

JBM Guidance

Risk-Based Approach to the Accreditation of New Programmes of Study (including undergraduate, apprenticeship, MSc and Doctoral programmes)

Introduction

In June 2014 the JBM agreed to adopt a risk-based approach to the assessment of proposals for new programmes of study submitted by higher education institutions (HEIs) which currently offer Engineering Council (EngC)–accredited programme(s). This approach draws upon the EngC Registration Code of Practice (paragraph 51) re-issued in August 2020 which notes that: *Programmes may be recognised which, at the time of application, do not have an output cohort. Licensees shall monitor the output of such programmes until such time as at least one cohort has completed the programme, and review their recognition accordingly.*

Criteria

1. The learning outcomes must be appropriate for the level and title of the programme(s) to be considered, as set out in the [JBM's Guidelines for Developing Degree Programmes](#).
2. The risk of the final output not being at an acceptable level is considered to be low. This will be based on output seen at the most recent JBM full accreditation visit and the HEI satisfying the following criteria:
 - The department has experience of running similar programmes at the same level.
 - There is reasonable commonality of programme content across all years (normally considered to be in the region of 70%) with other accredited programmes at the level proposed. If more than 30% of a recognised programme is additional or new, an accreditation visit may not be waived.
 - Adequate resources (facilities and staff) are in place or there is a clear commitment to future investment (within an acceptable timescale) to provide such resources.
 - Appropriate procedures are in place for assessing and assuring the quality of programmes at the level proposed.
 - No significant issues arose during the most recent accreditation visit and any requirements of that visit have been, or are being, addressed.
 - No adverse changes have occurred within the department's resources or governance since the most recent accreditation visit.
 - Samples of output are provided as soon as they are available and give reassurance to the JBM that the standard is appropriate.

Submission Requirements

The HEI must submit a report to the JBM (jbm@ice.org.uk) containing the following information for each programme to be reviewed:

1. AHEP Learning Outcomes

Complete the JBM mapping table to AHEP learning outcomes ([Appendix C](#)) for each programme submitted for accreditation to demonstrate how the latest [AHEP learning outcomes](#) applicable to all engineering programmes are met in the individual modules/units of each programme. Include only modules with primary outcomes which are assessed and evidenced in outputs.

Notes:

- *It is normally expected that the AHEP output standards will be achieved in the compulsory modules of the programme. Where there is reliance upon optional modules to achieve AHEP output standards, please clearly articulate how these output standards will be achieved for all pathways through a programme.*

2. Programme Specifications

Provide details of the structure of the programme.

3. Commonality with other Accredited Programme(s)

Provide a mapping table demonstrating commonality between the proposed new programme(s) and currently-accredited programme(s).

4. Details of Changes to related Accredited Programmes since the last JBM Visit

Briefly summarise any significant programme changes since the last visit.

5. Student Numbers

Provide projected recruitment statistics.

6. Internal Validation

Briefly outline the internal validation procedures.

7. Resource Implications

Indicate the resources – including staffing and facilities – which are currently in place to support the programme(s), or set out the action (with timescales) which will be taken to ensure that adequate resources will be provided.

8. JBM Core Subjects (for undergraduate programmes only)

i) Briefly explain how the JBM list A and B core subjects, as well as maths, fluid mechanics (hydraulics), and surveying, are covered within each programme; and demonstrate how the minimum academic requirements, as stated in the [JBM's Guidelines for Developing Degree Programmes](#) (Part 2, Section 3), have been met:

ii) Complete the JBM core subject matrix ([Appendix D](#)) for each programme submitted for accreditation and clearly identify where the following are covered:

- the three 'list A' core subjects
- two of the 'list B' core subjects – other than fluid mechanics (hydraulics) and surveying
- maths
- fluid mechanics (hydraulics)
- surveying
- highways and transportation engineering.

9. JBM Threads (for undergraduate programmes only)

i) Integration of threads



Briefly explain **how** each of the four JBM threads – design, sustainability, health and safety risk management, professionalism and ethics – are embedded within, and developed throughout, each undergraduate programme.

ii) JBM threads matrix

Complete the JBM threads matrix ([Appendix E](#)) for each programme submitted for accreditation and clearly identify **where** the threads are covered.

10. MSc Programmes only

Briefly state whether the MSc programme(s) submitted for accreditation are technical or non-technical (if submitting against [AHEP3](#))/ type I (if submitting against [AHEP4](#)). For technical programmes, list which modules include the technical content. For type I MSc, list which modules acquire learning outcomes C6 and C11 to 15 from AHEP4.

Note:

A technical MSc programme is one in which at least 50% of the taught modules AND the dissertation are of a technical nature. For full details, please refer to the [JBM Guidelines for MScs and Programmes of CEng Further Learning \(FL\) \(Technical and Non-technical MScs and FL Programmes\)](#)

A 'Type I' MSc programme requires IEng graduates to additionally acquire the learning outcomes C6 and C11 to 15 from AHEP4, which are those that distinguish a BEng (Hons) graduate from an IEng graduate, and that its technical content is such that it achieves the further learning required by their chosen professional institution. For an MSc to be accredited as Type I it is also necessary for the dissertation to be of a technical nature. For full details, please refer to the [JBM Guidelines for MScs and Programmes of CEng Further Learning \(FL\) AHEP4](#)

11. Apprenticeship Degrees only

Provide the following information:

- A rationale for the new programme which includes:
 - [AHEP Learning outcomes](#); JBM mapping to core subject matrix and threads.
 - Projected recruitment statistics.
 - Internal validation report.
 - Details of changes to related accredited programmes since the last JBM visit
- Programme specifications providing details of the structure of the programme.
- Commonality with other accredited programmes.
- Resource implications (including staffing and equipment).
 - A statement confirming which apprenticeship standard(s) the award provides the underpinning knowledge for, including a reference to the need for apprentices to complete an End Point Assessment (EPA), where applicable.
 - The academic and industrial support provided to apprentices.
 - Proposals for monitoring apprentices' industrial competence.
 - If academic credit is to be given for work-based learning (WBL), state the number of credits and how the WBL is to be assessed.
 - Any tailored *Memorandum of Understanding/Agreement* in place between the apprentice, the employer and the HEI.
 - The tri-partite commitment statement between the apprentice, the employer and the HEI.
- Completed JBM Apprenticeship checklist

The Review Process

Wherever possible, the review will be undertaken by the JBM team leader of the most recent accreditation visit to the HEI plus one other member of the JBM (or its panel of moderators). If issues for concern are identified at the initial review stage, a decision may be deferred until the next accreditation visit to the HEI; or a review of output from the new programme may be required; or a visit may be arranged.

