Programme Regulations: 2021/22

Programme Titles:

Degree of Master of Engineering with Honours in Automation and Control with Industrial Project - UCAS Code: H661 (with Foundation Year – UCAS Code: H606)

Degree of Master of Engineering with Honours in Automation and Control with Industrial Project with Placement Year (Year 3) - Code: 1554U*

Degree of Master of Engineering with Honours in Automation and Control with Industrial Project with Placement Year (Year 4) - Code: 1193U

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 transfers for Tier 4 students may be restricted by current Tier 4 rules. Please refer to the Visa Team for advice.

*(vii) *Programme 1554U Degree of Master of Engineering with Honours in Automation and Control with Industrial Project with Placement Year (Year 3) is only available to students undertaking Careers Placement in Year 3 in academic year 19/20 only.*

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, and 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

(a) 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
EEE2015	Electromagnetic Fields and Waves	10		10	5
ENG2026	Automatic Control Systems	10		10	5
ENG2025	Digital Electronics	10		10	5
ENG2029	Introduction to Electrical AC Machines and Drives	10		10	5

(b) To progress to Stage 3 of this degree programme, candidates are required to obtain an average over all modules taken at Stage 2 of at least 55 at the first attempt.

4. Year 3 (Placement Year) – Programme Code 1554U Only

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*	*Mode*
NCL3000	Career 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*
EEE3001	Linear Controller Design and State Space Analysis	10	10		6
EEE3008	Industrial Automation and PLCs	10	10		6
EEE3011	Electric Drives	10		10	6
EEE3018	Digital Control Systems	10		10	6
ENG2001	Accounting, Finance and Law for Engineers	10	5	5	5

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

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

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

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*
EEE8111	Study Project	10	10		7
EEE8112	Study Project	10		10	7

(d) All candidates shall take 20 credits of optional modules normally selected from the following list:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*
EEE3002	Electrical Machines	10	10		6
EEE3003	Introduction to the Basics of Modern Power Electronics	10	10		6
EEE3004*	Digital Signal Processing	10	10		6
EEE3009*	Real Time and Embedded Systems	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
EEE3016	Photonics	10		10	6
EEE3020	Electronic Devices	10	10		6
EEE3021	Renewable Energy Systems and Smart Grids	10		10	6

Notes:

*(i) Modules marked * are recommended*

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

6. Year 4 (Placement Year)

On completion of Stage 3 and before entering Stage 4, 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 3 assessment must delay the start of their placement until they have done so. Students who fail Stage 3 may not complete a placement year.

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

7. Stage 4

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

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*
EEE8106	Extended Course Work on Applications and Design (ECAD)	10	10		7
EEE8113	Group Design Project	30		30	7
EEE8114	Industrial Project	40	40		7

(b) All candidates shall take the following specialist module:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Mode*
EEE8151	Distributed Control Systems	20		20	7	Block

(c) All candidates shall take a 20 credit optional module from the table below:

Code	*Descriptive title*	*Total Credits*	*Credits Sem 1*	*Credits Sem 2*	*Level*	*Mode*
EEE8116	Bioelectronics	20	20		7	Block
EEE8124	Low Power VLSI Design			20	7	Block
EEE8125	Advanced Device Fabrication	20		20	7	Block
EEE8127	Microelectronics Design Tools	20		20	7	Block
EEE8155	Design & Analysis of Electrical Machines & Drives	20		20	7	Block
EEE8158	Robust & Adaptive Control Systems	20		20	7	Block

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

9. 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.

10. Subject to University Approval: Compensation and Condonement

For students who started stage one from 2018/19, the Engineering Council's policy on compensation and condonement will apply to marks awarded for modules at all stages, to satisfy IET 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. Furthermore, the condonement policy does not allow the failure of any compulsory or optional module on the degree programme, where the final mark is 10 percentage points or more below the pass mark.

Any student not satisfying IET accreditation requirements, but satisfying 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.

11. 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.