

School Engineering and Computer Science

Title of Programme: MEng (Hons) in Civil Engineering


Programme Code: ENCIVMENG

Programme Specification

This programme specification is relevant to students entering:
23 September 2019

Associate Dean of School (Academic Quality Assurance):

Susan Murray



Signature

A programme specification is a collection of key information about a programme of study (or course). It identifies the aims and learning outcomes of the programme, lists the modules that make up each stage (or year) of the programme, and the teaching, learning and assessment methods used by teaching staff. It also describes the structure of the programme, its progression requirements and any programme-specific regulations. This information is therefore useful to potential students to help them choose the right programme of study, to current students on the programme, and to staff teaching and administering the programme.

Summary of amendments to the programme:

Section	Amendment
F	Changed to reflect the latest School's policy.
G	Amended entry requirements to reflect School's entry tariff.

If you have any queries regarding the changes please email AQO@herts.ac.uk

Programme Specification BEng (Hons) in Civil Engineering

This programme specification (PS) is designed for prospective students, enrolled students, academic staff and potential employers. It provides a concise summary of the main features of the programme and the intended learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the teaching, learning and assessment methods, learning outcomes and content for each module can be found in Definitive Module Documents (DMDs) and Module Guides.

Section 1

Awarding Institution/Body	University of Hertfordshire
Teaching Institution	University of Hertfordshire and the Building Research Establishment
University/partner campuses	University of Hertfordshire College Lane and De Havilland Campuses, and the BRE site. Note that students will be required to travel to the BRE site in Garston, near Watford, as part of their studies.
Programme accredited by	Accreditation will be sought on a staged basis from the JBM
Final Qualification	MEng (Hons)
All Final Award titles (Qualification and Subject)	Civil Engineering Civil Engineering (Sandwich) Civil Engineering with Year Abroad Civil Engineering with Study Abroad
FHEQ level of award	7
UCAS code(s)	H200
Language of Delivery	English

A. Programme Rationale

The core of the School of Engineering and Technology undergraduate portfolio is a well-established, fully accredited, MEng/BEng provision attracting highly qualified undergraduate students to a range of engineering disciplines. These awards expand this provision to include engineering graduates to work specifically in the Civil Engineering industry.

The programme will take advantage of research/commercial activity the Materials subject groups as well as links that the school has established with both large and medium Civil Engineering companies.

This Civil Engineering programme will exhibit a unique and distinctive partnership with the BRE and will expose our students to a world leading organization in the field of Construction Research and Fire Engineering.

Initially, at level 4, students will study a broad engineering curriculum supplemented by some modules from the School of Life and Medical Sciences and the School of Physics, Astronomy and Mathematics. Levels 5 and 6 will provide the essential learning for students to enter the industrial world as competent young Civil Engineers. Project work at level 6 and level 7 will equip our students with the design, teamwork and communication skills to be attractive to prospective employers.

MEng and BEng students will study together during levels 4, 5 and 6 with MEng students staying on for an extra year of level 7 studies. BEng students with a sufficient level of achievement during levels 4, 5 and 6 are encouraged to consider transfer to the MEng award. The level 7 studies will give the students the opportunity to develop their leadership and team working skills whilst also deepening and broadening their understanding of advanced level Civil Engineering systems and technologies.

All students have the opportunity to studying the sandwich option spending at least 48 weeks on industrial placement usually between levels 5 and 6, although this can be pursued between levels 6 and 7 for those transferring to the MEng award.

There is a national need to provide more qualified Civil Engineers and all graduates can expect to be employable within the Civil Engineering industry. MEng graduates can expect to gain more rapid promotion into positions of responsibility within industry. Alternatively some graduates may wish to extend their studies by taking a research based award.

B. Educational Aims of the Programme

The programme has been devised in accordance with the University's graduate attributes of programmes of study as set out in [UPR TL03](#).

Additionally this programme aims to:

- provide a high-quality education in engineering giving a deeper learning of the whole life design of projects and advanced design / design methods while considering the complexities of inter related factors;
- provide an education basis for the individual to enhance their prospect of becoming employed in a leadership capacity;
- provide programme awards that have the potential for accreditation by the Joint Board of Moderators (JBM) on behalf of the Institution of Civil Engineers, the Institution of Structural Engineers, the Chartered Institution of Highways and Transportation and the Institute of Highway Engineers.
- provide studies that develop innovation, technology transfer and the use of emerging technologies;
- provide learning experiences that address areas of sustainability, environmental policy and governance, structural design and fire safety, systems and data, and whole life design.

C. Intended Learning Outcomes

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills and other attributes in the following areas. The programme outcomes are referenced to the QAA benchmark statements for Engineering and the Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2014) and relate to the typical student. Additionally, the SEEC Credit Level Descriptors for Further and Higher Education (2016) have been used as a guiding framework for curriculum design.

