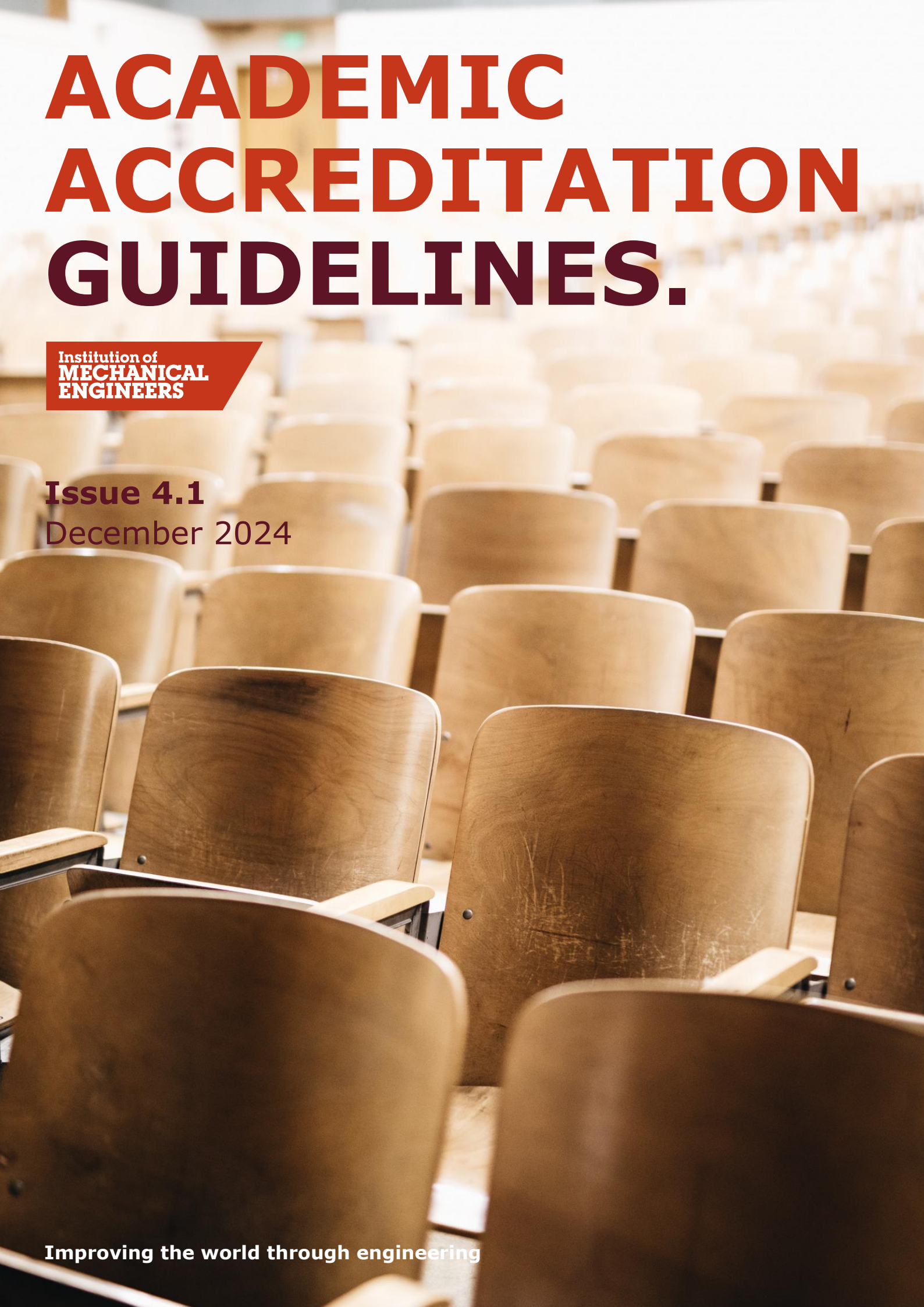
ACADEMIC ACCREDITATION GUIDELINES.

Institution of MECHANICAL ENGINEERS

Issue 4.1
December 2024



Improving the world through engineering

FOREWORD

This document defines the required overall standard to be achieved by engineering higher education programmes if they are to be accredited by the Institution of Mechanical Engineers (IMechE). It is intended as guidance to those who design and/or deliver degrees who are considering submitting them for accreditation or reaccreditation. The Institution recommends that in addition to reading this document, degree designers should familiarise themselves with the most recent editions of AHEP and UK-SPEC. The Institution accredits against the content of these Guidelines as its interpretation of AHEP (4th edition).

Please note that the academic levels referred to in this document are based upon the system employed in England and Wales Higher Education.

The IMechE periodically reviews and updates all documents associated with academic accreditation. This document is uncontrolled when printed.

CONTENTS

INTRODUCTION

The Institution of Mechanical Engineering (IMechE) has its mission to be the recognised authority in mechanical engineering, supporting a global community that is 'Improving the World through Engineering'. Our strategic objectives are:

- Developing engineers
- Promoting engineering
- Informing opinion
- Encouraging innovation

The Institution is committed to encouraging and developing a culture of lifelong learning, and to supporting the academic and ongoing professional development of a wide range of career paths within and related to mechanical engineering. **The IMechE expects all its members and employees to commit to its values of Professionalism, Integrity, High Ethical Standards, Respect for people and the environment, and Innovation.**

This document sets out the policy, context, rules, and procedures that the Institution will use to recognise a wide range of engineering degrees that provide suitable academic preparation for a career in mechanical engineering as a Chartered (CEng) or Incorporated (IEng) Engineer.

