

Programme Regulations: 2023/24

Programme Titles:

Degree of Master of Engineering with Honours in Engineering - UCAS Code: H104

- *With specialism in Civil Engineering – Code 1559U*
- *With specialism in Civil Engineering with Placement Year – Code 1560U*

- *With specialism in Electrical and Electronic Engineering - Code: 1561U*
- *With specialism in Electrical and Electronic Engineering with Placement Year - Code: 1562U*

- *With specialism in Mechanical Engineering - 1563U*
- *With specialism in Mechanical Engineering with Placement Year – Code 1564U*

- *Bachelor of Engineering (Exit award only) Code - 1565U**

(all Foundation Year – UCAS Code: H101)

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) *A core module is a module which a student must pass, and in which a fail mark may neither be carried nor compensated; such modules are designated by the board of studies as essential for professional body accreditation of the degree programme.*
- (vi) *All modules are delivered in Linear mode unless stated otherwise.*
- (vii) *At the end of Stage 1 a student may, with the permission of the appropriate Degree Programme Director, transfer to one of the programmes in the following single disciplines: Civil Engineering; Electrical and Electronic Engineering; Mechanical Engineering.*
- (viii) *Programme transfers for Tier 4 students may be restricted by current Tier 4 rules. Please refer to the Visa Team for advice.*
- (ix) **BEng (Hons) in General Engineering is offered at either at the end of Stage 3 or Stage 4 as an exit award 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 the 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:

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Level</i>	<i>Type</i>	<i>Mode</i>
ENG1001	Engineering Mathematics I	20	10	10	4	Core	
ENG1002	Sustainable Design, Creativity and Professionalism	30	10	20	4		
ENG1003	Electrical and Magnetic Systems	15	10	5	4		
ENG1004	Electronics and 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 20 credits:

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Level</i>	<i>Type</i>	<i>Mode</i>
ENG2011	Engineering Mathematics II	10	10		5		
ENG2031	Mathematical Modelling and Statistical Methods for Engineering	10		10	5	Core	

(b) All candidates shall take 100 credits of modules appropriate to their chosen specialism (i-iii):

(i) Specialism in Civil Engineering

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Level</i>	<i>Type</i>	<i>Mode</i>
CEG2004	Design of Sustainable Engineering Systems 2	20	10	10	5		
CEG2201	Geotechnics	10	10		5		
CEG2302	Design of Building Elements	10	10		5		
CEG2502	Hydraulics	10		10	5		
CEG2711	Engineering Surveying	10		10	5		
ENG2015	Mechanics II	20	10	10	5		
ENG2022	Materials Science II	10	10		5		
ENG2025	Digital Electronics	10		10	5		

(ii) Specialism in Electrical & Electronic Engineering

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Level</i>	<i>Type</i>	<i>Mode</i>
EEE2008	Project & Professional Issues	20		20	5		
EEE2009	Signal and Communications	20	20		5		
EEE2014	Semiconductor Devices & Analogue Electronics	20	20		5		
ENG2022	Materials Science II	10	10		5		
ENG2025	Digital Electronics	10		10	5		
ENG2026	Automatic Control Systems	10		10	5		
ENG2029	AC Electrical Power & Conversion	10		10	5		

(iii) Specialism in Mechanical Engineering

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Level</i>	<i>Type</i>	<i>Mode</i>
ENG2015	Mechanics II	20	10	10	5		
ENG2022	Materials Science II	10	10		5		
ENG2023	Thermal Engineering	10		10	5		
ENG2026	Automatic Control Systems	10		10	5		
ENG2027	Fluid Mechanics II	10	10		5		
ENG2029	AC Electrical Power & Conversion	10		10	5		
MEC2007	Design and Manufacturing II	20	10	10	5		
MEC2008	Mechanical Engineering Professional Skills II	10	5	5	5		

- (c) Candidates wishing to progress on a Master of Engineering programme are normally required to pass Stage 2 with an average mark of at least 55% at the first attempt in every module. Candidates who fail to satisfy the criterion will leave the programme at the end of Stage 3, with an appropriate award.

4. Stage 3

- (a) All candidates shall take the following 120 credits depending on specialism (i-iii).