Knowledge and Understanding	Teaching and learning methods	Assessment strategy
<p>A1- The analytical methods employed by Civil Engineers.</p> <p>A2- The engineering sciences appropriate to Civil Engineers.</p> <p>A3- The design principles and design-to-build processes (including developing technologies) appropriate to Civil Engineering.</p> <p>A4- The principles of environmental, ethical, social, legal and</p>	<p>Acquisition of knowledge and understanding is through the following approaches.</p> <p>Acquisition of A1 and A2 is through a combination of lectures, small group tutorials, coursework and laboratory work at levels 4 and 5 of the programme.</p> <p>Additional support is provided through the Mathematics Drop-in Centre. Specialist aspects of A2 are further developed at levels 6 and 7.</p>	<p>Knowledge and understanding are assessed through a combination of unseen examinations (A1, A2, A3 and A5) and in-course assessments (A1-A6) in the form of laboratory reports, essays and phase tests. Some aspects of A3, A4 and A6 are assessed by design exercises and project reports and presentations. At level 6 and 7 some aspects of A5 and A6 are assessed using</p>

<p>sustainability in Civil Engineering.</p> <p>A5- Professional engineering practice appropriate to Civil Engineering with an appreciation of likely new developments.</p> <p>A6- The application of innovation, technology transfer, emerging technologies in Civil Engineering.</p>	<p>Acquisition of A3, A4, A5 and A6 is through a combination of lectures, projects, coursework, laboratory work, site visits, guest lectures and field work throughout the programme.</p> <p>Staff deploy a range of teaching and learning strategies in the most appropriate way for each individual module. This will vary depending on the subject nature of a particular module and the level of study. A more didactic approach will tend to be adopted at lower levels, in particular for A1 and A2. An increasingly self-directed and interactive approach will be adopted at higher levels, particularly for A3, A4, A5 and A6.</p> <p>Throughout, the learner is encouraged to undertake independent study both to supplement and consolidate what is being taught/learnt and to broaden their individual knowledge and understanding of the subject.</p>	<p>case studies and design exercises</p>
Intellectual skills	Teaching and learning methods	Assessment strategy
<p>B1- Critically analyse and solve engineering problems using appropriate techniques.</p> <p>B2- Model and critically analyse relevant engineering systems.</p> <p>B3- Appreciate the limitations, and make sound judgement, when selecting appropriate computer based methods for engineering and Communication.</p> <p>B4- Fully evaluate external influences on the design process including those outside of engineering.</p> <p>B5- Innovatively design appropriate systems, components or processes (as applicable) and utilise emerging technologies in both known and unfamiliar problems.</p>	<p>Intellectual skills are developed throughout the programme by the methods and strategies outlined for section A of the intended learning outcomes above, again moving from a more didactic approach to an increasingly self-directed and interactive approach at higher levels, particularly for B3, B4, B5 and B6.</p> <p>Analysis, problem solving and modelling skills (B1 and B2) are further developed through tutorial work, laboratory work, in-course exercises and project work.</p> <p>Design and IT skills (B3-B6) are further developed through project work, design exercises and some case study work at levels 6 and 7.</p>	<p>Intellectual skills B1, B2, B5 and B6 are assessed through unseen examination papers, laboratory reports and coursework related to in-course exercises.</p> <p>Intellectual skills B3, B4 and B6 are assessed through project reports, design projects, analysis and reports, and presentations.</p>

B6- Promote advanced designs and design methods and consider the complexity of inter-related factors in designs.	<p>Feedback is given to all students on all coursework produced.</p> <p>Throughout, the learner is encouraged to develop intellectual skills further by independent study.</p>	
Practical skills	Teaching and learning methods	Assessment strategy
<p>C1-Apply analytical skills and modelling techniques to solve problems, including unfamiliar problems, appropriate to Civil Engineering.</p> <p>C2-Perform experimental work and draw conclusions based on critical evaluation, making sound judgement in the absence of complete data.</p> <p>C3-Use computer-based engineering tools.</p> <p>C4-Prepare technical documentation and clearly communicate this to a range of audiences.</p> <p>C5-Critically evaluate Civil engineering designs at system, component or process level.</p> <p>C6-Plan and manage a project, taking into account technical, commercial, industrial and other external constraints.</p>	<p>Practical skills are developed throughout the programme by the methods and strategies outlined in sections A and B of the intended learning outcomes above, again moving from a more didactic approach to an increasingly self- directed and interactive approach at higher levels, particularly for C4, C5 and C6.</p> <p>C1 is developed through laboratory work, coursework assignments and tutorial work.</p> <p>C2 is developed through laboratory work.</p> <p>C3 is developed through the use of software simulation tools at all levels.</p> <p>C4 is developed through project work, lab exercises and software documentation, particularly at level 4.</p> <p>C5 is developed through lab and project work at levels 5, 6 and 7. C6 is developed through lectures and project work.</p> <p>Feedback is given to all students on all coursework produced.</p>	<p>Practical skills are assessed through laboratory reports, coursework assignments, design exercise submissions, case study reports, presentations, project reports and field work.</p>
Transferable skills	Teaching and learning methods	Assessment strategy
<p>D1- Communicate effectively, orally, graphically or in writing to a range of audiences</p> <p>D2-Use commonly available IT tools.</p> <p>D3-Manage time and resources effectively.</p>	<p>Transferable skills are developed throughout the programme by the methods and strategies outlined in sections A, B and C of the intended learning outcomes above.</p> <p>D1 is developed through feedback on coursework</p>	<p>Transferable skills are assessed through the following approaches.</p> <p>D1, D2, D5 and D6 are assessed through coursework, individual MEng project and technical reports, and oral presentations.</p>

