

Mechanical Engineering MEng/BEng (Hons) programmes specification with integrated foundation pathway

Academic Entry Year:	2026/2027
Degree Awarding Body:	The University of Bradford
Main Location:	City Campus
Subject Benchmarks:	Engineering (Quality Assurance Agency 2019); Standard for Professional Engineering Competence and Commitment, 4th edition (UK-SPEC: Engineering Council 2020)
Qualifications Frameworks:	HE Qualifications of UK Degree Awarding Bodies (FHEQ: QAA 2014) and Regulated Qualifications Framework (RQF: Ofqual 2015)
Target Degree Award:	Bachelor of Engineering with Honours (BEng Hons) Mechanical Engineering [Level 6] Master of Engineering (MEng) Mechanical Engineering [Level 7]
Intermediate/exit awards:	Ordinary Degree of Bachelor (BEng) Engineering (Mechanical) [Level 6] Diploma of Higher Education (DipHE) Mechanical Engineering [Level 5] Certificate of Higher Education (CertHE) Mechanical Engineering [Level 4] Foundation Certificate (FdC) Engineering [Level 3]
Programme Admissions:	UK/home students (all routes) and international students (excluding foundation)
Programme Start Date(s):	September
Programme Modes of Study:	(UCAS code H300) 3 years full-time towards BEng (Partner entry only) 3-5 years full-time towards BEng/MEng with international year 1 (UCAS code H301) 4 years full-time, BEng with placement year or study abroad (UCAS code H302) 4 years full-time, BEng with integrated foundation year (UCAS code H303) 5 years full-time, BEng with foundation & placement/study abroad (UCAS code H305) 4 years full-time towards MEng (UCAS code H306) 5 years full-time, MEng with placement year or study abroad (Not open 2026) 5 years full-time, MEng with integrated foundation year (Not open 2026) 6 years full-time, MEng with foundation & placement/study abroad

This programme is accredited by the Institution of Mechanical Engineers ([IMechE](#)). It's recognised by the UK Engineering Council ([EngC](#)) as leading to Incorporated Engineer (IEng) or Chartered Engineer (CEng) status. This means you'll have a great head start to a professional engineering career in a wide range of fields related to making, monitoring and moving with widespread international recognition for your degree.

Please note: The University has a set of terms and conditions for all students accepting an offer to study on a course here at Bradford. This is called the Student Contract. This document sets out the Terms and Conditions which apply when you accept an offer of a place on a programme of study at the University of Bradford. [View our Student Contract for further details](#). Information about this programme and its modules has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but changes may occur given the interval between publishing and commencement of teaching. Any change which impacts the terms and conditions of an applicant's offer will be communicated to them.

Minor Modification Schedule

1. May 2026: New programme specification incorporating integrated foundation for MEng following review for consistency across portfolio.
2. August 2026: Updated admissions and placement modules

Programme overview

Engineering is fundamental to the economic and social prosperity of the UK. It is the profession responsible for the creation of all material objects and systems necessary for modern life, from concept to customer to decommissioning. Engineering is a “people serving” profession whose activities not only manage humankind’s environment but also create that environment itself. It requires well-qualified and motivated students who seek to be the future leaders within their profession.

Mechanical Engineering is the most versatile of the engineering disciplines and there exists a high and growing demand from industry for graduate Mechanical Engineers. Our accredited degree will place you at the heart of modern industry, providing career opportunities in sectors such as:

- Aerospace, automotive and rail
- Energy and power generation
- Manufacturing engineering; product design, materials, production and processing.

You’ll combine mechanics, materials science, thermofluids and computational methods to design, analyse and implement complex systems which are economic, reliable, efficient and sustainable. Upon graduation students will have the capacity for meaningful interdisciplinary interaction, leadership roles, and professional growth.

