

Programme Regulations: 2023/24

Programme Titles:

Degree of Master of Engineering with Honours in Civil Engineering - UCAS Code: H290 (with Foundation Year – UCAS Code: H291)

Degree of Master of Engineering with Honours in Civil Engineering with Year in Industry - Code: H295 (with Foundation Year – UCAS Code: H291)

Programme Title: Degree of Master of Engineering with Honours in Civil & Structural Engineering - UCAS Code: H242 (with Foundation Year - UCAS Code: H291)

Degree of Master of Engineering with Honours in Civil & Structural Engineering with Year in Industry – UCAS Code: H296 (with Foundation Year - UCAS Code: H291)

Degree of Master of Engineering with Honours in Civil Engineering Science – Code 1658U**

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 progression to a further stage of the programme or for study in a further module.*
- (vi) All modules are delivered in Linear mode unless stated otherwise as Block, eLearning or distance learning.*
- (vii) Candidates with a Stage 2 average mark of below 55% must normally transfer to the equivalent BEng programme.*
- (viii) Programme transfers for Tier 4 students may be restricted by current Tier 4 rules. Please refer to the Visa Team for advice.*
- (ix) **Programme coded 1658U 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:

| <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> |
|-------------|---|----------------------|----------------------|----------------------|--------------|-------------|
| ENG1001 | Engineering Mathematics 1 | 20 | 10 | 10 | 4 | Core |
| ENG1002 | Sustainable Design, Creativity, and Professionalism | 30 | 10 | 20 | 4 | |
| ENG1003 | Electric and Magnetic Systems | 15 | 10 | 5 | 4 | |
| ENG1004 | Electronics and Sensors | 10 | | 10 | 4 | |
| ENG1005 | Thermofluid Mechanics | 15 | 5 | 10 | 4 | |
| ENG1006 | Properties and behaviours of Engineering Materials | 15 | 15 | | 4 | |
| ENG1007 | Mechanics I | 15 | 5 | 10 | 4 | |

H295 and H296 Year in Industry Only: In order to progress the intercalating year candidates are required to obtain an overall pass of at least 50% at the end of Stage 1.

3. Stage 2

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> |
|-------------|--|----------------------|----------------------|----------------------|--------------|-------------|
| CEG2002 | Statistics and Numerical Methods for Civil Engineers | 10 | | 10 | 5 | |
| CEG2004 | Design of Sustainable Engineering Systems 2 | 20 | 10 | 10 | 5 | Core |
| CEG2101 | Water Treatment Engineering for the 21st Century | 10 | | 10 | 5 | |
| CEG2102 | Environmental Systems and Quantification | 10 | 10 | | 5 | |
| CEG2201 | Geotechnics | 10 | 10 | | 5 | Core |
| CEG2302 | Design of Building Elements | 10 | 10 | | 5 | Core |
| CEG2401 | Land Traffic and Highways | 10 | 10 | | 5 | |
| CEG2502 | Hydraulics | 10 | | 10 | 5 | |
| CEG2711 | Engineering Surveying | 10 | | 10 | 5 | |
| ENG2015 | Mechanics II | 20 | 10 | 10 | 5 | Core |

To progress to Stage 3 of this programme, candidates are required to obtain an overall average over all modules taken at Stage 2 of at least 55%.

4. Intercalating Year – H295/H296 only

- (a) Upon successful completion of Stage 2 (with an overall pass threshold of 50% at the end of Stage 1) and before entering Stage 3, candidates shall spend the equivalent of one academic year in an approved placement. If a candidate is not successful in securing an approved placement, or fails the assessment of the placement year, then the candidate will be required to transfer to Stage 3 of the equivalent programme without Year in Industry.

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

| <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> |
|-------------|--------------------------------------|----------------------|----------------------|----------------------|--------------|-------------|
| NCL3000 | Career Service Placement Year Module | 120 | 60 | 60 | 6 | |

5. Stage 3

(a) 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> |
|-------------|--|----------------------|----------------------|----------------------|--------------|-------------|
| 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 | |
| CEG3708 | Spatial Data Engineering and BIM | 10 | 10 | | 6 | |

(b) All candidates for Master of Engineering with Honours shall follow one of the streams (i) to (ii) below, for which they are registered.

