Programme Regulations: 2022/23

Programme Titles:
Degree of Bachelor of Engineering with Honours in Microelectronic Engineering - UCAS Code: H611 (with Foundation Year – UCAS Code: H606)
Degree of Bachelor of Engineering with Honours in Microelectronic Engineering with Placement Year - Code: 1184U
Degree of Bachelor of Engineering with Honours in Electrical Engineering Science – Code: 1623U*

Notes

(i) These programme regulations should be read in conjunction with the University's Taught Programme Regulations.

(ii) All optional modules are offered subject to the constraints of the timetable and to any restrictions on the number of students who may be taught on a particular module. Not all modules may be offered in all years and they are listed subject to availability.

(iii) Unless otherwise stated under 'Type', modules are not core.

(iv) A compulsory module is a module which a student is required to study.

(v) All modules are delivered in Linear mode unless stated otherwise as Block, eLearning or distance learning.

(vi) Programme coded 1623U is a non-accredited Honours degree title and is awarded where a candidate only meets the requirements of the University's Taught Programme Regulations and Examination Conventions.

See also:
Stage 0 (Foundation Year) for all Degrees of Bachelor of Engineering with Honours and Master of Engineering with Honours

1. Stage 0

Candidates who do not meet the requirements for entry into Stage 1 may with approval of the Degree Programme Director commence this degree programme at Stage 0 and shall proceed under the regulations relating to Stage 0.

2. Stage 1

All candidates shall take the following compulsory modules:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*
ENG1001	Engineering Mathematics I	20	10	10	4
ENG1002	Sustainable Design, Creativity & Professionalism	30	10	20	4
ENG1003	Electrical and Magnetic Systems	15	15		4
ENG1004	Electronics & Sensors	10		10	4
ENG1005	Thermofluid Mechanics	15	5	10	4
ENG1006	Properties and Behaviour of Engineering Materials	15	15		4
ENG1007	Mechanics I	15	5	10	4

3. Stage 2

All candidates shall take the following compulsory modules:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*
EEE2007	Computer Systems and Microprocessors	20	10	10	5
EEE2008	Project and Professional Issues	20		20	5
EEE2009	Signals and Communications	20	20		5
EEE2014	Semiconductor Devices and Analogue Electronics	20	20		5
ENG2026	Automatic Control Systems	10		10	5
ENG2025	Digital Electronics	10		10	5
ENG2029	AC Electrical Power and Conversion	10		10	5
ENG2031	Mathematical Modelling and Statistical Methods for Engineering	10		10	5

4. Year 3 (Placement Year)

On completion of Stage 2 and before entering Stage 3, candidates may as part of their studies for the degree spend a year in a placement with an approved organisation. Permission to undertake a placement is subject to the approval of the Degree Programme Director. Students who are required to re-sit their Stage 2 assessment must delay the start of their placement until they have done so. Students who fail Stage 2 may not complete a placement year.

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
NCL3000	Careers Service Placement Year Module	120	60	60	6	

5. Stage 3

(a) All candidates shall take the following compulsory modules:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
ENG2001	Accounting, Finance and Law for Engineers	10	5	5	5	
EEE3009	Real Time and Embedded Systems	10		10	6	
EEE3020	Electronic Devices	10	10		6	
EEE3022	Introduction to Machine Learning	10		10	6	

(b) All candidates shall take **one** of the following optional modules:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
EEE3095	Individual Project and Technical Paper	40	20	20	6	
EEE3096	Individual Project and Technical Paper	40	10	30	6	
EEE3097	Individual Project and Technical Paper	40	30	10	6	

(c) All candidates shall take 40 credits of optional modules normally selected from the following list:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Type*
EEE3001	Linear Controller Design and State Space Analysis	10	10		6	
EEE3003	Introduction to the Basics of Modern Power Electronics	10	10		6	
EEE3004*	Digital Signal Processing	10	10		6	
EEE3008	Industrial Automation and PLCs	10	10		6	
EEE3011	Electric Drives	10		10	6	
EEE3013	Image Processing and Machine Vision	10		10	6	
EEE3014	Power System Operation	10		10	6	
EEE3015*	Telecommunication Networks	10		10	6	
EEE3018	Digital Control Systems	10		10	6	
EEE3021	Renewable Energy Systems and Smart Grids	10		10	6	

Notes:
*Modules marked * are recommended*

With the approval of the Degree Programme Director alternative optional modules to those listed above may be selected.

5. Assessment Methods

Details of the assessment pattern in each module are explained in the module outline. To satisfy IET accreditation requirements, a module comprising two assessment modes (coursework and examination) that assess different learning outcomes and each mode contributes more than 30% to the overall module mark, can only be passed if neither assessment mode is awarded a mark that is no more than 10% below the normal module pass mark.

6. Compensation and Condonement

For students entering the programme* in 2021/22 onwards, the Engineering Council's policy on compensation and condonement will apply to marks awarded for modules at all stages, to satisfy accreditation requirements. To be awarded an accredited honours degree, only a maximum of 30 credits can be compensated over the duration of the degree programme, where the final mark is up to 5 percentage points below the pass mark**. Core modules cannot be compensated. Individual projects and group projects worth more than 20 credits cannot be compensated.

There is no condonement of modules delivering Accreditation of Higher Education Programmes (AHEP) learning outcomes.

Any student not satisfying the accreditation requirements, but satisfying the University's Degree and Assessment regulations, will have the opportunity to be awarded a non-accredited honours degree with its classification based on the overall final stage averages beyond stage one.

*Note that for Electrical & Electronic Engineering programmes, the above text on compensation and condonement has been applicable for students who started stage one from 2018/19.

**Note that for IET-accredited Electrical and Electronic Engineering degree programmes, a module comprising assessed components worth at least 30% of the overall module mark can only be passed if the overall module mark achieved is at least the pass mark and none of those assessed components have a mark that is more than 10 marks below the pass mark.

7. Degree classification

Candidates will be assessed for degree classification on the basis of all the modules taken at Stages 2 and 3 with the weighting of the stages being 1:3 for Stage 2 and Stage 3 respectively.