Our Mechanical Engineering programmes are accredited by [IMechE - the Institution of Mechanical Engineers](#). IMechE accreditation aims to ensure that the MEng and BEng Mechanical Engineering degrees meets national [Engineering Council](#) & international standards:

- The MEng integrated master's degree is accredited by IMechE on behalf of the Engineering Council for the purposes of fully meeting the academic requirement for registration as a Chartered Engineer (CEng).
- The BEng bachelor's degree with Honours is accredited by IMechE on behalf of the Engineering Council for the purposes of demonstrating in part the knowledge and understanding required for registration as a Chartered Engineer (CEng). Applicants for CEng registration must also demonstrate the further learning required, this may be through achievement of an accredited Masters or Doctorate, or other learning including in the workplace.
- The BEng bachelor's degree with Honours is accredited by IMechE on behalf of the Engineering Council for the purposes of demonstrating in full the underpinning knowledge and understanding required for registration as an Incorporated Engineer (IEng).
- The BEng Engineering ordinary degree (which may be awarded if you leave the University of Bradford before completing the programme in full) may contribute towards the academic

requirements for Further Learning for registration as an Incorporated Engineer but is not accredited by IMechE. To hold accredited qualifications for IEng registration candidates must also hold an accredited Foundation degree or HND from another provider.

Designed for the next generation of engineers

BEng or MEng studies at Bradford will be a launch platform for your future, developing a deep understanding of fundamental and advanced technical principles, analytical tools, and competence in their application together with a wide range of management, personal and professional skills.

The undergraduate Mechanical Engineering programme sets out:

1. to give technical depth across the discipline and in relevant specialist applications of technology
2. to provide breadth to encourage innovation, and
3. facilitate exposure to other engineering disciplines.

An excellent way to further develop these skills is to undertake an integral industrial placement as part of the degree studies.

Our programmes have been designed as part of the [CDIO educational framework](#) for producing the next generation of engineers. This will provide a learning experience that stresses the engineering fundamentals set within the context of **Conceiving, Designing, Implementing and Operating** real-world systems and products. This framework has been developed by universities across the globe and benefits from the ongoing collaborative experience of engineers and educationalists. This will mean that students learning will reflect the real world, their work in teams to solve real-world problems and in the process they will develop professional skills alongside technical skills.

We recognise that society benefits from the talents of all, and that the development of creative, collaborative engineers, skilled in communication and teamwork is vital. Diverse engineering teams are known to be more innovative. We help students to contribute to and learn from the varied perspectives of their tutors and peers. We want to equip our graduates with the knowledge and skills to respond to the many different needs of our businesses and communities.

[The Faculty of Management, Sciences and Engineering](#) welcomes and celebrates the diverse cultural and national backgrounds of our students. We are committed to an educational experience that is inclusive of the diversity of the students and staff, and that addresses attainment gaps within our student body, particularly those between BME and white students. The University of Bradford holds Bronze [Athena Swan Charter](#) and [Race Equality Charter](#) accreditations from [AdvanceHE](#), recognising our commitment to advancing the careers of everyone in STEM.

We also recognise that the future for engineers is one where they will be working in interdisciplinary teams to solve new, complex and evolving problems that will require innovative solutions. Students' ability to work across engineering disciplines and collaboratively with experts in other specialist fields will be crucial to creating the solutions of tomorrow. We have designed our programmes to encourage and experience interdisciplinary working, to develop breadth as well as

depth of skills and knowledge, and in this way, we believe students will be ideally equipped to be successful and employable.

Following the optional integrated Foundation Year (Stage 0) where students are provided with the necessary baseline knowledge, skills and understanding for Engineering education, all our engineering students begin with an interdisciplinary year (Stage 1) which ensures that all students have a good understanding of the breadth of what is encompassed by the word 'engineer'. Stage 1 provides students with fundamental skills and knowledge as well as specific projects that they will work on with other students in their discipline and a final project which will be on interdisciplinary project working with a range of engineers from different disciplines.

All our programmes are designed to provide three progression routes for graduates. Upon graduation students will be equipped to be employed as a Projects Engineer, Design Engineer, Operations Engineer or Research and Development (R&D) Engineer. If this is their goal, they should seriously consider a placement year as this will be invaluable. Alternatively, students could pursue a research career, they will have highly developed research skills and their personal tutor can help them identify postgraduate research opportunities here at Bradford. The third route open to students on graduation is to develop their own business. As a Bradford engineering graduate they will have the skills to design and develop products processes or systems that could have serious commercial potential. We have a long track record of supporting and developing new companies and helping students on those first steps as an entrepreneur.

