UNIVERSITY of BRADFORD
Faculty of Engineering and Informatics

Engineering Foundation Year Programme Specification

https://www.bradford.ac.uk/courses/ug/engineering-foundation/

Academic Year:	2022/23
Registered Learning Provider:	The University of Bradford
Target Outcome:	Progression to University-level study (undergraduate degrees)
Interim/exit Awards:	Certificate of Foundation Studies in Engineering; Certificate of Continuing Education [Regulated Qualifications Framework Level 3]
Programme Admission:	September
Programme duration:	1-year full time (9-12 months)
UCAS Code:	H101 (B56)
Subject Benchmark Statement:	Engineering (QAA 2019)

Please note: This programme specification 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. Upon commencement of the programme, students will receive further detail about their course and any minor changes will be discussed and/or communicated at this point.

Minor Modification Schedule

1. September 2016: Removal of enhanced pass waivers
2. March 2019: Changes to admissions requirements
3. December 2020: Specification reformatted and made accessible
4. May 2021: Annual changes for 2021 academic year
5. July 2022: Annual changes for 2022 academic year
6. January 2023: Corrected Admissions requirements

Introduction

The Engineering Foundation Year is designed to give students who are currently without eligible mathematic or scientific qualifications, the necessary knowledge and skills in a University environment to continue their education in Engineering or Technology undergraduate programmes. By completing the Engineering Foundation, you will gain a strong grounding in the engineering fundamentals of mathematics, physics, materials and mechanics.

Students who enter our Foundation Year are usually intending to seek a career as Chartered Engineers (CEng) within one of the Engineering Professions: Architectural, Biomedical (including Electrical), Chemical, Civil, Mechanical (including Automotive) or Structural Engineering. If you're not sure which one is right for you, you will be introduced to each Engineering discipline at the University of Bradford and be supported to choose between them. Please see the course website for the currently running programmes you can progress into. Integrated Foundation Programmes are also available at the University towards a specified degree, including Computer Science for would-be Software Engineers.

Programme Aims

The programme is intended to prepare students with appropriate qualifications so that they can enter into Stage 1 of an accredited Engineering degree programme (BEng/MEng) at the University of Bradford.

Students can alternatively take the Engineering Foundation Year as a 'stand-alone' programme and, if successful, seek admission to programmes at other Universities using it as an entry qualification. In this case students will study towards the Certificate of Engineering Foundation Studies.

A feature of the year is the practical elements of the programme where students spend time in the laboratories to conduct experiments on various engineering applications. Students will be able to develop an awareness of the breadth of opportunities and challenges posed by engineering and the exciting possibilities for their career development.

Programme Learning Outcomes

To be eligible for the RQF Level 3 award of Certificate of Foundation Studies, students will have:

1. Knowledge and understanding of mathematics, mechanics, physics, materials and chemistry to an appropriate standard to allow students to enter a CEng accredited programme.
2. Knowledge and skills in the use of computers for word processing, report writing, data processing, power-point presentation, Computer Aided Design; numerical methods for understanding, simple modelling and analysing engineering problems relevant to their chosen specialism; selection and application of principles and data collection & manipulation methods to support problem solving; undertake and report an investigation.
3. Knowledge and skills in data management and presentation, IT and communication skills, systematic problem solving, lifelong learning, scientific method, teamwork, and personal management.

Curriculum

The Engineering Foundation stage lasts 2 semesters (an "Academic Year") with 60 credits being studied in each semester.

Each subject is delivered in a 20-credit module which may be linked through both semesters. Modules studied are: Mathematics, Mechanics, and Physics, to A2 level, and Fundamentals of Materials to AS level. There are also 20 credits modules designed to introduce students to the use of Information and Communication Technologies within the context of the Engineering profession.

