



LEEDS  
BECKETT  
UNIVERSITY

# Course Specification

**MEng Civil Engineering**

**Course Code: MCVEN**

2021/22

[leedsbeckett.ac.uk](https://leedsbeckett.ac.uk)

## **Award & Title MEng Civil Engineering (MCVEN)**

### **Applicant Facing Course Specification for 2021/22 Undergraduate Entrants**

**Confirmed at 08/2021**

#### **General Information**

<b>Award</b>	Master of Engineering Civil Engineering
<b>Contained Awards</b>	Bachelor of Engineering (with Honours) Civil Engineering Bachelor of Engineering Civil Engineering Diploma of Higher Education Civil Engineering Certificate of Higher Education Civil Engineering

**Awarding Body** Leeds Beckett University

**Level of Qualification & Credits** Level 7 of the Framework for Higher Education Qualifications, with 120 credit points at each of Levels 4, 5, 6 and 7 of the UK Credit Framework for Higher Education (480 credits in total)

#### **Course Lengths & Standard Timescales**

Start dates will be notified to students via their offer letter. The length of the course is confirmed below and modes of delivery will be confirmed prior to the start date in line with Government guidance:

- 4 years (full time, campus based)
- 5 years (full time, sandwich, campus based)
- 5 years (full time levels 4-6, part time level 7)
- 6 years (full time levels 4-6, sandwich, part time level 7)

**Location(s) of Delivery** City Campus, Leeds

Students are responsible for obtaining their own placement, with assistance from the University. The locations will vary, dependant on the opportunity.

### **Entry Requirements**

Admissions criteria are confirmed in your offer letter. Details of how the University recognises prior learning and supports credit transfer are located here:

[www.leedsbeckett.ac.uk/studenthub/recognition-of-prior-learning](http://www.leedsbeckett.ac.uk/studenthub/recognition-of-prior-learning).

Admissions enquiries may be directed to:

[AdmissionsEnquiries@leedsbeckett.ac.uk](mailto:AdmissionsEnquiries@leedsbeckett.ac.uk).

### **Course Fees**

Course fees and any additional course costs are confirmed in your offer letter. Fees enquiries may be directed to

[Fees@leedsbeckett.ac.uk](mailto:Fees@leedsbeckett.ac.uk).

### **Timetable Information**

Timetables will be made available to students during induction week via:

- i) The Student Outlook Calendar
- ii) The Student Portal (MyBeckett)
- iii) The Leeds Beckett app

Any difficulties relating to timetabled sessions may be discussed with your Course Administrator.

### **Policies, Standards and Regulations ([www.leedsbeckett.ac.uk/public-information](http://www.leedsbeckett.ac.uk/public-information))**

In line with a recent Engineering Council directive, a Regulation Exemption has been approved by the University which states that:

*“Students must pass all modules which are mapped to Accreditation of Higher Education Programme (AHEP) learning outcomes with an overall mark of not less than 40% in the combined assessments, with a submission in each component for each module.*

*If students do not achieve these marks at the first attempt they will have the chance to undergo a re-sit in that particular area; if they still fail to achieve the marks at this attempt they will not be allowed to progress onto the following year until they have completed the module again and achieved the above mark.*

*Failure at the second attempt at a module will result in a student’s withdrawal from the course.”*

### **Key Contacts**

#### **Your Course Director**

Tom Craven

#### **Your Academic Advisor**

Each Student will be allocated an Academic Advisor once they commence their studies at the University. The

Academic Advisor will be a member of the Engineering Academic Staff.

Your Course Administrator

Millie Dagless - [M.R.Dagless@leedsbeckett.ac.uk](mailto:M.R.Dagless@leedsbeckett.ac.uk)

## Sandwich Placement Information

### Summary

Leeds Beckett is dedicated to improving the employability of our students and one of the ways in which we do this is to support our students to gain valuable work experience through work based placements. Our placement teams have developed strong links with companies, many of whom repeatedly recruit our students into excellent placement roles. Our teams are dedicated to supporting students through every stage of the placement process. Details of how to contact our placement teams may be found here: [www.leedsbeckett.ac.uk/studenthub/placement-information](http://www.leedsbeckett.ac.uk/studenthub/placement-information)

### Length

Placements should be 44 weeks and undertaken during the third year of full time study, upon successful completion of level 5/year 2.

### Location

Students are responsible for obtaining their own placement, with assistance from the University. The locations will vary, dependent on the opportunity.

## Other 'In Year' Work Placement Information

### Summary

#### Summer Internships

Paid summer internships are available to students during the summer months between levels 4 and 5 of the course. Each year the course team liaise through our strong industry links with the region's civil engineering industry. Companies interested in providing internships are collated and then made available to interest from highly achieving students with exemplary attendance records. Students who are interested are asked to submit a CV for consideration

### Length

The duration in work will vary between internships and the opportunities available. Typically the length will be 3 months of paid work.