The ability of an engineer to think clearly, logically and ethically is widely appreciated by many other professions and studies at Bradford may well be a stepping stone to many alternative careers other than engineering. As an engineering graduate from Bradford, students have a real foundation for life and for a lifetime of learning.

Learning with and as part of a research community

[The School of Computing and Engineering](#) places emphasis on both teaching and research. Lecturers at Bradford are active researchers in their fields of expertise producing peer-reviewed knowledge through publications in journal articles and books. This research permeates to their teaching practice giving students access to world leading professionals, equipment and ideas within the Engineering and Artificial Intelligence research theme of the [Institute of Digital and Sustainable Futures](#).

We have particular research strengths in:

- Automotive Engineering (especially braking, engine tribology, engine mapping and calibration, turbo-charger testing, quality engineering in system and component design and manufacture).
- Materials Engineering (especially polymeric engineering and processing, composites and nanocomposites, recycling, product design and manufacture).
- In-line Monitoring and Control of Manufacturing Processes (instrumentation, sensors, computer-based data acquisition and control).

- Mechanical Dynamics and Control (especially machine tool dynamics and control, and vehicle dynamics and control).
- Computer Aided Modelling and Design (creation, virtual testing and prototyping).

We conduct this research jointly with many companies including Stellantis, Jaguar Land Rover, Ford, Sabic, Sinopec, Dow, SCG Chemical, Autodesk, Cummins, and their supplier bases as well as with UK Research Councils.

Each year after the foundation stage, students will engage in enquiry-based projects allowing learning through research. During Stage 4, MEng students can expect to interact with the research activity of the Institute of Digital and Sustainable Futures centres in engineering. Participating in programmes of study including research that include an emphasis on application, experiential learning and real-world engagement will make a major contribution to students developing skills and attributes for enhanced employability.

Students will have many opportunities to contribute to their Higher Education Achievement Report (HEAR) whilst with us. Students can gain HEAR accreditation for becoming student representative for their course, by becoming a student ambassador, helping with open days and applicant experience days, or by being a PAL leader. The peer assisted learning scheme or PAL is where students in stages two and three support new students of the University. The PAL scheme has been very successful, providing guidance on all aspects of being a student of Bradford. PAL leaders become mentors and role models for new students. We support people to become PAL leaders, but we also recognise their contribution through the HEAR.

Programme aims

The programme is intended to develop graduates:

- A1. With a solid grounding in engineering fundamentals and experience of interdisciplinary working.
- A2. Who have the engineering, design, management and personal skills required to become professional Mechanical Engineers and in doing so, also equip them for careers in other professions.
- A3. Who are imaginative, innovative, versatile and competitive engineers, who will be able to progress rapidly to professional positions of responsibility with minimal additional training.
- A4. Who can provide technical, managerial and entrepreneurial leadership in specialist/interdisciplinary projects, with the educational requirements (in compliance with [UK-SPEC](#)) to permit progression to Incorporated (BEng) or Chartered (MEng) Membership of the Institute of Mechanical Engineers and registration as an Incorporated or Chartered Engineer with the UK Engineering Council.

Programme learning outcomes

Stage 0: On successful completion of the integrated foundation stage at RQF Level 3, students will progress to Stage 1 of the degree programme able to:

- 0.1. Apply knowledge and understanding of mathematics, mechanics, physics, materials and chemistry to an appropriate standard to allow students to engage with an accredited Engineering programme.
- 0.2. Demonstrate knowledge and skills in the use of computers for word processing, report writing, data processing, power-point presentation, Computer Aided Design; numerical methods for simple modelling and analysing engineering problems relevant to their chosen specialism; selection and application of principles and data collection and manipulation methods to support problem solving; undertake and report on an investigation.
- 0.3. Demonstrate knowledge and skills in data management and presentation, IT and communication skills, systematic problem solving, lifelong learning, scientific method, teamwork, and personal management.

Stage 3: Students eligible for the FHEQ Level 4 Certificate award will be able to:

- 3.1. Select and apply physical principles to describe fundamental engineering processes.
- 3.2. Select and correctly apply quantitative methods to analyse the performance of engineering components and systems.
- 3.3. Select and use appropriate and relevant materials, equipment, tools, processes, software, or products.
- 3.4. Apply simple computational techniques, including AI, to model/simulate and visualise the solution to specified engineering problems.
- 3.5. Apply skills in problem solving, working with others, information retrieval, and effective use of general IT facilities, and communicate work to technical and non-technical audiences.
- 3.6. Exercise personal and professional responsibility, which may be as a team member, and include evidence of safe and effective workshop and lab practice.

