5 + 1 3rd Year module. *^
4th year EEE Management			There is no official module split this year so it is up to the students to decide how many modules they want to do in each term. You have 3 compulsory BPES modules and 4 technical modules. Out of the 4 technical modules, 3 must be 4th year modules and you can choose one 3rd year module. *^
3rd Year BEng EIE	Total of 7 modules: at least 3 EEE, at least 2 DoC, exactly 1 I-Explore module		
3rd Year MEng EIE	Total of 8 modules: at least 3 EEE, at least 2 DoC, exactly 1 I-Explore module		
4th Year MEng EIE	Total of 7 modules: at least 2 EEE, at least 2 DoC, exactly 1 BPES/IDX/Horizons module ^		You may take exactly one 3rd year module in 4th year

* 1 module from Imperial Horizons, Business School or ELEC96032 Managing Engineering Projects

^ You may choose an 8th module for ECTS only. You can take any 3rd year Autumn term module that is assessed by exam (coded ELEC*) OR any Horizons module. You cannot take any module with coursework as part of the assessment OR any Business School module

https://www.imperial.ac.uk/electrical-engineering/internal/current-students-course-handbook/module-selection-and-registration/
https://www.imperial.ac.uk/staff/tools-and-reference/quality-assurance-enhancement/programme-information/programme-specifications/