1.1 Accreditation in brief

Mechanical Engineering is a dynamic and diverse profession, offering the broadest career opportunities from specialist to generalist. Mechanical Engineers make a significant contribution to sustainable development, the generation of wealth in every sector of the economy, and the quality of life of each member of society. As such, mechanical engineering demands professional qualifications.

Academic accreditation is the mark of assurance that individual engineering programmes within higher education meet the required overall standards set by the engineering profession and defined by the Engineering Council (EngC). It is a developmental process, an ongoing dialogue between the Higher Education Institution (HEI) and the IMechE. Periodic visits by the Institution provide a structured framework within which a department can evaluate and improve the quality of their programmes, supported by peer-review.

The advantages of an accredited programme include:

- the demonstration of the high standards of UK engineering education, both nationally and internationally under the EUR-ACE Accord, The Washington Accord and The Sydney Accord;
- an internationally recognised benchmark of quality for the HEI, the graduate and the employer;
- quality assurance for both prospective students and employers that the degree meets the standards set by the engineering profession; and
- confirmation that the qualification has provided a suitable educational basis to enable an application for a professional registration title.

Top

1.2 Related standards

The Engineering Council has developed the Accreditation of Higher Education Programmes (AHEP) handbook in consultation with the engineering profession, employers in industry and engineering academics. The latest (4th) edition focuses on the use and application of Design and Innovation, Sustainability, Ethics, Security, and Equality, Diversity, and Inclusion. The number of learning outcomes has also been reduced to emphasise core areas and demonstrate progression between academic levels of study. **Accredited degrees are assessed against output criteria set out in AHEP, as interpreted by the Institution to meet the specific requirements of the mechanical engineering sector.**

UK Standard for Professional Engineering Competence (UK-SPEC) is the EngC policy statement for the formation of CEng, IEng, and Engineering Technicians (EngTech). It explains the value of and the requirements for becoming professionally registered. Accredited engineering programmes develop the underpinning knowledge and understanding requirements of professional registration; therefore, the learning outcomes in this document exist within the context of the generic statements of competence and commitment for IEng and CEng in UK-SPEC.

The Institution recommends that degree designers should also familiarise themselves with the most recent editions of AHEP and UK-SPEC.

Top

THE FORMATION OF PROFESSIONAL ENGINEERS

Mechanical engineering is a profession directed towards the skilled application of a distinctive body of knowledge based on mathematics, natural science, materials, and manufacturing, all integrated within the design and innovation process. This solid foundation of engineering principles is directed to developing a technological outcome that provides the infrastructure, goods, and services needed by society. All engineers have a responsibility to the community regarding sustainability, safety, security, and the ethical and environmental impact of their work. These attributes are typically acquired through education and professional formation in a particular engineering discipline.

2.1 Levels of registration

Mechanical engineers, who are qualified or working towards CEng, IEng or EngTech registration, are welcomed into Institution membership. The accreditation of degree programmes offers either or full or partial demonstration of the under-pinning educational requirements for CEng or IEng (Appendix A).

2.2 Qualifications that meet underpinning knowledge and understanding requirements

The standards contained within UK-SPEC, and the qualifications described in AHEP form the basis of competence and commitment for national registration at CEng or IEng level. AHEP identifies the following pathways to meet the educational requirements, any of which may be accredited for delivery in various modes, including Degree Apprenticeships (at England and Wales Levels 6 & 7), as set out in Approval and Accreditation of Qualifications and Apprenticeships (AAQA). Each mode of study will need to be accredited separately.

2.3 Routes to professional recognition

The ideal route to professional registration is a seamless progression of learning experiences beginning with an accredited degree, through Initial Professional Development (IPD) in early employment and Continued Professional Development (CPD) once professionally registered. Once qualified, professional engineers keep up to date by continued learning throughout their career through CPD. Professional Engineering Institutions (PEI) membership and registration with the EngC are recognised benchmarks against which the engineer can judge and demonstrate professional progress.