Additionally, students eligible for the FHEQ Level 5 award of Diploma will be able to:

- 3.7. Understand the essential concepts, principles and theories of Mechanical Engineering.
- 3.8. Select mathematical, statistical and Machine Learning methods necessary to underpin the engineering discipline and proficiently apply tools and notations in the modelling, analysis, solution, and evaluation of engineering problems.
- 3.9. Apply analytical and computational methods to solve and visualize problems in the engineering discipline and to implement appropriate action.
- 3.10. Apply problem-solving skills, technical knowledge and understanding to create/adapt and evaluate design solutions that are fit for purpose (inc. operation, maintenance, reliability, etc.).

- 3.11. Apply relevant practical and laboratory skills to obtain accurate data to evaluate system performance and/or validate system models.
- 3.12. Plan and apply safe methods of construction and manufacture to semi-open projects, deriving solutions that consider technical, regulatory, and client requirements.
- 3.13. Work effectively as a specialist within a multidisciplinary team towards a shared objective.

Additionally, students eligible for the FHEQ Level 6 Honours Degree award will be able to:

- 3.14. Generate innovative designs for products, systems, components or processes to fulfil new needs.
- 3.15. Select, apply, and evaluate quantitative tools and data collection methods to underpin the engineering discipline and apply a range of tools and notations proficiently and critically in the analysis and solution of engineering problems.
- 3.16. Select, apply, and effectively integrate knowledge of other engineering disciplines to support study and evaluation of the engineering discipline.
- 3.17. Apply principles of organisation and management (project management, change management, health and safety, self-management) to achieve engineering objectives.
- 3.18. Demonstrate comprehensive knowledge and understanding of the concepts, principles and theories underpinning Mechanical Engineering.
- 3.19. Apply engineering principles to critically analyse problems to create innovative process and product designs, with systematic appreciation of key aspects of field of study, including acquisition of coherent and detailed knowledge informed by characteristics of the engineering discipline.
- 3.20. Plan and implement an individual programme of work, monitoring and adjusting where appropriate in an on-going basis, utilising research skills to critically evaluate and report on technical literature and newly developed data and reflect on personal and professional development to improve their performance.
- 3.21. Describe and work effectively and collaboratively in different roles within a team, and evidence responsibility of engineers to consider environmental and socio-economic aspects in the development of sustainable solutions.
- 3.22. Use appropriate specialised software packages, including AI applications, in the modelling, simulation, analysis, design, and critical performance evaluation of composite engineering systems in the discipline.
- 3.23. Correctly identify and use codes of practice and industry standards.

Stage 4: Additionally, on successful completion of Stage 4, students eligible for the FHEQ Level 7 Integrated Master's Degree award of MEng (Hons) will be able to:

- 4.24. Apply and critically evaluate concepts, principles and theories underpinning Mechanical Engineering with knowledge in Advanced Solid Mechanics, Modelling and Optimisation as well as two other optional modules.

- 4.25. Apply and critically evaluate comprehensive integrated or systems approaches to engineering problems through know-how of relevant discipline concepts, theories and technologies and their application, with the ability to work with technical uncertainty.
- 4.26. Apply advanced problem-solving skills, technical knowledge and understanding to establish rigorous and creative solutions that are fit for purpose for all aspects of the problem, including production, operation, maintenance and disposal.
- 4.27. Extract and evaluate pertinent data and apply engineering analysis techniques to solve unfamiliar problems and communicate outcomes by a range of advanced techniques.
- 4.28. Describe and critically evaluate different roles within an engineering team and exercise initiative and personal responsibility, which may be as a team member or leader.

Learning and teaching strategy

The University of Bradford aims to create an inclusive learning culture and transformative university experience that empowers our students to realise their ambitions and make a positive difference to the world. This vision will be realised through the achievement of three objectives: inclusive curriculum, inclusive experiences and inclusive community. We aim to make learning accessible to all of our students regardless of starting point or individual circumstance.