(i) Civil Engineering (H290/H295)

| <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> |
|-------------|------------------------------------|----------------------|----------------------|----------------------|--------------|-------------|
| CEG3401 | Design of Transport Infrastructure | 10 | | 10 | 6 | |
| CEG3503 | Hydrosystems Engineering | 10 | 10 | | 6 | |

(ii) Civil and Structural Engineering (H242/H296)

| <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> |
|-------------|------------------------------|----------------------|----------------------|----------------------|--------------|-------------|
| ARC3020 | Introduction to Architecture | 10 | | 10 | 6 | |
| CEG3302 | Structural Analysis 2 | 10 | 10 | | 6 | |

6. Stage 4

(a) 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> |
|-------------|--|----------------------|----------------------|----------------------|--------------|-------------|-------------|
| 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 | | |

(b) All candidates shall take 20 credits of optional modules normally selected from the following list (subject to timetabling):

| <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> |
|-------------|--|----------------------|----------------------|----------------------|--------------|-------------|-------------|
| CEG8005 | Global Engineering – An International Design and Build Challenge | 20 | 5 | 15 | 7 | | Block |
| CEG8010 | Bridge to industry | 20 | | 20 | 7 | | Block |
| SPG8016 | Design, Innovation and Entrepreneurship in Science and Engineering | 20 | | 20 | 7 | | Block |

(i) Civil Engineering (H290/H295).

All candidates shall take technical optional modules with a total value of 40 credits from one of the subject areas below:

ENVIRONMENTAL 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> |
|-------------|--|----------------------|----------------------|----------------------|--------------|-------------|-------------|
| CEG8104 | Wastewater Engineering | 10 | | 10 | 7 | | Block |
| CEG8105 | Solid Waste and Resource Management | 10 | 10 | | 7 | | Block |
| CEG8107 | Environmental Engineering in Low and Middle Income Countries | 10 | | 10 | 7 | | Block |
| CEG8112 | Air Pollution | 10 | 10 | | 7 | | Block |

GEOTECHNICAL 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> |
|-------------|---|----------------------|----------------------|----------------------|--------------|-------------|-------------|
| CEG8212 | Assessment of slope stability; design of slopes, mine pitwalls and tailing dams | 20 | 20 | | 7 | | Block |
| CEG8214 | Soil Modelling and Numerical Methods | 20 | | 20 | 7 | | Block |

TRANSPORT 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> |
|-------------|---|----------------------|----------------------|----------------------|--------------|-------------|-------------|
| CEG8410 | Road Safety | 10 | | 10 | 7 | | Block |
| CEG8422 | Intelligent Transport Systems | 10 | 10 | | 7 | | Block |
| CEG8427 | Behavioural models for individual choices | 10 | | 10 | 7 | | Block |
| CEG8431 | Technologies for Future Mobility | 10 | | 10 | 7 | | Block |

WATER RESOURCES ENGINEERING – All candidates Shall take the following compulsory module;

| <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> |
|-------------|---------------------------------------|----------------------|----------------------|----------------------|--------------|-------------|-------------|
| CEG8526 | Hydrosystems Modelling and Management | 20 | 20 | | 7 | | Block |

Candidates shall take a further 20 credits of technical optional modules selected from the following list (subject to timetabling):

| Code | Descriptive title | Total Credits | Credits Sem 1 | Credits Sem 2 | Level | Type | Mode |
|---------|---|---------------|---------------|---------------|-------|------|-------|
| CEG8517 | Computational hydraulics | 10 | | 10 | 7 | | Block |
| CEG8514 | Climate Change: Vulnerability, Impacts and Adaptation | 10 | | 10 | 7 | | Block |
| CEG8523 | Modelling and Forecasting of Floods | 10 | | 10 | 7 | | Block |

(ii) Civil and Structural Engineering (H242/H296).

All candidates shall take the following compulsory modules:

| Code | Descriptive title | Total Credits | Credits Sem 1 | Credits Sem 2 | Level | Type | Mode |
|---------|-------------------------------------|---------------|---------------|---------------|-------|------|-------|
| CEG8304 | Structural Reliability | 10 | 10 | | 7 | | Block |
| CEG8306 | Engineering Mechanics of Composites | 10 | | 10 | 7 | | Block |
| CEG8314 | Seismic Resistant Design | 10 | 10 | | 7 | | Block |
| CEG8315 | Advanced Structural Modelling | 10 | | 10 | 7 | | Block |

Up to 20 credits of alternative optional modules may be selected subject to the approval of the Degree Programme Director.

7. Assessment methods

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

8. Condonement and Compensation

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.

9. Degree classification

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 for Stage 2, Stage 3 and Stage 4 respectively.