<p>D4-Work effectively within a team as a member or in a leadership role.</p> <p>D5-Manipulate, sort and present data.</p> <p>D6-Solve problems in a logical manner.</p> <p>D7-Learn effectively and independently, in all aspects of life.</p>	<p>reports, oral presentations and project reports.</p> <p>D2 is developed through their use in preparing project reports, laboratory reports, case studies, design work, etc.</p> <p>D3 is developed through project work planning and throughout the programme.</p> <p>D4 is developed through group project and assignment work.</p> <p>D5 and D6 are developed through lectures and tutorial work throughout the programme.</p> <p>D7 is developed and promoted throughout the programme.</p> <p>Throughout, the learner is encouraged to develop transferable skills by maintaining a record of evidence and completing a personal development plan.</p>	<p>D4 is assessed by review of group project work.</p> <p>D3 and D7 are specifically assessed by review of an individual's progress during individual MEng project work</p>
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D. Programme Structures, Features, Levels, Modules, and Credits

The programme is offered in full-time (4 years) and sandwich (5 years) modes, and leads to the awards of a MEng Degree with Honours in Civil Engineering.

It is not possible to study beyond the BEng level for as a part-time student due to the level 7 programme structure.

Entry is normally at level 4 (with A-Level, or equivalent qualifications) but is possible at level 5 with suitable qualifications (e.g. an Edexcel HND in Civil Engineering with appropriate subjects studied). Direct entry into level 6 is also possible following successful completion of two years of a similar BEng or MEng JBM accredited degree programme at another HE institution, provided the entrant has studied a suitable blend of modules. It is possible for a BEng Honours student to transfer to the MEng provided they have passed the MEng progression requirements. Part time students who have successfully completed the BEng and obtained an upper second or higher classification, can convert to full time mode to obtain an MEng. Intake is normally in Semester A (September)

Professional and Statutory Regulatory Bodies

The programme has been designed to meet the requirements of the Joint Board of Moderators (JBM), who are the accrediting organisation for the Institution of Civil Engineers, the Institution of Structural Engineers, the Chartered Institute of Highways and Transportation, and the Institute of Highways Engineers. The School will seek a staged accreditation for the degree in discussion with the JBM. The programme will be submitted for accreditation in accordance to the requirements of the Joint Board of Moderators. The expected submission date is October 2021. Once accredited, this will be backdated to include all the cohorts joined the University since September 2017.

Work-Based Learning, including Sandwich Programmes

A designated sandwich programme leads to a University award in the sandwich mode and the word "sandwich" appears on the award certificate. This requires the student to complete a period of approved work experience (industrial placement) of not less than 48 weeks, excluding holidays, normally during year 3. To achieve this, students must start their work experience before 1st October. The work experience will normally be completed

within the United Kingdom but with approval may be completed within other countries. Progress of the student's training is monitored by visits from University academic staff. Students will be required to document this period of work in accordance with the guidelines produced by the School. Students on industrial placement will be registered on the Civil Engineering Placement Year module (6ENT1077).

Additionally, students undertaking a sandwich placement must meet the following criteria:

- The whole period of placement should be recorded in a Training Report, which should be submitted to the university. This will be used as the basis of a debriefing session at which individual students should assess and be assessed on their achievements. Health and safety training will form an important part of this assessment.
- Student will be required to make a formal presentation on his/her placement, preferably to a peer group and staff, lasting approximately 15-20 minutes. This will form part of the assessment.
- The student should keep all of their reports for future use and reference.

Students are encouraged by university staff, to use their experience and their reports as a basis for a presentation to the local Professional Institution Branch, Regions or Division possibly through student paper or poster competitions.

Students who have not achieved the minimum progression requirements at the end of level 5 may be prevented from undertaking a sandwich placement. The policy relating to progression onto the placement year from level 5 is given in the School Guidelines on Industrial Placements. Additionally, students on industrial placement but who have level 4 or 5 modules to repeat, will not normally be allowed to re-enrol on these modules until they return from industrial placement. This is to avoid a conflict between UH attendance requirements and the student's commitment to their employer.

Students who do not take the sandwich option, progressing directly to level 6, are automatically transferred to the full-time mode and are required to complete a Careers Portfolio to demonstrate their employability skills (6ENT1021). This portfolio will include evidence of any employment experiences the student has, evidence of any voluntary work experience, an audit of their employability skills and a careers action plan to further their employability skills post graduation. It is expected that much of this evidence will have been gathered during the Career Skills Development module (4ENT1096) and Career Planning module (5ENT1082).