The teaching and learning strategy takes into consideration the learning outcomes that need to be achieved, progression through the levels of study, and the nature of the subject. One of the goals of Higher education is that students develop lifelong learning skills and are increasingly able to take greater responsibility for their own learning as they progress through the programme.

The student journey has been considered at programme-level and our strategy begins with the end in mind. We want students to become great engineers; that means great problem solvers, great team-workers with an inquisitive and curious mind. This should mean that by the end of their study with us they can move seamlessly into the world of work, academic research or become an entrepreneur. In addition to the modules, academic skills workshops will be organised during the year to provide further support in self-regulation, persistence, and the development of essential skills such as digital literacy.

The Stage 0 Integrated Foundation Year introduces students to the principles of engineering holistically, introducing foundational concepts, frameworks and techniques common to other Engineering professions before contextualising them for Mechanical Engineering. The year features practical elements where students spend time in laboratories to conduct experiments on engineering applications. Students will be able to develop awareness of the breadth of opportunities and challenges posed by engineering and the exciting possibilities for their career development. The teaching of Maths aims to provide an academic outcome comparable to A-level.

In stages 1, 2, 3 and 4, the teaching and learning methods have been selected to engage students in developing their knowledge and understanding of engineering fundamentals, mechanical engineering through formal learning opportunities such as lectures and tutorials, experiential learning through practical classes and lab sessions and informal and social learning through team-working in projects and competitions.

Study with us will include formal lectures (including those from Visiting Lecturers), but these will always be interactive and two way. We want to develop understanding of the vast array of opportunities open to today's professional engineer and therefore we look to incorporate aspects of real-world engineering problems and solutions where possible. To this end we make use of case studies, practical demonstrations, and provide lots of opportunities for students to design their own solutions.

As part of our focus on building a learning experience which will prepare students for the world of work our curriculum has been developed using the [CDIO educational framework](#). This means that our learning strategy will be to encourage students to work in teams to **Conceive** potential solutions, **Design** new products processes or services, **Implement** (or model) and test those designs, and **Operate** the product or solution. In line with the CDIO philosophy students will have numerous opportunities to be an active learner, to work as an engineer on real-world projects.

Students will be involved in project work from the start of their time with us and these projects will become more complex and challenging as their skills and knowledge develop. Students will also design equipment and procedures and use control and measuring techniques in a supportive and collaborative environment with their supervisors.

Assessment strategy

In the same way that our teaching and learning strategy is designed to prepare students for the world of work, academic research or entrepreneurship, our assessment methods incorporate a wide range of different methods designed to meet the needs of industry, the accrediting bodies as well as prepare students for a potential academic research career.

Assessment is a key part of the learning process, it is only through challenging themselves to express what they have learned or put it to practical use, can they complete the learning journey and assess for themselves if they have understood what they have been taught and are able to apply and use that skill and knowledge. Practical skills are often assessed via individual and group technical reports with the laboratory work linked with the taught modules. The methods of assessment of transferable skills are built in the structure of the examinations, case studies, laboratory demonstrations and project work. Broadly speaking, there are two categories of assessment, formative and summative.

Formative assessment which provides an opportunity for our staff to give students feedback during their learning. This feedback is designed to help and guide their learning. All the modules will have some formative assessment, and this may be in various forms including discussions or questioning from the supervisor, tests, practical activities, et cetera. These formative activities are crucial if students are to make best use of their learning experience, and they are designed to prepare students for their summative assessment.

Summative assessment is how we grade the work on a module and the details of this assessment will be available from the beginning of the module so that students understand how their grade will be determined. A main method of summative assessment (as is common on all professional engineering degree programmes) is by written examinations which may be closed or open book. Project work will often be assessed on the basis of the quality of the product produced as part of

the project, we use practical tests to assess practical skills and written reports to show the depth of understanding of concepts and ideas. Practical skills are often assessed via individual and group technical reports with the laboratory work linked with the taught modules. The methods of assessment of transferable skills are built in the structure of the examinations, case studies, laboratory demonstrations and the 'Design Project' work.

Placement and/or study abroad

This programme provides the option for students to undertake a work placement or period of study abroad in the penultimate year of study (between the 3rd and 4th year of an MEng or between the 2nd and 3rd years of a BEng). Students wishing to take this option will be encouraged to register for the placement year programme. All School of Computing and Engineering students are encouraged to apply for Industrial Placements (Year in industry).

