

## Joint Board of Moderators (JBM)

# Guidance for the Submission of Foundation Degrees in Civil Engineering for Accreditation

The following guidelines for Foundation Degrees (FDs) have taken into account current JBM guidance for the submission of BSc(Hons) and BEng (Hons) programmes for accreditation at Incorporated Engineer level. They have also been written to accommodate the “QAA Characteristics Statement, Foundation Degrees”, and [AAQA](#).

It should be noted that an FD will fully meet the educational base requirements for registration with the Engineering Council as an Engineering Technician or partly satisfy the educational base requirements for registration with the Engineering Council as an Incorporated Engineer with the addition of Further Learning (see later section).

From September 2022, for dual accreditation of FD programmes for EngTech and Partial IEng, HEIs will need to submit two Learning Outcomes mapping tables, one for EngTech as well as one to demonstrate achievement of Partial IEng outcomes.

The basic design of all FD programmes lies in a balance between meeting academic educational criteria, and skills and work-based assessment. The Board (JBM) would wish to support FDs in General Civil Engineering and those which are designed to meet the needs of particular areas of employment in the civil engineering industry. The overall FD programme should meet the needs of engineers in the arts, science, and practice of an aspect of civil engineering, whilst at the same time providing a substantial base for the FD holder to continue with further learning or an honours degree at IEng level and membership of a professional body.

The minimum credit tariff for a FD is 240 CATs points, of which 90 should be at the level of the qualification.

The [QAA Characteristic Statement on Foundation Degrees](#) is a Qualification Characteristics Statement about the characteristics of foundation degrees. It describes the distinctive features of foundation degrees in the UK.

The learning outcomes for Foundation Degrees are listed in the [Approval and Accreditation of Qualifications and Apprenticeships \(AAQA\)](#).

The assessed ‘work-based learning’ should contribute to a minimum of 30 credits and a maximum of 40 credits of the 240 credits, of which normally 10 credits are at the qualification award level. QAA lists the guiding principles for work-based learning on their website - <https://www.qaa.ac.uk/quality-code/advice-and-guidance/work-based-learning>.

In conclusion, progression from FDs may be to an academic award of a higher degree, normally, with honours or an award validated by a professional body.

As will be seen from the above, ‘work-based learning and its assessment’ is an integral part of a Foundation Degree.

**The JBM has determined that ‘Accredited’ FDs will have not less than 30 credits of ‘Assessed Work-Based Learning’ within the 240 credits necessary to the ‘Award’, and that not less than 10 of these credits should be at the level of the final level of the ‘Award’.**

## Foundation Degree Characteristics

The characteristics of a Foundation Degree in the construction industry is predicated by the roles which they currently undertake and those they will undertake in the future. These may be generalised under a number of headings:-

- A sound knowledge of science, mathematics, and civil engineering principles.
- A high knowledge and skill in the chosen branch of engineering application.
- An ability to work with others and independently.
- An ability to take responsibility for self and others.
- An ability to effect design solutions to engineering problems.
- An understanding of the impact their actions and others on the environment.
- An ability to learn and acquire new knowledge and skills independently.
- An ability to translate their acquired knowledge and skills in the work-place
- An ability to demonstrate learning which has taken place in the work-place.

Specifically, the JBM Visiting Team will be seeking evidence that the following are present in the FD, so that the above may be met.

- The early part of the programme should contain a development of the individual's mathematical, scientific, and engineering knowledge and skills (including computing) of an applied nature.
  - Undertaking experiments which engage the student in scientific method and rigour is as important as the knowledge gained.
  - In developing the engineering principles in the student or employer's chosen area the wider context of engineering principles should not be neglected.
- All years of the programme and all modules should be related to the application of the knowledge, concepts, and skills in an engineering situation. Whilst some FDs will be very specific in their engineering application, the wider understanding of civil engineering practice should not be neglected.
- From the beginning of the programme students should be developing their personal skills and attitudes in working with others and independently.
- In taking responsibility for themselves and others the student should not only develop a sense of leadership but also demonstrate knowledge of health, safety and risk both in the special engineering field and the wider civil engineering context.
- A design thread should be present throughout the programme. Students should be exposed to engineering problems both in the HEI and the work-place, which require design solutions. The student should be able to solve design problems encountered by themselves or set by others. The identified problem and the factors to its solution should be considered, giving rise to a well-reasoned argument leading to the solution. The reasoning may or may not involve mathematics and/or software.
- Where applicable, all taught modules should contribute to the JBM threads of Design, Health and Safety Risk Management, Sustainability and Professionalism and Ethics. These could be incorporated into the work-place learning.
- All situations, both academic and industrial, should be contributing to the student's attitude and ability to acquire new knowledge and skills independently.
- The subject of work-based learning and its assessment is considered to be a key element in the FD. Some guidance is offered in Appendix B.

## Teaching and Learning

Whilst the JBM does not want to be prescriptive, the JBM Visiting Team would be looking for clear signs of integration of learning in all academic modules and the work-place.

## The Accreditation Process

The accreditation process will consist of two parts. Part 1 will be the submission and review of the HEI's submitted documentation. Part 2 will be a visit to the HEIs.