Erasmus Exchange programme and Study Abroad Options

Students may opt to take additional studies through the Year Abroad or Semester Abroad options at a partner institution in place of the sandwich placement year. To be eligible for these options students will be expected to have passed 120 credits at level 4 and 120 credits at level 5 with an average of at least 60%. In order to maintain registration with UH, students studying abroad for a full year will be registered on 6ENT0001 whilst students studying abroad for a single semester will be enrolled on 6ENT1051. In recognition of the extra study, provided a full transcript of their achievement in the host academic institution is submitted to the Board of Examiners, this will lead to an award of a MEng Degree with Honours in one of the named awards as listed in Section 1 (page 2) "with year abroad" or "with study abroad" on the award.

Programme Structure

The programme structure and progression information below (Table 1a and 1b) is provided for the Honours award. Any interim awards are identified in Table 1b. The Programme Learning Outcomes detailed above are developed and assessed through the constituent modules. Table 2 (page 18) identifies where each learning outcome is assessed.

Table 1a Outline Programme Structure

Mode of study

The modes of study are Full Time: 4 years; Sandwich/Year Abroad: 5 years.

Entry point Semester A

Level 4

Module Title	Module Code	Credit Points	Language of Delivery	% Examination	% Coursework	Compulsory (C) or Optional (O)	Semesters	Year of Study	
								Full Time Mode	Part Time Mode
Career Skills Development	4ENT1096	0	English	0	100	C	AB	1	-
Civil Engineering Materials 1	4ENT1134	15	English	60	40	C	A	1	-
Engineering Mathematics	4PAM1007	15	English	80	20	C	A	1	-
Principles of Sustainable Design and Construction	4ENT1137	15	English	0	100	C	A	1	-
Site Surveying and Setting Out	4ENT1135	15	English	0	100	C	A	1	-
Fluid Mechanics and Hydraulics	4ENT1138	15	English	80	20	C	B	1	-
Mechanical Science	4ENT1067	15	English	60	40	C	B	1	-
Engineering Application of Mathematics	4PAM1033	15	English	0	100	C	B	1	-
Dynamic Earth	4LMS0183	15	English	50	50	C	B	1	-

- Progression to level 5 of MEng requires a minimum of 90 credits to remain on honours award.
- Students who at level 4 of the BEng have passed 120 credits and who can demonstrate that their average performance at level 4 is equivalent to or above an upper second class (2i) honours classification can request progression/transfer to the MEng Civil Engineering programme.

Level 5

Module Title	Module Code	Credit Points	Language of Delivery	% Examination	% Coursework	Compulsory (C) or Optional (O)	Semesters	Year of Study	
								Full Time Mode	Part Time Mode
Career Planning	5ENT1082	0	English	0	100	C	AB	2	-
Mathematical Modelling and Simulation	5ENT1093	15	English	0	100	C	A	2	-
Soil Mechanics	5ENT1094	15	English	70	30	C	A	2	-
Structural Mechanics	5ENT1012	15	English	70	30	C	B	2	-
Civil Engineering Materials 2	5ENT1095	15	English	70	30	C	A	2	-
Construction and Building Management	5ENT1099	15	English	70	30	C	B	2	-
Hydrology and Open Channel Hydraulics	5ENT1097	15	English	70	30	C	A	2	-
Civil Engineering Structural Design	5ENT1096	15	English	70	30	C	B	2	-
Surveying and Highway Engineering	5ENT1098	15	English	0	100	C	B	2	-

- Progression to level 6 of MEng Honours requires 210 credit points and above at level 4 and 5.
- Students who at level 5 of the BEng have passed 240 credits and who can demonstrate that their average performance at level 5 is equivalent to or above an upper second class (2i) honours classification, can request progression/transfer to the MEng Civil Engineering programme.

Level 6

Module Title	Module Code	Credit Points	Language of Delivery	% Examination	% Coursework	Compulsory (C) or Optional (O)	Semesters	Year of Study	
								Full Time Mode	Part Time Mode
Civil Engineering Placement Year	6ENT1077	0	English	0	100	O	ABC	3	-
Careers Portfolio	6ENT1021	0	English	0	100	C	AB	3	-
Year Abroad	6ENT0001	0	English	0	100	O	AB	3	-
Semester Abroad	6ENT1051	0	English	0	100	O	A/B	3	-
Individual MEng Project	6ENT1097	30	English	0	100	C	AB	3	-
Geotechnical Design	6ENT1072	15	English	60	40	C	B	3	-
** Flood Management and River Engineering	6ENT1073	15	English	60	40	O	A	3	-
** Highway and Traffic Engineering	6ENT1078	15	English	60	40	O	A	3	-
Advanced Structural Analysis and Design	6ENT1074	15	English	60	40	C	A	3	-
Sustainable Engineering	6ENT1075	15	English	60	40	C	B	3	-
Industry Group Design Project	6ENT1076	30	English	0	100	C	AB	3	-

- ** Students will study either Highway and Traffic Engineering or Flood Management and River Engineering.
- Progression/transfer to level 7 requires eligibility for at least an upper second class BEng Honours exit award, as defined in UPR AS14, and including the Individual MEng Project in the calculation of the degree classification.
- Progression/transfer to level 7 can only be on a full time study basis.
- MEng students may opt to transfer from the MEng programme to the BEng programme after completing level 6 and will be subject to the BEng requirement for qualification and degree classification.
- MEng students who at level 6 have not met the eligibility criteria for progression to level 7 will be required to transfer to the BEng Civil Engineering programme.