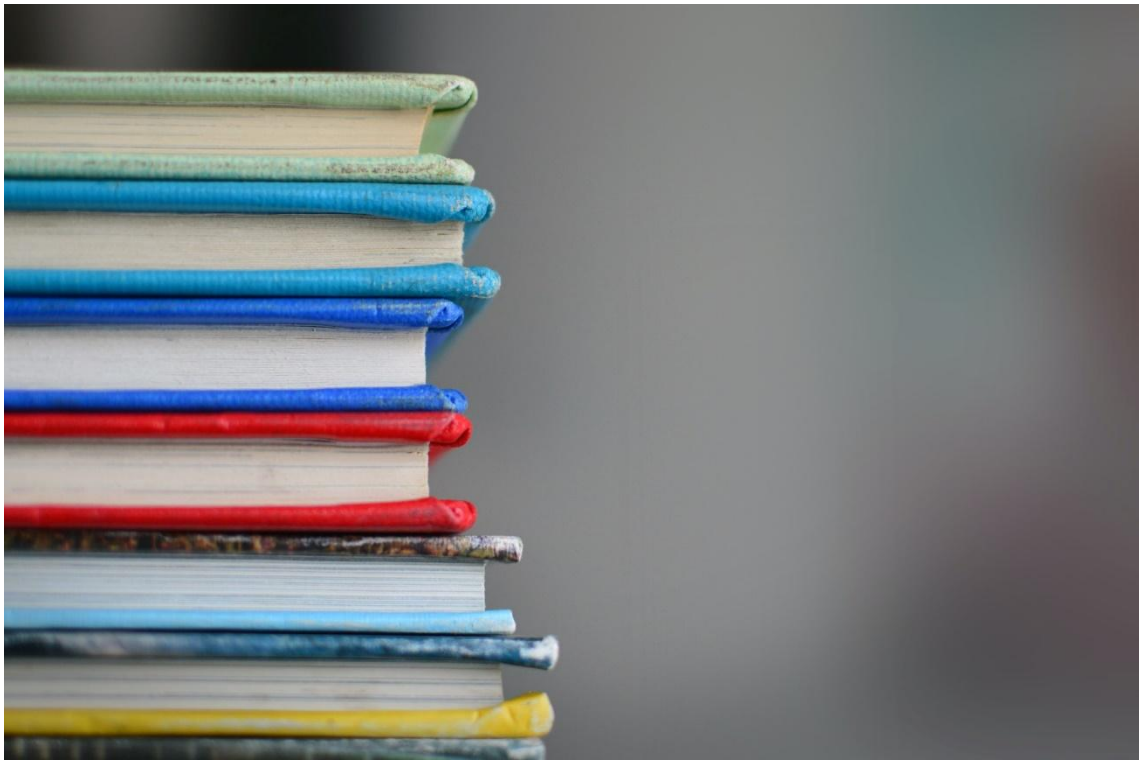
The Institution recommends that Mechanical Engineers complete their IPD (and any further learning) through the structured Monitored Professional Development Scheme (MPDS). MPDS records professional development achieved in the workplace.

2.4 Further learning

Although this document refers only to the accreditation of degrees, the Institution offers separate guidance on how to complete an appropriate form of 'Further Learning', which is the academic/educational achievements based on knowledge and understanding gained. Further learning is required where a graduate's highest qualification is accredited as partially meeting the required standard for IEng or CEng.

It should also be noted that graduates from an accredited MSc programme who do not have a Bachelors degree accredited for CEng may not have the exemplifying qualifications for professional registration as a Chartered Engineer. They will need to have their qualifications individually assessed through the Academic Review process if they wish to progress to CEng.

Incorporated Engineer	Chartered Engineer
An accredited Bachelors or Honours degree in engineering or technology;	An accredited integrated Masters (e.g., MEng) degree;
or an HND or Foundation Degree in engineering or technology, plus appropriate further learning to Bachelors degree level;	Or an accredited Bachelors degree with honours in engineering or technology, plus either an appropriate Masters degree or Engineering Doctorate or appropriate further learning to Masters level;
or a qualification or apprenticeship at the appropriate level that has been approved or accredited in line with AAQA.	or a qualification or apprenticeship at the appropriate level that has been approved in line with AAQA.



Top

CHARACTERISTICS OF DEGREES ACCREDITED BY THE INSTITUTION OF MECHANICAL ENGINEERS

This section outlines the expectations of a degree programme for which accreditation is sought from the IMechE. As such, they may differ from the expectations of other PEIs.

3.1 Degrees suitable for accreditation

An indicative list of the degrees that the Institution will consider for accreditation can be found in Appendix B. This list is not exhaustive, and other degrees meeting the minimum programme expectations described here can also be considered for accreditation. Any reference to accreditation or professional titles (IEng, CEng, etc.) and professional bodies (EngC, PEIs, etc.) within a degree title is not permitted and any such inclusion will see accreditation of such titles refused. Those developing degree programmes or considering accreditation via the IMechE may find it helpful to consider the Institution's definition of mechanical engineering for applicants. It is also recommended that the Institution be consulted to confirm if a particular degree can be considered.

Further information regarding the defining characteristics of an accredited degree is provided in Appendix A. The Institution does not favour any particular approach to teaching, learning or assessment. **The accreditation process supports innovation in both the delivery and content of mechanical engineering degrees and HEI's are encouraged to develop innovative provision in response to industry needs.**

3.1.1 MASTER OF SCIENCE DEGREES

Some additional requirements apply to the accreditation of postgraduate Masters degrees (e.g., MSc) other than Integrated Masters. To be considered for accreditation:

- the level of at least 70% of the modules must be above Bachelors level;
- the majority of MSc modules should relate to mechanical engineering with additional multi-disciplinary engineering topics to suit their degree title;
- a reasonable element of professional skills at Masters level is encouraged; and
- Topics related to engineering such as Engineering Management are acceptable, but topics such as General Management would not qualify as an engineering subject.

It is not possible to accredit an MSc whose primary purpose is to convert students from non-engineering disciplines to engineering ones unless the majority of the assessment is at Masters level.

Top

3.2 Programme design

Knowledge gain can be described as developing a student's potential to prepare for a career as a registered professional engineer by understanding engineering principles and practices, developing engineering skills, and acquiring the motivation to continue learning throughout life. **The effective delivery of a cohesive body of knowledge is critical to knowledge gain**.