Timetabled pre-placement lectures and timetabled 'drop-in' sessions will be scheduled to support students throughout the pre-placement process. All placement opportunities received are made available to students on the placement route via the VLE.

Any placement or period of study abroad is subject to approval by the Programme Team. Students who wish to participate in a placement or period of study abroad will be required to find, apply for and make the most of their chosen opportunity, and will be supported in doing so by the Programme Team, the Faculty Academic Lead for Placements, as well as the central University Careers and Employability Service.

Students on placement or study abroad will be registered for the optional FHEQ Level 5 modules **ENG5002-Z (Placement)** or **ENG5004-Z (Study Abroad)** and encouraged to complete a diary and portfolio presentation of their activity, as completing this module on return to the University will enable evidence to be added to the academic transcript or HEAR.

Students funded by the Lifelong Learning Entitlement (LLE) or international students on a UKVI Student Visa should be aware that 6-year programmes are not routinely funded and that it may not be possible to combine the foundation year as well as placement or study abroad. There may also be restrictions that apply to you around resits or restudy on a 5-year programme visa. You must get advice from the Student Life Service if either of these restrictions applies to you before applying for a placement/study abroad.

Further information about [internships and placements](#) and [study abroad opportunities](#) is published on the University's website.

Curriculum

The Mechanical Engineering with Integrated Foundation Year curriculum is organised into modular units, studied across the "Academic Year" of September to May or discretely in a single Semester. Students study 120 credits in each stage/year: These can be core (studied by everyone) or options (make a choice to complete the credit requirement).

Please note that the curriculum in future years may change subject to the University's programme approval, monitoring and review processes, balancing your rights under consumer law and the obligations to maintain currency for accreditation with [IMechE](#) and [UK-SPEC](#).

Students may join the programme in Stage 0 (foundation certificate) or Stage 1 (higher certificate) before progressing to degree-level study. International students may join the programme to a modified Stage 1 if they require additional English language tuition. Students intending to progress to the MEng (Stage 4) must pass stages 1-3 with an average of 50% or higher overall.

In Stage 0, students will study 100 core credits and select 1 optional module from 2 choices to study in Semester 2.

Stage 0 Mechanical Engineering Modules (RQF Level 3)

Code	Module Title	Credit	Period	Selection
ENG3500-B	Professional and Independent Learning for Engineering and Computing	20	Semester 1	Core
ENM3003-B	Foundation Mathematics	20	Semester 1	Core
COS3011-B	Computer Skills and Applications	20	Semester 1	Core
MAE3003-B	Fundamentals of Materials	20	Semester 2	Core
MAE3004-B	Foundation Physics	20	Semester 2	Core
ENM3002-B	Introduction to Computer Visualisation	20	Semester 2	Option 1
COS3009-B	Introduction to Coding	30	Semester 2	Option 2

At the end of Stage 0, students who successfully complete the year will progress onto their chosen BEng or MEng route's Stage 1. The FHEQ Level 4 core modules taken at Stage 1 are different depending on whether students study the UK/Home Stage 1 or the International College International Year 1 (IY1) route.

Table 1: UK/Home Stage 1 Core Modules

Module Code and Title	Credit	Period
ENB4002-B Computer Aided Engineering	20	Ac Year
MAE4013-B Design, Build and Test (Mechanical Engineering)	20	Ac Year
ELE4013-B Electronics & Mechanics	20	Ac Year
ENM4004-B Mathematical Methods and Applications	20	Ac Year

Module Code and Title	Credit	Period
ENG4007-B Engineering Materials	20	Sem 1
ENG4008-B Thermofluids	20	Sem 2

Table 2: IY1 Stage 1 Core Modules

Module Code and Title	Credit	Period
BIC4014-B Principles of Computer Aided Engineering	10	NsYr or Sem 3
BIC4020-C Academic English and Skills	30	AcYr or NsYr

Module Code and Title	Credit	Period	Module Code and Title	Credit	Period
BIC4027-A Engineering Materials and Mechanics	10	NsYr or Sem 3	BIC4015-B Electronics and Mechanics	20	AcYr or NsYr
BIC4019-B Mathematics for Engineering	20	AcYr or NsYr	BIC4026-B Thermofluids	20	AcYr or NsYr

At the end of Stage 1, students who successfully complete the year will progress onto their chosen BEng or MEng route's Stage 2.

