

## Programme Regulations: 2022/23

### 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	15		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 -	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>
ENG2015	Mechanics II	20	10	10	5		
ENG2016	Geotechnics	10	10		5		
ENG2017	Hydraulics	10		10	5		
ENG2018	Design of Building Elements	10	10		5		
ENG2019	Engineering Surveying	10		10	5		
ENG2022	Materials Science II	10	10		5		
ENG2025	Digital Electronics	10		10	5		
CEG2004	Design of Sustainable Engineering Systems	20	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>
ENG2022	Materials Science II	10	10		5		
ENG2025	Digital Electronics	10		10	5		
ENG2026	Automatic Control Systems	10		10	5		
ENG2029	AC Electrical Power & Conversions	10		10	5		
EEE2009	Signal and Communications 2	20	20		5		
EEE2008	Project & Professional Issues	20		20	5		
EEE2014	Semiconductor Devices &	20	20		5		

	Analogue Electronics						
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(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		
ENG2027	Fluid Mechanics II	10	10		5		
ENG2029	AC Electrical Power & Conversions	10		10	5		
ENG2026	Automatic Control Systems	10		10	5		
MEC2007	Design and Manufacturing	20	10	10	5		
MEC2008	Mechanical Engineering Professional Skills	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**

<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>
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- (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>
CEG3002	Construction Management	10	10		6		
CEG3302	Structural Analysis 2	10	10		6		
CEG3203	Foundation Design	10	10		6		
CEG3005	The Data -Centric Urban Environment	10		10	6		
CEG3708	Spatial Data Processing and BIM	10	10		6		
CEG3001	DSES 3	20	20		6		
EEE3011	Electric Drives	10		10	6		
EEE3018	Digital Control Systems	10		10	6		
EEE3021	Renewable Energy Systems and Smart Grids	10		10	6		
CEG3401	Design of Transport Infrastructure	10					

CEG3301	Design of Building Systems	10	10				
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(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>
EEE3002	The Analysis and Modelling of Electrical Machines	10	10		6		
EEE3003	Introduction to the Basics of Modern Power Electronics	10	10		6		
EEE3018	Digital Control Systems	10		10	6		
EEE3021	Renewable Energy Systems and Smart Grids	10		10	6		
EEE3095/6	Individual Project and Dissertation	40	20	20	6		
EEE3020	Electronic Devices	10	10		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>
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		
EEE3002	Electrical Machines	10	10		6		
EEE3008	Industrial Automation and Robotics	10	10		6		
EEE3021	Renewable Energy Systems and Smart Grids	10		10	6		
MEC3031	Introduction to Biomedical Engineering	10	10		6		
ENG3099	Individual Design and Research Project30	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.

**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

<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>
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(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>
CEG8107	Environmental Engineering for the Global South	10		10	7		Block
CEG8431	Technologies for Future Mobility	10		10	7		Block
CEG8514	Climate Change: Vulnerability, Impacts and Adaption	10		10	7		Block

CEG8003	Public policy: infrastructure and climate change	10	10		7		Block
CEG8304	Structural reliability	10	10		7		Block
CEG8011	Construction Project Management	10	10		7		Block
CEG8006	Digital Engineering and Analytics	10	10		7		Block
CEG8099	Investigative Research Project (individual)	30	10	20	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>
EEE8116	Bioelectronics	20		20	7		Block
EEE8114	Industrial Project	40	40		7		Block
CME8061	Advanced Materials for Energy Applications	20		20	7		Block
EEE8111	Engineering Study Project	10	10		7		Block
EEE8113	Group Design Project	30		30	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
MEC8028	Human Centred Design and Engineering	20		20	7		Block
CME8061	Advanced Materials for Energy Applications	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.