Table 1: Engineering Foundation Modules

Study Period	Code	Title	Credit	Level
Academic Year	MAE3001-B	Foundation Mechanics	20	RQF 3
Academic Year	MAE3002-B	Foundation Physics	20	RQF 3
Academic Year	MAE3003-B	Fundamentals of Materials	20	RQF 3
Academic Year	ENB3001-B	Information and Communication Technology	20	RQF 3
Semester 1	ENM3001-B	Foundation Mathematics 1	20	RQF 3
Semester 2	ENM3002-B	Foundation Mathematics 2	20	RQF 3

Please note: The curriculum may change, subject to the University's programme approval, monitoring and review procedures.

At the end of the programme, students will be eligible to exit with the award of **Certificate of Foundation Studies in Engineering** if they have successfully completed 120 credits at RQF Level 3 and achieved the award learning outcomes.

Teaching, Learning and Assessment Strategy

Students will experience a wide range of teaching and learning environments. Concepts, principles and theories are generally explored in formal lectures, practised in associated tutorials and demonstrated in laboratory classes.

- Practical skills are developed in laboratories.
- Cognitive and personal skills are developed in more open-ended problem solving and design exercises, often tackled by working in small groups supported by members of academic, technical and library staff.
- Project work is used to bring various aspects of the programme together.

Typically, each module will involve students in 72 hours of class contact except Mathematics. Students will have 96 hours of class contact in the Mathematics modules. An expected weekly commitment will be around 21 hours.

Methods of Assessment are similarly varied, and students' progress will be assessed using a mix of formal examinations, tests, laboratory reports, and oral presentations.

Assessment Regulations

This Programme conforms to the standard University Undergraduate Assessment Regulations which are available at the link: https://www.bradford.ac.uk/regulations/

There is one variation to these regulations that may apply: To proceed to Stage 1 of any accredited MEng Engineering programme at the University of Bradford, students are required to achieve a "Distinction" grade with an overall average of 70%.

Admission Requirements

We take into consideration a number of factors when assessing your application. It's not just about your grades; we take the time to understand your personal circumstances and make decisions based on your potential to thrive at university and beyond.

The Foundation Year programme is suitable for "home" students from the UK only. International foundation students are welcome at the University of Bradford International College (UBIC): https://www.bradford.ac.uk/international/international-college/

All applicants need GCSE Mathematics grade C/4 and GCSE English grade D/3 or equivalent. Other RQF Level 2 qualifications such as Key Skills are acceptable. If you have AS/A-Level Maths or Physics or equivalent, this will be an advantage for your studies and when there is competition for the available places.

The UCAS tariff applicable is likely to change more than for other programmes depending on demand and your own personal background and circumstances. A typical offer to someone applying through UCAS would be between 88 points (CCD at A-Level) and 72 points (DDD at A-level).

On completion of a UCAS form potential students will be invited to the Faculty for an Experience Day when they will have the opportunity to meet staff, view the facilities and discuss "the Bradford experience" with current students.

Access and Recognition of Prior Learning

Applications are welcome from students with non-traditional qualifications, and/or significant personal/professional experience. For such applicants, evidence of their interests and work experience would be required and this would likely take the form of a portfolio of work and/or an interview with the programme.

The University of Bradford has always welcomed applications from disabled students. To discuss adjustments or to find out more about support and access, you may wish to contact Disability Services before you apply online: www.bradford.ac.uk/disability/before

Applications are particularly welcomed from adult learners (those aged 21+ at the start of the programme), armed forces families, carers and care leavers, estranged or orphaned learners, refugees and asylum seekers, and Romani or Traveller families. To find out more about the University of Bradford Progression Scheme, visit the webpage: https://www.bradford.ac.uk/applicants/progression-scheme/

If applicants have prior certificated learning or professional experience which may be equivalent to parts of this programme, the University has procedures to evaluate and recognise this learning in order to provide applicants with exemptions from specified modules or parts of the programme. For more details on RPL, visit the webpage: https://www.bradford.ac.uk/teaching-quality/prior-learning/

Please note: This information is relevant to the contemporary recruitment cycle and therefore may be different now to when this document was originally published. The current UCAS tariff for the programme, as well as accepted equivalent qualifications, is published online at the course page: https://www.bradford.ac.uk/courses/ug/engineering-foundation/