Level 7	Module Code	Credit Points	Language of Delivery	% Examination	% Coursework	Compulsory (C) or Optional (O)	Semesters	Year of Study	
								Full Time Mode	Part Time Mode
Module Title									
**Sustainable Energy	7LFS1032	15	English	0	100	O	A	4	-
Environmental Policy and Governance	7ENT1080	15	English	0	100	C	A	4	-
**Structural Design for Fire Safety	7ENT1075	15	English	50	50	O	A	4	-
Systems, Data and Technologies for Civil Engineering	7ENT1079	30	English	50	50	C	A	4	-
Civil Engineering Whole Life Design Project	7ENT1077	60	English	0	100	C	B	4	-

- ** Students study either Sustainable Energy or Structural Design for Fire Safety
- If any of the progression requirements stated above are not met then the Board of Examiners is empowered to require the student to transfer to the BEng non-Honours or BEng Honours degree programme. The study pattern for students transferring onto the BEng (non-Honours) route shall be agreed on a case-by-case basis with the BEng Programme Tutor or Associate Dean of School.

The award of an Honours MEng degree requires 480 credit points passed with a minimum of at least 360 at level 7/6/5 of which 120 must be at level 7.

Honours classification

The University has approved structure and assessment regulations common to all programmes. Full details are provided in [UPR AS14](#), Section D. However, this programme has specific regulations relating to the determination of Honours classification given under the Programme Specific Regulations at the end of Section D.

Table 1b Final and interim awards available

The programme provides the following final and interim awards:

Final Award	Award Title	Minimum requirements	Available at end of Level	Programme Learning Outcomes developed (see above)
MEng (Hons)	Civil Engineering	480 credit points including 360 at levels 7/6/5 of which 120 must be at level 7.	7	All programme learning outcomes (see Table 2, page 18)
	Civil Engineering (Sandwich)	480 credit points including 360 at levels 7/6/5 of which 120 must be at level 7. Additionally students must satisfactorily complete the Civil	7	All programme learning outcomes (see Table 2, page 18)

	Engineering Placement Year.		
Civil Engineering with Year Abroad	480 credit points including 360 at level 7/6/5 of which 120 must be at level 7. Additionally, students must satisfactorily complete the Year Abroad module.	7	All programme learning outcomes (see Table 2, page 18)
Civil Engineering with Study Abroad	480 credit points including 360 at level 7/6/5 of which 120 must be at level 7. Additionally, students must satisfactorily complete the Semester Abroad module.	7	All programme learning outcomes (see Table 2, page 18)

Interim Award	Award Title	Minimum requirements	Available at end of Level	Programme Learning Outcomes developed (see above)
University Certificate		45 credit points at level 4	4	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm
Certificate of Higher Education		120 credit points at level 4	4, 5	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm
Diploma of Higher Education		240 credit points including at least 120 at level 5	5, 6	See UPR AS11, section 13: http://sitem.herts.ac.uk/secreg/upr/AS11.htm
BEng	Civil Engineering	300 credit points including 180 at level 6/5 of which 60 must be at level 6	6	A1, A2, A3, A4, A5, B1,B2, B3, B4, B5,C1,C2,C3, C4, C5, C6, D1, D2,D3, D4, D5, D6, D7
	Civil Engineering (Sandwich)	300 credit points including 180 at level 6/5 of which 60 must be at level 6 excluding the Individual MEng Project. Additionally, students must satisfactorily complete the Civil Engineering Placement Year	6	A1, A2, A3, A4, A5, B1, B2, B3, B4, B5,C1,C2,C3, C4, C5, C6, D1, D2,D3, D4, D5, D6, D7
	Civil Engineering with Year Abroad	300 credit points including 180 at level 6/5 of which 60 must be at level 6 excluding the Individual	6	A1, A2, A3, A4, A5, B1,B2, B3, B4, B5,C1,C2,C3, C4, C5, C6, D1, D2,D3, D4, D5, D6, D7