The particular emphasis and characteristics of a degree programme, including its aims, objectives and learning outcomes should be described in formal quality assured documentation available to students such as Programme Specifications (or similar). This key accreditation document should also state whether the degree is designed to meet the CEng or IEng standard and whether it has been designed to meet the AHEP and Institution requirements.

While all learning outcomes in a programme must be delivered and assessed for each student, the relative balance and weighting should reflect the programme aims. For example, some courses may bias engineering practice, while others may emphasise engineering analysis. Whilst no teaching specific content is stipulated by the IMechE, most of the content of an IMechE accredited programme will be directly related to the art and practice of mechanical engineering.

An accredited degree programme demonstrates a holistic delivery of learning outcomes. Some learning outcomes will be delivered concurrently, for example, through project work. Other learning outcomes may be distributed across one or more modules. In many instances, numerous opportunities will be provided for students to demonstrate their attainment of learning outcomes within each level. It is expected that the module content and assessment methods are appropriate to the learning outcome, and it should be clear that all students passing a given module must have also passed all its associated AHEP learning outcomes (See section 5.4 'Compensation and Condonement').

An accredited programme will be expected to show thoughtful calibration and distribution of learning outcomes throughout the degree. Within a given level of study, departments should ensure a consistent level of learning, and modules of equal credit weighting with similar numbers of learning outcomes. Similarly (from level to level) departments should demonstrate the development of students' ability through increasing complexity commensurate with the level of study.

3.3 Learning Outcomes

A programme must deliver and assess all the learning outcomes at the stipulated threshold ISCED/EQF level to achieve accreditation (see Areas of Learning and Appendix C). The learning outcomes represent the competencies and commitment demanded of graduates to complete the educational base for professional registration. Although they represent a substantial grounding in principles relevant to mechanical engineering, **learning outcomes represent a threshold level of attainment and should be interpreted in the context of the stipulated ISCED/EQF level of study** and a particular disciplinary or multi-disciplinary engineering practice.

Top

3.3.1 SUBJECT BENCHMARKING

AHEP introduces a single progressive set of learning outcomes that extend from Level 3 to Level 7 (England and Wales) so that learning from any engineering qualification is covered by a single framework with shared expectations and standards. The level at which the learning outcomes are delivered is derived from the relevant qualifications described in The Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies published by the QAA at the time of development. The level at which each learning outcome should be delivered in a programme is described in the table in Appendix C.

The Institution supports the work conducted by the QAA and the Engineering Professors' Council to produce useable and relevant output standards for engineering degrees. EngC has used the work by these two bodies in the production of the learning outcomes statements that accompany UK SPEC and AHEP. Some helpful examples of the development of taxonomy are provided in Appendix D.

Learning outcomes then should not only include the level of study, but also indicate the difficulty of the problems to be addressed. AHEP introduces definitions for 'complex problems' (CEng) and 'broadly defined problems' (IEng) to differentiate between the levels of learning required in the educational base for registration. The definitions are:

Broadly defined problems involve a variety of factors which may impose conflicting constraints but can be solved by the application of engineering science and well-proven analysis techniques.

Complex problems have no obvious solution and may involve wide-ranging or conflicting technical issues and/or user needs that can be addressed through creativity and the resourceful application of engineering science.

3.3.2 OUTPUT STANDARDS MATRIX

The depth and breadth of coverage of AHEP learning outcomes will depend on the degree's particular emphasis and whether the degree is accredited for CEng or IEng. This information is captured within the 'Output Standards Matrix' for each programme, which provides a framework for assessing learning outcome coverage during the accreditation processes.

The mapping of modules against the prescribed learning outcomes for the level of accreditation sought must demonstrate that a graduate from an accredited degree will have met all the required learning outcomes irrespective of any optional modules selected. The AHEP learning outcomes must be summatively assessed.

The Output Standards Matrix should reflect the aims and characteristics of the degree at the programme level. At the module level, the Output Standards Matrix represents a map of a degree programme, where the HEI will identify (and tick) each module that evidentially adds to each AHEP learning outcome. The process of mapping output standards gives both the HEI and the IMechE a powerful tool to assess the balance of testing and thematic progression. This map is used by the Institution to locate evidence of learning outcomes in both the module specification and assessment methods and will be scrutinised as part of the accreditation process.

Accreditation decisions will be made (in part) on the strength of the learning outcome coverage, and this evidence should not be treated as merely an administrative exercise. A frequent pitfall arises within larger modules, such as project modules, which are used as a catchall for excessive numbers of learning

outcomes. It would not be correct to claim a learning outcome against a project module on the basis that a student 'might' demonstrate it, depending on the project topic. **Learning outcomes should only be indicated where they can be guaranteed to be covered by every student taking the module.**

A further aspect that should be carefully considered is the teaching of mixed cohorts on modules shared between different programmes, particularly in the final years of a degree programme. In this case, **the Institution will seek reassurance that such delivery does not disadvantage any group of students (both in terms of performance and preparation)**. The HEI must be clear regarding the level of assessment and, therefore, which standard is being assessed. **It is important to note that the learning outcomes, which reflect the level of educational underpinning, vary for IEng, partial CEng, and full CEng claims. Consideration must be given to how best to tailor claims to the appropriate level required, and understanding how this might impact the mapping for mixed cohorts.**

3.3.3 EQUALITY DIVERSITY AND INCLUSIVITY

The IMechE is committed to creating an inclusive culture where all members and employees know they belong, feel valued and can thrive and wants to ensure that the Institution, and the wider engineering profession, is welcoming to all people with the right skills and knowledge regardless of their background. Equality, Diversity, and Inclusion (EDI) is also a specific learning outcome within AHEP4.