Stage 2 Mechanical Engineering Modules (FHEQ Level 5)

Code	Module Title	Credit	Period
ENM5007-B	Engineering Mathematics and Machine Learning	20	Academic Year
ENG5060-B	Group Project	20	Academic Year
MHT5013-B	Instrumentation, Measurement and Control Systems	20	Academic Year
ENG5059-B	Materials and Manufacturing Technologies	20	Academic Year
MAE5013-B	Solid Mechanics and Vibration Analysis	20	Academic Year
MAE5012-B	Thermofluids 2	20	Academic Year

At the end of Stage 2, students who successfully complete the year will progress onto their chosen BEng or MEng route's Stage 3, or to the elective placement/study abroad year. For more details, see the **Placement and Study Abroad Experience Options** section.

Stage 2b Elective Sandwich Year Modules (FHEQ Level 5)

Module Code	Module Title	Credit	Period	Selection
ENG5002-Z	Placement	0	Full Year	Placement route
ENG5004-Z	Study Abroad	0	Full Year	Study abroad route

In stage 3, students will study 80 core credits including the Individual Research Project and select 2 optional modules from 5 choices to study in Semester 2.

Stage 3 Mechanical Engineering Modules (FHEQ Level 6)

Code	Module Title	Credit	Period	Selection
ENG6003-D	Individual Research Project	40	Academic Year	Core
ENG6004-B	Integrated Design	20	Semester 1	Core
MAE6018-B	Materials Failure Analysis and Reliability	20	Semester 1	Core
MAE6013-B	Advanced Fluid Mechanics with Aerodynamics	20	Semester 2	Option 1
ENB6010-B	Project Management and Six Sigma	20	Semester 2	Option 2
ENB6009-B	Reliability and Safety Engineering	20	Semester 2	Option 3
ENG6005-B	Sustainable Energy	20	Semester 2	Option 4

Code	Module Title	Credit	Period	Selection
MAE6017-B	Vehicle Design and Analysis	20	Semester 2	Option 5

At the end of stage 3, students who have maintained the progression average of 50% at Stages 1, 2 and 3 may progress onto the MEng Stage 4 or exit with the BEng according to the regulations. In stage 4, students will study 80 core credits including the Systems Engineering Design Team Project and select 2 optional modules from 4 choices to study in Semester 2.

Stage 4 Mechanical Engineering Modules (FHEQ Level 7)

Code	Module Title	Credit	Period	Selection
ENG7012-D	Systems Engineering Design Team Project	40	Academic Year	Core
MAE7013-B	Advanced Solid Mechanics	20	Semester 1	Core
ENM7005-B	Modelling and Optimisation	20	Semester 1	Core
MAE7031-B	Automotive Tribology and Noise, Vibration and Harshness	20	Semester 2	Option 1
ENB7007-B	Risk Assessment and Management	20	Semester 2	Option 2
CPE7012-B	Polymer and Materials Engineering	20	Semester 2	Option 3
MAE7030-B	Vehicle Powertrain and Dynamics	20	Semester 2	Option 4

Assessment, continuation and award regulations

This programme follows the Assessment, Continuation and Award regulations for undergraduate taught courses published on the University's Website ([Regulation 2](#)), with variance from the regulations as outlined below and documented in the Variance Register:

- Variance from 6.1 and 6.2: Students must achieve a stage progression average of 50% or above to continue on the MEng.
- Variance from 7.1.2 (Programme-specific calculation): The MEng award is calculated based on a 0:10:40:50 split. An average of the best 100 credits at Stage 2 contributes 10%, an average of the best 100 credits at Stage 3 contributes 40% and an average of the best 100 credits at Stage 4 contributes 50% of the overall award.

The target awards of BEng (Hons) or MEng provide eligibility to register with the Institution of Mechanical Engineers (IMechE). See the Programme Overview section for details on registration entitlements.

- MEng (Hons) Mechanical Engineering: Complete 480 FHEQ credits and achieve the award learning outcomes 1-28.
- BEng (Hons) Mechanical Engineering: Complete 360 FHEQ credits and achieve the award learning outcomes 1-23.