		MEng Project. Additionally, students must satisfactorily complete the Year Abroad module.		
	Civil Engineering with Study Abroad	300 credit points including 180 at level 6/5 of which 60 must be at level 6 excluding the Individual MEng Project. Additionally, students must satisfactorily complete the Semester Abroad module.	6	A1, A2, A3, A4, A5, B1, B2, B3, B4, B5, C1, C2, C3, C4, C5, C6, D1, D2, D3, D4, D5, D6, D7
BEng (Hons)	Civil Engineering	300 credit points including 180 at level 6/5 of which 60 must be at level 6	6	A1, A2, A3, A4, A5, B1, B2, B3, B4, B5, C1, C2, C3, C4, C5, C6, D1, D2, D3, D4, D5, D6, D7
	Civil Engineering (Sandwich)	300 credit points including 180 at level 6/5 of which 60 must be at level 6 excluding the Individual MEng Project. Additionally, students must satisfactorily complete the Civil Engineering Placement Year	6	A1, A2, A3, A4, A5, B1, B2, B3, B4, B5, C1, C2, C3, C4, C5, C6, D1, D2, D3, D4, D5, D6, D7
	Civil Engineering with Year Abroad	300 credit points including 180 at level 6/5 of which 60 must be at level 6 excluding the Individual MEng Project. Additionally, students must satisfactorily complete the Year Abroad module.	6	A1, A2, A3, A4, A5, B1, B2, B3, B4, B5, C1, C2, C3, C4, C5, C6, D1, D2, D3, D4, D5, D6, D7
	Civil Engineering with Study Abroad	300 credit points including 180 at level 6/5 of which 60 must be at level 6 excluding the Individual MEng Project. Additionally, students must satisfactorily	6	A1, A2, A3, A4, A5, B1, B2, B3, B4, B5, C1, C2, C3, C4, C5, C6, D1, D2, D3, D4, D5, D6, D7

Programme-specific assessment regulations

The programme is compliant with the University's academic regulations (UPR AS11, UPR AS12 or UPR AS13, UPR AS14) with the exception of those listed below, which have been specifically approved by the University:

- A compensated pass cannot be awarded for the Individual MEng Project;
- The Individual MEng Project must be included in the calculation of degree classification for Honours;
- A pass grade in the report component of the Level 6 Individual MEng Project is required for an award at Honours;
- Students who take either of the Study Abroad options (see page 7) as an alternative to the Civil Engineering Placement Year can receive an accredited award as they will have taken all the modules required by the accrediting body.
- Students undertaking the sandwich qualification are required to undertake an approved 48-week work placement.
- The following zero credit modules are taken by students at Level 4 and 5 respectively. They are compulsory modules although they have no academic impact on the student's degree outcome:
 - Career Skills Development - 4ENT1096
 - Career Planning - 5ENT1082

Students who do not pass at their first attempt may be offered a referral (second assessment) opportunity for these modules. However, students who do not pass their referral assessment will not be given an opportunity to repeat the module in a subsequent year (FREN). If students do not pass the assessment at the second attempt their final transcript will show "FNFA" (Fail No Further Attempts).

Course Code	Course Instance	Award Title	Modules (child instance codes & title)	Must be included in classification algorithm?
ENCIVMENG	MCIV4F	MEng (Honours) Civil Engineering	6ENT1097 - Individual MEng Project	Yes
ENCIVMENG	MCIV5S	MEng (Honours) Civil Engineering MEng (Honours) Civil Engineering (Sandwich) MEng (Honours) Civil Engineering with Year Abroad MEng (Honours) Civil Engineering with Study Abroad	6ENT1097 - Individual MEng Project	Yes

E. Management of Programme & Support for student learning.

Management

The programme is managed and administered through:

- Dean of School;
- Associate Dean of School (AQA) who has overall responsibility for Quality Assurance;
- Associate Dean of School (L&T) who has overall responsibility for Learning & Teaching;
- the Programme Leader who is responsible for chairing the programme committee and advising students on the programme as a whole;

- the Student Administrator responsible for the administration associated with the programme;
- Programme Leaders who are responsible for the day to day management;
- An Admissions Tutor, with specific responsibility for selection;
- A programme committee that includes the above plus student representation;
- Module leaders who are responsible for individual modules.
- A BRE based programme co-ordinator.

Support

Students are supported by:

- an induction week at the beginning of each new academic session;
- an extensive Learning Resources Centre, incorporating a library and computer centre;
- guided student-centred learning through the use of StudyNet;
- a student handbook that is specific to the programme;
- a Programme Leader who can advise on programme issues;
- a Student Administrator and admin assistants in the school office;
- Module teaching teams who provide academic support;
- Computer and technical laboratories facilities and technical support staff;
- a project supervisor;
- student representatives on the programme committee;
- the Mathematics Drop-in Centre;
- the Careers, Employment and Enterprise Service that support students looking for either graduate employment or an industrial placement.
- a substantial Student Centre that provides advice on issues such as finance, University regulations, legal matters etc.;
- the Medical Centre;
- the Accommodation Office;
- the International Students Centre who organise an Overseas Student Orientation induction programme;
- printing, photocopying, laminating and document binding facilities;
- Nightline – a confidential student listening and information service in the evening when other services are not available;
- a confidential counselling service;
- University Disability Advisors;
- an Equal Opportunities Officer;
- the Students' Union.

F. Other sources of information

In addition to this Programme Specification, the University publishes guidance to registered students on the programme and its constituent modules:

- A Programme (or Student) Handbook;
- A Definitive Module Document (DMD) for each constituent module;
- A Module Guide for each constituent module.