It is expected that students on IMechE accredited degree programmes will recognise the responsibilities, benefits and importance of EDI and will be taught how to adopt an inclusive approach to engineering practice. Furthermore, it is expected that Universities delivering accredited degree programmes will promote EDI in line with applicable regulatory frameworks, e.g. the UK Equality Act 2010.

Within a degree programme it is recommended that EDI may ideally be embedded at all levels of study across the curriculum so that it is recognised as an integrated theme and deep understanding and practice is developed. Alternatively, it may be taught within a separate module where a more focused approach can be taken, although care must be taken to ensure that the relevance to and integration with engineering practice is maintained, particularly if specialist staff from outside engineering are involved in the delivery. Whichever approach is taken it is important that students have the experience of and are assessed in applying the principles and practice of EDI to engineering problems and activities, such as design. Therefore, EDI should be explicitly included in assessment and marking criteria. Further guidance on the teaching and assessment of EDI in engineering departments has been developed in collaboration with the Institution of Engineering and Technology.

3.3.4 STUDENTS WITH PROTECTED CHARACTERISTICS

The IMechE expects HEI's to foster a community of practice that is unconditionally inclusive. An individual student's dimensions of diversity should never present a barrier to their academic success. To this end, the Institution is highly sympathetic to any reasonable adjustments made for students, for example, with disabilities who may need to demonstrate their attainment of AHEP learning outcomes in different ways.

3.4 Areas of Learning

Learning outcomes are grouped around five specific areas of learning, which reference the generic statements of competence in UK-SPEC. These five areas are:

- Science and Mathematics
- Engineering Analysis
- Design and Innovation
- The Engineer and Society
- Engineering Practice

The content of degree programmes and the associated programme modules must satisfy the learning outcomes for each of the five areas of learning, consistent with the title and scope of the degree programme. The following sections provide some specific guidance and expectations of a degree programme accredited by the IMechE. They should not be considered exhaustive but help interpret the (necessarily generic) AHEP Areas of Learning (Appendix C).

3.4.1 SCIENCE AND MATHEMATICS

An understanding of engineering science is an essential academic element of a mechanical engineer's formation. Therefore, degrees must include an appropriate amount of the relevant natural sciences, including mechanics, taught from an engineering perspective. Typically, a degree accredited by the Institution will involve the subjects listed below, where their relative amount and balance are appropriate to the nature of the degree. It is expected that more specialist degrees (such as MSc) may demonstrate a bias towards one area.

- Solid-body Statics, Mechanics, and Dynamics
- Fluid Mechanics
- Thermodynamics and Heat Transfer
- Materials and Manufacture
- Inter-disciplinary engineering topics, for example, principles of Electrical/Electronic Engineering

All degrees accredited by the Institution must contain mathematics, statistics, engineering science, and modelling appropriate to the subject and type of degree and the level of accreditation. The mathematics and engineering science content should be embedded throughout the whole degree programme. **During the first year of study, the content should meet the needs of the entire peer group and allow for the variation in entry knowledge. This is particularly important for mathematics**.

There is no expectation that any of these science or mathematics subjects must be taught within discrete modules.

3.4.2 ENGINEERING ANALYSIS

Engineering analysis involves applying engineering concepts and tools to analyse, model and solve problems that become increasingly complex as the student progresses through their degree. The IMechE interprets analysis as including the advanced computer modelling tools employed in industry, with both a validation and interpretation phase. The Institution would also expect students to

demonstrate the use of appropriate technical literature and standards as part of this learning area.

3.4.3 DESIGN AND INNOVATION

Design is creating and developing an economically viable product, process, system, or solution to meet a defined need. **Design must be present as an integrating theme throughout an IMechE accredited engineering degree**. Ideally, this will involve practical and hands-on design and make projects in earlier levels of study, leading to a major individual and investigative project in the final or penultimate year of study. Within Integrated Masters degrees (e.g., MEng) accredited for CEng, the design and innovation theme must **also** lead to a large scale multi-disciplinary group design project.

3.4.4 THE ENGINEER AND SOCIETY

In the 21st century the world faces unprecedented challenges. Engineers will play a vital role in reducing the environmental impact of current practices and promoting sustainable solutions to these global challenges. In AHEP4 students are required to be able to assess the environmental impact of solutions to engineering problems and HEIs are encouraged to make use of the United Nations Sustainable Development Goals in helping to develop understanding of these issues. It is recommended that **sustainability** and environmental impact are not taught as separate subjects but should form an integral part of the course theme and structure to enable students to develop a mindset of sustainable engineering practice. Design and project work should include an appreciation and understanding of these issues as they relate to the areas of study. Further guidance may be found in the Guidance on Sustainability on the EngC's website and in the recently published Sustainability Toolkit produced by the Engineering Professors Council. HEIs may also wish to refer to the recently launched Engineers 2030 project from the Royal Academy of Engineering.