### Location

Students are responsible for obtaining their own internship, with assistance from the University. The locations will vary, dependent on the opportunity.

## Professional Accreditation or Recognition Associated with the Course

<b>Professional Body</b>	Joint Board of Moderators (JBM) on behalf of:  The Institution of Structural Engineers  The Institute of Highway Engineers  The Institution of Civil Engineers  The Chartered Institution of Highways & Transportation
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## Accreditation/ Recognition Summary

This degree is designed to fully satisfy the educational base for a Chartered Engineer (CEng). See [www.jbm.org.uk](http://www.jbm.org.uk) for further information. Formal accreditation is to be sought at the earliest opportunity. Normally the PSRB requires a cohort to complete the course prior to accreditation being considered. As such, accreditation gained is normally retrospective to cover students completing prior to accreditation.

## Course Overview:

### Aims

The course provides a broad-based education enabling successful students to enter careers in design, construction or operations within the civil engineering industry. The course aims to provide a broad-based technical educational experience, enabling successful students to enter careers in the civil engineering and allied sector. At present, there is a significant shortfall in the number of graduate civil engineers in the UK and, in a global context, particularly within the emerging economies. In the future, students who have studied STEM subject disciplines are going to be in great demand. The target group for the MEng Civil Engineering programme is therefore students seeking to become engineering practitioners employed in the civil engineering and related disciplines, i.e. design consultancy, site based contractors, project management, government agencies and local authorities, modelling and a variety of specialist design areas. This programme is seen as a stepping stone for students who enjoy problem-solving and would like to be involved in a diverse and interesting career and the opportunity to work on such projects as designing large structures and a variety of infrastructure including roads, water supply and drainage, bridges, airports, tunnels, sea and flood defences and structures supporting energy supply and transmission.

## Course Learning Outcomes

At the end of the course, students will be able to:

1	Demonstrate a knowledge of the mathematical and scientific principles and methodologies, which underpin civil engineering and apply them to solve real-world problems
2	Develop and critically evaluate solutions to engineering situations in diverse global contexts and demonstrate reflective learning

3	Utilise a range of appropriate traditional and contemporary methods and tools to optimise solutions to civil engineering problems
4	Demonstrate the skills necessary to investigate, evaluate and produce solutions to real design-related engineering problems (including the requirement to work with technical uncertainty) whilst utilising technical literature and the appropriate codes of practice and/or industry standard
5	Develop a detailed knowledge of, and technical proficiency with, health and safety, and sustainable, environmental and economic development and the frameworks in which they operate
6	To apply the mechanical and physical characteristics of civil engineering materials to Design Scenarios through practical laboratory work
7	Develop the ability to conduct research whilst also gaining an understanding of how to integrate and apply the research of others into their own work within a professional context

## Teaching and Learning Activities

### Summary

All modules on the course are designed for formal lecture-based delivery, accompanied by tutorial, laboratory practical and fieldwork sessions to consolidate student learning and enhance the student experience.

Student support and pastoral care is provided by the course team via a dedicated course administrator as well as subject specialist tutors, personal tutors, module leaders, level tutors and the course leader. In addition, the team operate an open access policy which gives students easy access to academics outside of taught sessions.

Emphasis is placed on the practical application of technical engineering principles to provide solutions for increasingly complex engineering problems. Aspects of the course which are particularly relevant to professional and transferable skills development and employability are:

- Exposure to industry standard software for analysis, design and drawing. Students are also taught the latest Eurocode design standards and the government endorsed NEC4 Contracts.
- Exposure to professional practice via site visits together with a professional body (ICE) compliant PDP scheme for students. Further exposure is through visiting speakers.
- Experience in IT using industry standard software for analysis, design, drawing and planning.
- Hands-on experience of laboratory testing in Civil Engineering materials, soils and fluids
- Practical design applications and case studies relevant to current engineering practice
- A broad range of study covering both technical and management-based subjects which build knowledge, understanding and application across levels.
- Design solutions to practical problems. Initially simple problems with tutor lead design solutions. The problems presented become increasingly complex, necessitating imagination and judgement in developing a practical solution. At all levels, the design problems are case study based and relevant to current industry practice.

- As required by the PSRB, threads (Design, Health Safety and Risk Management, Sustainability and Professionalism and Ethics) permeate the curriculum both horizontally and vertically and this is embedded in the modular content.

By the completion of level 7 specifically the approach to learning and teaching for students will aim to facilitate:

- Students' transformation into sophisticated, independent, critical thinkers.
- Students' ability and confidence to apply their knowledge with originality within advanced academic and civil engineering-related contexts.
- The opportunity for students to conduct research and also gain an understanding of how to integrate and apply the research of others within their own work within a professional context.
- The impression of value in a student's career outlook for the continuation of development in a professional and also, potentially, an academic environment.