The [Ask Herts](#) website provides information on a wide range of resources and services available at the University of Hertfordshire including academic support, accommodation, fees, funding, visas, wellbeing services and student societies.

As a condition of registration, all students of the University of Hertfordshire are required to comply with the University's rules, regulations and procedures. These are published in a series of documents called 'University Policies and Regulations' (UPRs). The University requires that all students consult these documents which are available on-line, on the UPR web site, at: <http://www.herts.ac.uk/secreg/upr/>. In particular, [UPR SA07](#) 'Regulations and Advice for Students' Particular Attention - Index' provides information on the UPRs that contain the academic regulations of particular relevance for undergraduate and taught postgraduate students.

In accordance with section 4(5) of the Higher Education and Research Act 2017 (HERA), the UK Office for Students (OfS) has registered the University of Hertfordshire in the register of English higher education providers. The Register can be viewed at: <https://www.officeforstudents.org.uk/advice-and-guidance/the-register/the-ofs-register/>. Furthermore, the OfS has judged that the University of Hertfordshire delivers consistently outstanding teaching, learning and outcomes for its students. It is of the highest quality found in the UK. Consequently, the University received a Gold award in the 2018 Teaching Excellence and Student Outcomes (TEF) exercise. This award was made in June 2018 and is valid for up to 3 years. The TEF panel's report and conclusions can be accessed at: <https://www.officeforstudents.org.uk/advice-and-guidance/teaching/tef-outcomes/#/provider/10007147>

G. Entry requirements

The normal entry requirements for the MEng (Hons) Civil Engineering programme are: 120 UCAS points from 3 A-levels, including Mathematics at A-level, plus GCSE Maths, English Language and a Science at grade C or above. An 'A' level qualification in a science based subject, such as Physics or Chemistry is desirable but other A-level qualifications in subjects such as Economics, Engineering Design, Technology and Geography will be considered. General Studies/Critical Thinking are not accepted. Applications are also welcomed from those holding International Baccalaureate, and appropriate equivalent international qualifications.

Direct entry onto the MEng Civil Engineering programme from the Extended Engineering and Technology Degree Programme (Initial Year) is not permitted. Direct entry onto the MEng Civil Engineering programme from HIC programmes is not permitted.

In addition to the academic fees, students will be responsible for their costs of travel to BRE and for the costs of the residential field course at level 5.

Direct Entry at Second and Final Year

In accordance with University Admissions Policy to allow flexible entry at different levels, it may be possible for applicants to enter the programme at second and final year level. In all instances, candidates will be required to discuss their individual circumstances with the appropriate Admissions Tutor.

Direct entry into level 5 and level 6 is possible, for example following successful completion of one or two years of a similar BEng or MEng degree programme at another HE institution. Direct-entry into level 7 will be considered for applicants who have successfully completed a JBM-accredited BEng(Hons) in Civil Engineering with a classification of upper second class honours or first class honours, and where a pass has been achieved in an individual final year project and this is included in the calculation of the degree classification.

English Language Requirements

In addition to the requirements stated above, students entering the programme and whose first language is not English will be required to demonstrate a proficiency in English to IELTS 6.0 with 5.5 in each band or an equivalent recognised qualification.

The programme is subject to the University's Principles, Policies and Regulations for the Admission of Students to Undergraduate and Taught Postgraduate Programmes (in [UPR SA03](#)), along with associated procedures. These will take account of University policy and guidelines for assessing accredited prior certificated learning (APCL) and accredited prior experiential learning (APEL).

If you would like this information in an alternative format please contact: the School Administration Manager

If you wish to receive a copy of the latest Programme Annual Monitoring and Evaluation Report (AMER) and/or the External Examiner's Report for the programme, please email a request to aqo@herts.ac.uk

BEng (Honours) Civil Engineering

Table 2: Development of Intended Programme Learning Outcomes in the Constituent Modules

This map identifies where the programme learning outcomes are assessed in the constituent modules. It provides (i) an aid to academic staff in understanding how individual modules contribute to the programme aims (ii) a checklist for quality control purposes and (iii) a means to help students monitor their own learning, personal and professional development as the programme progresses.