The engineering profession is granted considerable trust from society to govern and regulate its practice. As such, it bears significant responsibility to adhere to and regulate its professional codes of conduct. Students following an accredited programme will be expected to understand the nature of **engineering Ethics**, identify ethical concerns, and make informed choices to ensure the benefits of innovation and progress are shared equitably. A Statement on Ethical Principles can be found on the EngC's website.

Engineering risk must be treated holistically, and relevant forms of risk and mitigation processes must be included in the programme, consistent with the degree programme title. Engineering risk could relate to several areas, including (in no order of priority); environmental, integrity, maintenance, process, product, project, reliability, regulatory, reputational, safety and health, security. During the accreditation process, the adequacy of treatment of engineering risk will be explored with the expectation that all students should additionally have a broader rather than a narrow perspective of risk in an engineering business. Further Guidance on Risk can be found on the EngC's website.

The treatment of **Security** is new and introduced to reflect the integrated nature of engineering within a modern, multi-faceted society. The learning outcomes are accompanied by a reference to the EngC Guidance on Security, which states:

Security can be defined as the state of relative freedom from threat or harm caused by deliberate, unwanted, hostile, or malicious acts. It operates on a number of levels ranging from national security issues to countering crime. It includes

preserving the value, longevity and ongoing operation and function of an enterprise's assets, whether tangible or intangible, and the handling of privacy issues such as the protection of personally identifiable information.

The addition of **Equality, Diversity, and Inclusion** (EDI) as a specific learning outcome is also new and was made in response to the growing recognition of the ethical and business drivers for change and legal obligations. Further guidance is provided in Section 3.3.3.

3.4.5 ENGINEERING PRACTICE

The Institution expects that engineering practice should permeate the whole programme of study and that accredited degrees will provide ample opportunity for appropriate laboratory and practical work. Industry involvement should also be evident within engineering practice. The accreditation process will consider whether the HEI provides **for all students**:

- design and make exercises, and individual and group projects;
- adequate facilities and competent staff to support hands-on experience and projects;
- practical and laboratory work that is integrated and (where appropriate) credited within the programme to complement the subjects studied and provide the vehicle for exploring the relationship between conceptual models and real engineering systems;
- experience of a range of engineering materials and their behaviour, engineering equipment, and manufacturing processes (including additive and subtractive processes) appropriate to the degree;
- hands-on experience in an engineering workshop environment involving the use of hand-tools, machine-tools, digital manufacture processes, and an appreciation of the human skills needed in manufacture;
- and that industry or company visits, and industry guest lecturers are used to contribute to knowledge and understanding of industrial engineering application.

The practical application of engineering concepts and tools also has a commercial context. Students should also have a grounding in the organisational structure of industry, engineering and project management, finance, human behaviour, and relevant legal matters (for example, contract law). The combination of these subjects will be appropriate to the aims of the degree and the level of accreditation.

3.5 Major Projects

Project modules are considered an essential element of a degree accredited by the IMechE, and major projects must make a major contribution to the final award. Project modules provide an ideal opportunity for students to draw together their learning throughout their degree. It will be expected that the programme design offers adequate preparation for students throughout the earlier levels of study. Major projects must address relevant AHEP learning outcomes, commensurate with the aims of the project module and its major contribution to the final award. Assessment of AHEP learning outcomes must be transparent in project marking schemes and must be assessed for every student. AHEP Learning outcomes must be appropriate to the aims of the project module and each student must have the opportunity to achieve the learning outcomes irrespective of the

project topic. Assessment of AHEP learning outcomes must be transparent in project marking schemes and must be assessed for every student.

3.5.1 INDIVIDUAL PROJECTS

All degrees accredited by the Institution must include an individual investigative project. The project should be specified for individual learning and be independently conducted and assessed. If the project forms part of a 'linked' exercise or there is sharing of resources (e.g., students working in pairs), HEIs must ensure that the content of each project is separate, the work of each student is not interdependent, and that all forms of assessment (including project reports) are independently prepared and individually assessed.

The project should form a major part of the degree and be technical in its nature, generally supporting the engineering orientation of the degree. The project must be investigative and not, for example, involve the simple application of commercial computer software, a non-technical assignment, nor a review (although a review will typically be part of the project). An integrated exercise involving a technical investigation that incorporates the broader commercial context of engineering is encouraged.

The individual project would contribute at least 30 credits at a minimum of Level 6 within undergraduate degrees.

The individual project shall be at least 60 credits at level 7 within postgraduate (MSc) degrees.

Although some projects may not contain all the following elements, the ideal project should involve:

- Clear aims/objectives
- Project planning
- Reference to any relevant previous work
- Appropriate analysis
- Design work
- Manufacture (if practical)
- Testing and interpretation of results
- Relevant aspects of Engineering Practice
- Clear recommendations
- Preparation of a final report (and any other forms of assessment) that evidence the achievement of learning outcomes
- At Masters level, the individual project should also demonstrate research skills, analysis, and synthesis

3.5.2 GROUP PROJECT

An Integrated Masters degree must include a major group design or industrial project requiring reference to and integration of the engineering and non-technical subjects that distinguish the Masters from a Bachelors degree. The group project must be carried out at Level 7 and form a significant component of the MEng degree – at least 30 credits – and contribute to the Masters level learning outcomes.