### Part 1 - The Documentation

- Title, duration and modes of study.
- Location of programme delivery.
- Originator of the programme.
- Entry qualifications.
- Advanced standing given to entrants.
- Regulations associated with APL and APEL.
- Programme structure
- How JBM FD characteristics are met
- Learning outcomes and assessment strategy for each academic module.
- Learning outcomes and assessment strategy for the industrial element of the programme.
- Teaching and learning strategy.
- Staffing.
- Institution environment and ethos.
- Links with industry.
- Progression and employment
- For each programme submitted, a brief statement should be provided to explain how Annexes B, C and D, F (Design, Sustainability, Health and Safety Risk Management and Professionalism and Ethics) of the [JBM degree guidelines](#) have been met at the appropriate level and especially how the ethos of health and safety risk management is introduced to the students through laboratory procedures, field courses, project work and any other situations encountered by students during their course of study.
- Where accreditation is sought for a Foundation Degree which is employer or subject-specific, a case must be made by the HEI and the employer for its inclusion as an engineering award in the civil engineering field of employment.

Note: - Much of the above information may be encapsulated in the 'Student Programme Handbook'.

### Part 2 - The Visit

The primary purposes of the visit are to establish the veracity of the statements in the submitted documentation; to visit laboratories and student learning facilities; to assess the standard of the Award through examination of student output; to meet with staff, student, and employers.

A visit will take place where the FD Award is the sole accredited award for the HEI. Normally the visit will be concluded in one day.

Where the HEI has a number of awards accredited by the JBM, the visit to accredit the FD will be encompassed in the next scheduled full JBM accreditation visit, subject to the submission document being acceptable.

### Further Learning

All successful students should have the opportunity to continue their Further Learning and meet the academic base to register as an Incorporated Engineer. This may be achieved through completion of the final academic year of a BSc in Civil Engineering, with or without Honours.

Alternatively, for some F/HEIs and employers an accredited route which is based on the F/HEI and the workplace may be appropriate. The construction of such a route is indicated in Appendix C. An F/HEI proposing such a route may include it in their initial FD proposal or submit it at a later date.

It should be noted that registrants for the Institution of Structural Engineers may proceed from their FD base to the Associate Membership examination, which is appropriate Further Learning to meet the requirements for an Incorporated Engineer.

## Appendix A (FD) Work-based Learning

### Introduction

The purpose of 'Work-Based Learning' (WBL) within the framework of a Foundation Degree is to formalise, assess and credit the learning achieved whilst the student is in the workplace. As part of a Foundation Degree, not less than 12.5% of the assessment for the award shall be attributed to WBL. The minimum WBL will equate to not less than 30 credits and relate to 300 hours of student learning in the workplace. Of the 30 credits a minimum of 10 credits should be at the level of the award.

Work-Based Learning should be productive and cannot be simulated or replaced by an alternative.

### Aim of Work Based Learning

The aim of WBL modules is to credit the student's knowledge, learning, understanding and skills, which have been gained in the workplace. The modules will also enable the student to integrate the skills and knowledge they have acquired during their formal study part of the programme into the workplace environment.

### Main Topics of Study

The emphasis of WBL will vary depending upon the HEI and the work placement, but it should be in a distinctive area appropriate to the work placement. Any arrangement of WBL should encourage the employer/supervisor to be involved in ensuring that the student is receiving appropriate agreed experiences.

The following are to be considered as the minimum topic areas to be developed in WBL:

- Construction technology
- Industry specific skills and techniques
- Health, safety, welfare, and risk management and security
- Sustainability and Climate Emergency
- Professionalism, Ethics, Diversity, and Inclusion

### Teaching and Learning

It is to be desired that all F/HEIs will examine the content of each taught module to determine which elements could best be achieved in the workplace. The resulting freeing of time in the F/HEI could then enable more theoretical learning to take place in the Institution. However, the WBL may be an independently developed module or modules that suit either the F/HEI's or employer's specific requirements.



## Appendix B (FD) Accredited Further Learning for FDs in Civil Engineering

It should be noted that an FD will fully meet the educational base requirements for registration with the Engineering Council as an Engineering Technician and/or part satisfy the educational base requirements for registration with the Engineering Council as an Incorporated Engineer with the addition of Further Learning.

HEI's may wish to offer an accredited Further Learning programme to holders of an accredited Foundation Degree to meet the academic standards for registration as an Incorporated Engineer. Such a programme may be constructed in a number of ways to meet the needs of the institution, employers, or students, and delivered in a variety of forms, including distance learning.

All accredited programmes will have a number of features in common.

- The total learning credits will be 60 at Level 3 (Level 6 (Intermediate) on the National Qualifications Framework or Level 9 on the Scottish Credit and Qualifications Framework)
- Not less than 20 credits to be awarded for a work based, individual project.
- Not less than 2 modules of academic study will have taken place. These may be either deepening or broadening the students' knowledge and understanding.
- The programme to be assessed and certified by the HEI

More information on Further Learning can be found on the JBM website at [www.jbm.org.uk](http://www.jbm.org.uk).