### Your Modules

This information is correct for students progressing through the programme within standard timescales. Students who are required to undertake repeat study may be taught alternate modules which meet the overall course learning outcomes. Details of module delivery will be provided in your timetable.

### Course Structure

#### Full Time

#### Level 4

Semester 1	Core	Semester 2	Core
Civil Engineering Management A	Y	Engineering Mechanics	Y
Advanced Mathematics	Y	Applied Mechanics	Y
		Engineering Materials Science	Y
Surveying A and CAD	Y	Surveying A and CAD	Y

#### Level 5

Semester 1	Core	Semester 2
Civil Engineering Management B	Y	Engineering Materials Chemistry (15 credits)
Geotechnical Engineering Application and Theory	Y	Structural Analysis Techniques (15 credits)

Introduction to Structural Design (15 credits)	Y	Fluid Mechanics I
		Engineering Mathematics (15 credits)

#### Level 6

Semester 1	Core	Semester 2	Core
Independent Project (40 credits)	Y	Independent Project (40 credits)	Y
Structural Engineering Techniques	Y	Geotechnical Engineering Design and Theory	Y
Numerical Management Techniques (10 credits)	Y	Fluid Mechanics II (10 credits)	Y
		Infrastructure Engineering	Y

#### Level 7

Semester 1	Core	Semester 2	Core
Integrated Project (30 credits)	Y	Integrated Project (30 credits)	Y
Geotechnical Analysis and Design	Y	Structural Engineering with Design	Y
Water Engineering Or Project Management	N	Transportation Studies Or Humanitarian Engineering	N
		Research Paper(10 credits)	Y

#### Alternative Level 7 – Part time

##### Level 7 (Year 4/5)

Semester 1	Core	Semester 2	Core
Geotechnical Analysis and Design	Y	Structural Engineering with Design	Y
		Transportation Studies Or Humanitarian Engineering	N

### Level 7 (Year 5/6)

Semester 1	Core	Semester 2	Core
Water Engineering Or Project Management	N	Research Paper (10 credits)	Y
Integrated Project (30 credits)	Y	Integrated Project (30 credits)	Y

The option modules listed are indicative of a typical year. There may be some variance in the availability of option modules.

### Assessment Balance and Scheduled Learning and Teaching Activities by Level

The assessment balance and overall workload associated with this course are calculated from core modules and typical option module choices undertaken by students on the course. They have been reviewed and confirmed as representative by the Course Director but applicants should note that the specific option choices students make may influence both assessment and workload balance.

A standard module equates to 200 notional learning hours, which may be comprised of teaching, learning and assessment, any embedded placement activities and independent study. Modules may have more than one component of assessment.

Level 4 is assessed by examinations predominantly, with some coursework

Level 5 is assessed by examinations predominantly, with some coursework

Level 6 is assessed by coursework predominantly, with some examinations

Level 7 is assessed by coursework predominantly, with some examinations

### Workload

Overall Workload	Level 4	Level 5	Level 6	Level 7
Teaching, Learning and Assessment	282 hours	281 hours	294 hours	260 hours
Independent Study	918 hours	919 hours	906 hours	940 hours
Placement (optional)		44 weeks		

### Learning Support

If you have a question or a problem relating to your course, your Course Administrator is there to help you. Course Administrators work closely with academic staff and can make referrals to teaching staff or to specialist professional services as appropriate. They can give you a confirmation of attendance letter, and a transcript. You may also like to contact your Course Rep or the Students' Union Advice team for additional support with course-related questions.

If you have any questions about life at our University in general, call into or contact the Student Advice Hub on either campus. This team, consisting of recent graduates and permanent staff, are available to support you throughout your time here. They will make sure you have access to and are aware of the support, specialist services, and opportunities our University provides. There is a Student Advice Hub on the ground floor of the Rose Bowl at City Campus and one in Campus Central at Headingley. You can also find the team in the Gateway in the Leslie Silver Building at City Campus. Email enquiries may be directed to [studentadvicehub@leedsbeckett.ac.uk](mailto:studentadvicehub@leedsbeckett.ac.uk).

Within MyBeckett you will see two tabs (Support and Opportunities) where you can find online information and resources for yourselves. The Support tab gives you access to details of services available to give you academic and personal support. These include Library Services, the Students' Union, Money advice, Disability advice and support, Wellbeing, International Student Services and Accommodation. There is also an A-Z of Support Services, and access to online appointments/registration.

The Opportunities tab is the place to explore the options you have for jobs, work placements, volunteering, and a wide range of other opportunities. For example, you can find out here how to get help with your CV, prepare for an interview, get a part-time job or voluntary role, take part in an international project, or join societies closer to home.