The project assessment would typically be made up of several elements such as a group mark, an individual mark, a peer review, and/or other moderated marks**.** The marks each student receive must reflect their individual achievement and input on this project.

3.6 Assessment

In accrediting a degree, the Institution accepts that the Board of Examiners will determine which students have achieved the standard required for the award of the degree. Thus, External Examiners' reports and the HEI responses are a crucial part of the evidence reviewed during the accreditation process.

There is usually a balance between different methods of assessment, which should be designed to minimise opportunities for academic misconduct, including plagiarism, self-plagiarism, and contract cheating. Policies and procedures relevant to academic integrity should be made clear, accessible, and actively promoted to students.

It is expected that the emphasis of assessment should change during the degree according to the level of study. Early on, an assessment may involve testing skills and knowledge. Later, it should involve testing understanding by applying engineering principles to realistic engineering problems appropriate to the CEng or IEng ethos of the degree. The accreditation team will look closely at the assessment arrangements and practices to ensure their rigour and that they are appropriate to the AHEP learning outcomes. The link between the assessment and AHEP learning outcome should be evident and logical.

Robust assessment of AHEP learning outcomes is critical, and requires a balanced, carefully structured, and clearly controlled distribution of learning outcomes by module. **There are minimum levels that learning outcomes need to meet, and these need to be demonstrated along with developmental learning as appropriate** (Appendix C). In modules which test multiple learning outcomes careful consideration must be given to how rigorously each may be demonstrated, i.e., how much credit each is worth. In some cases, it might be reasonable to assess a particular learning outcome more than once to ensure suitable ‘credit coverage’. This allows for missed marks on particular aspects of an assignment by ‘the average student’, who might be expected to score around 60% on any particular assessment.

Where a particular AHEP learning outcome is tested in only one module (e.g., as a single learning outcome in an assessment), care must be given to ensure this is a meaningful and robust test of the learning outcome, one which amply demonstrates the meeting of the threshold, and which cannot be avoided. Care must be given to ensure that any learning outcome assessments which are ‘single points of failure’ must be passed, as well as the module overall.

3.6.1 EXAMINATION PAPERS

Examinations will be reviewed for academic rigour and challenge, and questions should enable the candidate to demonstrate their ability to use a logical approach when obtaining a solution. The Institution will look for additional, more demanding 'open-ended' elements to some questions that allow the more able candidates to demonstrate their higher level of understanding, particularly at Levels 6 and 7.

All examination papers should consist of previously unseen questions, and students should not be 'coached' to answer the specific set of questions that will appear on

the examination paper. The Institution does not expect tutorial questions previously seen by students to appear in examination papers, with no other requirement than to reiterate theory, nor to answer questions previously covered in class. A resit examination must consist of a new set of previously unseen questions and must have the same duration and be taken under the same conditions as the initial examination. **It is expected that the HEI will have a policy to prevent the re-use of examination questions for a minimum of 3-years**. There should be an appropriate internal process to ensure conformance with the policy.

3.6.2 ONLINE EXAMINATIONS

'Traditional,' closed-book, in-person, tightly time-controlled examinations have long-proven effectiveness in the assessment of student ability. Recently, there has been rapid developments in the sector towards online examinations. In each case, in addition to the usual examination requirements, the following points should be considered, and reasonable mitigations applied:

- **Open- and closed-book exams:** The nature of the assessment shall reflect opportunities for students to review applicable material during the exam.
- **Time:** In-person, fixed-time examinations are easily controlled in terms of student interaction; online examinations are less so. In online settings time is a limiting factor for collusion and therefore examination duration along with a common start-time should be considered to limit opportunities for examinations to be pre-viewed by students.
- **Question Randomisation:** Whereas invigilation of in-person examinations directly prevents collusion, this is more difficult in online settings. Here methods such as the use of randomised questions, randomised order or personalised elements can be effective, particularly if coupled to suitably be configured with unidirectional access to questions (i.e., students only get one attempt at a question, no 'Back' button, etc.).

3.6.3 COURSEWORK

Coursework, worked-upon by the students over an extended period, often forms an important part of summative assessment. However, the nature of the assessment can introduce options for student collusion and plagiarism. To mitigate these effects, and so improve the reliability on each student meeting the full set of learning outcomes, the following should be considered:

- **Coursework Re-use:** It is likely students will have access to prior assessments. Whilst re-use of assessment has benefits in terms of teaching efficiency, this must be balanced against the ease with which students could obtain an unfair advantage. It is suggested that, at a minimum, coursework should not be simply re-used for a period of less than 3 years after its last setting, and then not wholly re-used. In cases where coursework re-use is unavoidable, the following should be considered :
  - **Unique/Personalised Assessment:** Thought should be given to how coursework might be adapted such that individual students face a unique challenge, based on a common core task; some defined variability can limit the effectiveness of collusion, whilst remaining suitably constrained in terms of what is assessed.
  - **Laboratory Assignments:** The (often) fixed nature of experimental apparatus presents a challenge in terms of assessment re-use due to the reduced scope for change. Thought should be given to how

outcomes may be robustly assessed on a more individualized basis. Means which could prove effective include personalization of equipment settings during the experiment/randomization of set points to be discussed in the experimental report.