Admission requirements

We are proud to be [one of the most inclusive universities in the UK](#). All our students have potential, and we believe that as many people as possible should have the chance to benefit from higher education, no matter what their background or circumstances.

We take the time to understand the background of our applicants, understand their journey to education, and make decisions based on an applicant's potential to thrive at university and beyond.

In addition to satisfying the general admissions requirements of the University of Bradford, the minimum entry requirements for Mechanical Engineering are as follows. All routes require GCSE Mathematics Grade 4/C (equivalent) and:

- **Stage 0 (Foundation Year) entry:** 64 Ucas tariff points to include 1 GCE Advanced Level or an equivalent qualification plus GCSE English at grade D/grade 3 or equivalent English qualification. Stage 0 entry is only open to UK and home students. International students may join Mechanical Engineering at Bradford through our partnership [University of Bradford International College](#) (UBIC) to the International Foundation Year, International Year Zero or International Year One incorporated degree pathways if they do not meet the Stage 1 entry requirements.
- **Stage 1 (BEng/MEng) entry:** 104 Ucas points to include A Level Maths minimum grade C. For all students whose first language is not English, the standard undergraduate [English language requirements for the University](#) apply as listed on our website. International students are welcome to apply for Stage 1 entry and should [check the entry requirements page for their country on our website](#) details of equivalent qualifications.
- Check the University of Bradford course pages for example entry profiles in qualifications such as A-Levels, T-Levels, BTEC, Access to HE and International Baccalaureate. Links to course pages are provided at the end of this document.
- If you are currently studying at another university and would like to transfer to the University of Bradford, this course accepts students into Stage 2 or Stage 3. This is called [advanced entry](#). Applications for advanced entry will be considered on a case-by-case basis and must include an official transcript (not a screenshot of a portal), all module descriptors, and relevant qualifications. Module descriptors must include learning outcomes. Applications must be submitted through Ucas and the required documents emailed along with your Ucas Personal ID no later than 31 August prior to the course starting in September. Relevant documents should be emailed to admissions@bradford.ac.uk.

On completion of a Ucas form students will be invited to the Faculty for an Open Day where they will have the opportunity to meet staff, view the facilities and discuss “the Bradford experience” with current students.

We are committed to raising aspirations and widening access to higher education, regardless of your background. The [University of Bradford Progression Scheme](#) welcomes Ucas applicants

from a number of groups including adult learners who are 21+ on the first day of term, British armed forces families, carers and care experienced learners, estranged or orphaned learners, refugees and asylum seekers, and Romani or Traveller family members.

Applications are welcome from students with non-traditional qualifications, and/or significant personal/professional experience. If you are an adult applicant returning to study (aged 21 and over when you apply), you will be eligible for admission to the Foundation Year route with level 2 qualifications (GCSE or equivalents). You will also need to provide a written statement and will be interviewed as part of the process.

If applicants have prior certificated learning or professional experience which may be equivalent to parts of this programme, the University of Bradford has procedures to evaluate and recognise this learning to provide applicants with exemptions from specified modules or parts of the programme. Find more information about [recognition of prior learning decisions](#) on the University website.

People thinking of studying with the University of Bradford don't need to wait for the start of the year to contact our Disability Service. The University can arrange for anyone to talk to this team about what support is on offer at Bradford including an invitation to our Get Set Day. To contact the Disability Service please complete the [request support form](#).

Information in this document is for the contemporary recruitment cycle and was accurate at time of publication. The current tariff and accepted qualifications for entry onto the programme is published at the online University of Bradford course pages:

<https://www.bradford.ac.uk/courses/ug/mechanical-engineering-with-integrated-foundation/>
<https://www.bradford.ac.uk/courses/ug/mechanical-engineering-beng/>
<https://www.bradford.ac.uk/courses/ug/mechanical-engineering-meng/>

Information about entry to UBIC provision for this programme including available pathways is published online by Oxford International Education Group:

<https://www.oxfordinternational.com/courses/detail/degree-university-of-bradford-beng-hons-mechanical-engineering/>
<https://www.oxfordinternational.com/courses/detail/degree-university-of-bradford-meng-hons-mechanical-engineering/>