		Programme Learning Outcomes (as identified in section 1 and the following page)																										
		Knowledge & Understanding						Intellectual Skills						Practical Skills						Transferable Skills								
Module Title		Module Code	A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	C5	C6	D1	D2	D3	D4	D5	D6	D7	
Level 4	Career Skills	4ENT1096					x														x	x	x			x	x	
	Civil Engineering Materials I	4ENT1134		x		x										x									x			
	Engineering Mathematics	4PAM1007	x														x								x	x		
	Principles of Sustainable Design and Construction	4ENT1137			x	x	x						x				x				x	x						
	Site Surveying and Setting Out	4ENT1135	x				x						x		x			x			x		x	x	x	x		
	Fluid Mechanics and Hydraulics	4ENT1138		x			x		x							x		x										
	Mechanical Science	4ENT1067		x					x							x												
	Engineering Applications of Mathematics	4PAM1033	x														x								x	x		
	Dynamic Earth	4LMS0183		x								x				x		x			x				x			
Level 5	Career Planning	5ENT1082					x														x						x	
	Mathematical Modelling and Simulation	5ENT1093	x						x	x	x				x		x					x			x	x		
	Soil Mechanics	5ENT1094	x	x					x			x				x									x			
	Structural Mechanics	5ENT1012		x						x					x	x									x			
	Civil Engineering Materials II	5ENT1095		x								x				x									x			
	Construction and Building Management	5ENT1099		x		x				x	x	x			x		x			x		x						
	Hydrology and Open Channel Hydraulics	5ENT1097	x	x					x	x		x			x	x									x			
	Civil Engineering Structural Design	5ENT1096			x		x						x			x	x								x			
	Surveying and Highway Engineering	5ENT1098	x				x		x		x	x	x				x	x			x	x	x	x	x	x		
																		x	x	x	x	x				x		
	Placement Year	6ENT1077				x	x											x	x	x	x	x				x		

Level 6	Year Abroad	6ENT0001																								
	Semester Abroad	6ENT1051																								
	Careers Portfolio	6ENT1021					x												x		x		x		x	
	Individual Major Project	6ENT1062				x			x		x	x					x		x	x	x		x	x	x	
	Geotechnical Design	6ENT1072	x			x			x		x	x	x		x		x								x	
	Flood Management and River Engineering **	6ENT1073	x	x	x	x			x		x	x			x	x	x		x					x	x	
	Highway and Traffic Engineering **	6ENT1078	x			x			x			x	x		x		x		x		x	x				
	Advanced Structural Analysis and Design	6ENT1074	x	x	x				x	x	x		x		x							x			x	x
	Sustainable Engineering	6ENT1075				x						x	x						x			x				
	Group Design Project	6ENT1076				x	x	x		x	x	x	x	x		x		x	x	x	x	x	x	x	x	x
Level 7	Sustainable Energy **	7LFS1032			x		x	x	x	x			x	x	x				x	x	x	x		x		x
	Environmental Policy and Governance	7ENT1080				x	x					x	x						x	x	x					x
	Structural Design for Fire Safety **	7ENT1075	x	x	x		x	x	x	x		x		x	x		x		x			x				
	Systems, Data and Technologies for Civil Engineering	7ENT1079				x	x		x		x	x		x	x			x	x	x		x			x	x
	Whole Life Design Project	7ENT1077				x	x	x	x	x	x	x	x	x	x			x	x	x	x	x	x	x	x	x

** Optional Modules

KEY TO PROGRAMME LEARNING OUTCOMES

Knowledge and Understanding

- A1. The analytical methods employed by Civil Engineers.
- A2. The engineering sciences appropriate to Civil Engineers
- A3. The design principles and design-to-build processes (including developing technologies) appropriate to Civil Engineering.
- A4. The principles of environmental, ethical, social, legal and sustainability in Civil Engineering
- A5. Professional engineering practice appropriate to Civil Engineering with an appreciation of likely new developments.
- A6. The application of innovation, technology transfer, emerging technologies in Civil Engineering

Intellectual Skills

- B1. Critically analyse and solve engineering problems using appropriate techniques.
- B2. Model and critically analyse relevant engineering systems.
- B3. Appreciate the limitations, and make sound judgement, when selecting appropriate computer based methods for engineering and Communication.
- B4. Fully evaluate external influences on the design process including those outside of engineering
- B5. Innovatively design appropriate systems, components or processes (as applicable) and utilise emerging technologies in both known and unfamiliar problems.
- B6. Promote advanced designs and design methods and consider the complexity of inter-related factors in designs.

Practical Skills

- C1. Apply analytical skills and modelling techniques to solve problems including unfamiliar problems, appropriate to Civil Engineering
- C2. Perform experimental work and draw conclusions based on critical evaluation, making sound judgment in the absence of complete data.
- C3. Use computer-based engineering tools.
- C4. Prepare technical documentation and clearly communicate this to a range of audiences.
- C5. Critically evaluate Civil engineering designs at system, component or process level.
- C6. Plan and manage a project, taking into account technical, commercial, industrial and other external constraints.

Transferable Skills

- D1. Communicate effectively, orally, graphically or in writing to a range of audiences.
- D2. Use commonly available IT tools.
- D3. Manage time and resources effectively.
- D4. Work effectively within a team as a member or in a leadership role.
- D5. Manipulate, sort and present data.
- D6. Solve problems in a logical manner.
- D7. Learn effectively and independently, in all aspects of life.

Section 2

Programme management

Relevant QAA subject benchmarking statements

Type of programme

Date of validation/last periodic review

Date of production/ last revision of PS

Relevant to level/cohort

Administrative School

Engineering

Undergraduate

July 16

April 2019

Level 4 entering September 2019

School of Engineering and Technology

Table 3 Course structure

Course details		
Course code	Course description	JACS/HECOS
ENCIVMENG	MEng(Hons) Civil Engineering	H200/100148