(i) Specialism in Civil Engineering

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Level</i>	<i>Type</i>	<i>Mode</i>
CEG3001	Design of Sustainable Engineering Systems 3	20	20		6		
CEG3002	Construction Management	10	10		6		
CEG3003	Engineering Ethics and Sustainability	10		10	6		
CEG3004*	Sustainable Engineering Systems Design Project	20		20	6		
CEG3005	The Data -Centric Urban Environment	10		10	6		
CEG3203	Foundation Design	10	10		6		
CEG3301	Design of Building Systems	10	10		6		
CEG3302	Structural Analysis 2	10	10		6		
CEG3401	Design of Transport Infrastructure	10		10	6		
CEG3708	Spatial Data Engineering and BIM	10	10		6		

(ii) Specialism in Electrical and Electronic Engineering

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Level</i>	<i>Type</i>	<i>Mode</i>
EEE3024	Industrial Automation and Control Systems	20	10	10	6		
EEE3025	Power Electronics – Design and Applications	20	10	10	6		

EEE3029	Net-Zero Energy Networks	20	10	10	6		
EEE3094	Individual Project and Technical Report	30	10	20	6		
MEC3030	Digital Manufacturing Processes and Systems	20		20	6		
MEC3031	Introduction to Biomedical Engineering	10	10		6		

(iii) Specialism in Mechanical Engineering

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Level</i>	<i>Type</i>	<i>Mode</i>
EEE3028	Electrical Machines and Drives	20	10	10	6		
MEC3027	Introduction to Instrumentation and Drive Systems	20	20		6		
MEC3028	Computational Heat and Fluid Flow	10	10		6		
MEC3029	Advanced Mechanics and Structural Optimisation	20	10	10	6		
MEC3030	Digital Manufacturing Processes and Systems	20		20	6		
MEC3098	Final Year Dissertation: Capstone Project	30	5	25	6		

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

- (b) Candidates wishing to progress on to a Master of Engineering programme are normally required to pass Stage 3 with an average mark of at least 50% at the first attempt in every module. Students who fail to satisfy this criterion will be considered for an appropriate exit award.
- (c) *Candidates studying specialism in Civil Engineering who fail to satisfy the criterion to progress onto the Master of Engineering programme, must take the following module instead of CEG3004:

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Level</i>	<i>Type</i>	<i>Mode</i>
CEG3099	Individual Project	20		20	6		

5. Year 4 (Placement Year/Year in Industry)

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 or a year in industry 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.

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Level</i>	<i>Type</i>	<i>Mode</i>
NCL3000	Careers Service Placement Year Module	120	60	60	6		

6. Stage 4

(a) All candidates shall take the following 120 credits depending on specialism (i-iii).

(i) Specialism in Civil Engineering

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Level</i>	<i>Type</i>	<i>Mode</i>
CEG8003	Public policy: Infrastructure and Climate Change	10	10		7		Block
CEG8006	Digital Engineering and Analytics	10	10		7		Block
CEG8011	Construction Project Management	10	10		7		Block
CEG8099	Investigative Research Project	30	10	20	7		Block
CEG8107	Environmental Engineering in Low and Middle Income Countries	10		10	7		Block
CEG8304	Structural Reliability	10	10		7		Block
CEG8431	Technologies for Future Mobility	10		10	7		Block
CEG8514	Climate Change: Vulnerability, Impacts and Adaption	10		10	7		Block

And 20 credits from the following optional modules:

CEG8005	Global Engineering – An International Design and Build Challenge	20	5	15	7	Optional	Block
CEG8010	Bridge to Industry	20		20	7	Optional	Block

(ii) Specialism in Electrical and Electronic Engineering

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Level</i>	<i>Type</i>	<i>Mode</i>
CME8061	Advanced Materials for Energy Applications	20		20	7		Block
EEE8111	Study Project	10	10		7		Block
EEE8113	Group Design Project	30		30	7		Block
EEE8114	Industrial Project	40	40		7		Block
EEE8116	Bioelectronics	20		20	7		Block

(iii) Specialism in Mechanical Engineering

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Level</i>	<i>Type</i>	<i>Mode</i>
CME8060	Lifetime Prediction & Design for Reliability	20		20	7		Block

CME8061	Advanced Materials for Energy Applications	20		20	7		Block
MEC8028	Human Centred Design and Engineering	20		20	7		Block
MEC8029	Design of Mechanical Power Transmissions	20	20		7		Block
MEC8099	Mechanical Engineering Team Project	40	30	10	7		Block

7. Assessment methods

Details of the assessment pattern for each module are explained in the module outline.

8. Degree title

Following successful completion of the programme, students will graduate with one of the following degrees depending on their specialism:

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- MEng (Hons) in Engineering with a specialism in Civil Engineering;
- MEng (Hons) in Engineering with a specialism in Electrical and Electronic Engineering;
- MEng (Hons) in General Engineering with a specialism in Mechanical Engineering.
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9. Degree classification

For the MEng programme, candidates will be assessed for degree classification on the basis of all the modules taken at Stages 2, 3 and 4 with the weighting of the stages being 1:2:3 respectively.

For the BEng exit qualification, 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 1:2 respectively.