- **Feedback & Marking Schemes:** A particular aspect of importance in the setting of coursework is clarity regarding the way marks will be allocated. A clear marking scheme, produced as part of the assignment brief, can be effective in delivering a consistent message in terms of expectations of the student. Subsequently, this will also help guide the marker to be consistent in their approach to grading, and in delivering helpful feedback to the student.

3.6.4 USE OF ARTIFICIAL INTELLIGENCE

Recent and continuing advancements in Artificial Intelligence (AI) make its use in education in some form inevitable. For example, regular internet search engines now offer enhanced capability via AI, and this is altering the way researchers identify and sift work key to their field of study. Across the Higher Education sector there is significant variability in the way AI is engaged with (by students and staff), and in the way use of AI is acknowledged in work. There is, however, consistency in the need to be able to demonstrate learning outcomes and cognitive skills in a robust manner, regardless of the possibilities of AI augmenting any student submission.

The IMechE will require evidence that the HEI has a clear statement on the use of AI by staff and students and seek re-assurance that the provider's process(es) are reasonable, broadly in line with the sector, and being followed. Above all, academic integrity must be maintained.

3.7 Professional practice

Accredited degree programmes should feature student engagement with relevant scholarship, research and/or professional practice.

The IMechE believes that all engineers should demonstrate and maintain high professional standards in their work. This applies equally to teaching staff involved in designing and delivering Institution accredited programmes as part of their professional commitment and as an example to students. Membership of a relevant professional body would be one sign of such a commitment. **The Institution would expect to see that the majority of staff delivering accredited degrees are professionally registered at CEng or IEng level**. It is also expected that the teaching staff will actively promote the concept of professionalism (demonstrated by PEI membership and eventually, registration) through presentations and guidance to students and by inviting IMechE Business Development Managers to the HEI to speak to the students about events and membership opportunities.

Should fewer than 25% of teaching staff be professionally registered at CEng or IEng, then this would normally generate a 'Condition' of accreditation on the HEI to increase this figure. Should the number of professionally registered staff be 25% or greater, but fewer than 50%, then HEIs would normally be given a 'Recommendation' to increase this figure. The Institution can assist with University-Based Registration of staff.

The Institution strongly recommends that HEI's appoint an Academic Liaison Officer (ALO). This person, who would typically be a member of the IMechE, will act as a

key point of contact between the IMechE and the HEI. A central part of the role is to make students aware of everything that the Institution does to support them, from free IMechE Affiliate membership, access to online journal and library facilities and even financial assistance.

3.8 Industrial influence

Accredited programmes must use modern engineering practices (in industry and commerce) to influence programme design and delivery and improve the student experience. Where possible, commentary on the effectiveness and development of the mechanisms used to engage with industry should also be provided. Industrial engagement can be achieved through a variety of complementary means including (but not limited to): industrial placements; visiting lecturers; collaboration with industry to set and deliver student projects; industry involvement with EngD programmes (if applicable); and demonstration of how key research collaborations between the HEI and industrial partners informs teaching.

The HEI should detail how industrial input is sought, captured, and acted upon at the programme level. This top-level summary should be brief and supported by evidence as applicable. For example, it is typical to develop groupings of industrial contacts into an **Industry Advisory Board** (or similar). This group contributes to the support for and development of academic programmes by providing external input and acting as a 'critical friend' to the HEI. Such groups help ensure that degree programmes remain current, are informed of developing industry trends, and are likely to remain appropriate for the initial destination of the student cohort. Specific evidence that is helpful in the submission includes details of group organisation and membership, group terms of reference; group meeting minutes; and notable group achievements.

Top

THE ACCREDITATION PROCESS

Accreditation is the process used by PEIs (under licence from the EngC) to assure the suitability of educational programmes designed as the preferred route into the engineering profession. It is important to note that other routes to Institution membership and registration with the EngC are available, although these require applicants to be individually assessed. Accreditation involves a periodic quality assessment and audit of the programme of study against agreed criteria.

Accreditation is an involved process taking between 6 and 18 months, from providing the completed application forms, plus supporting material, to receiving the outcome decision (Appendix F). If the Institution has not previously visited an HEI, an initial application form will be reviewed to ensure the provision is likely to be suitable for accreditation. Then, and for all other applications including reaccreditation, the Main Submission Form and Output Standards Matrix must be completed (Appendix G). Once satisfied that the programme is likely to meet its requirements for accreditation, the Institution will appoint an accreditation team and make the arrangements for a visit to the HEI.

At all stages of the application process, the supporting material will be peer-reviewed by a team of academic and industry-based engineers who have received special training in the accreditation process. This visiting accreditation team will then visit the HEI to review further evidence and engage in a series of structured meetings as critical friends.

At the end of the visit, the Chair of the visiting accreditation team will provide feedback on their findings to the HEI. This may include details of the **Conditions** that must be accommodated before accreditation can be awarded and **Recommendations** that are made to enhance the programme and its delivery, along with any **Commendable Findings** identified. This information is captured in a Visit Report that the HEI will be given the opportunity to check for factual accuracy and an Action Plan that contains the HEI's response. **It is important to note that the visiting accrediting team does not make decisions regarding the outcome of accreditation**. Accreditation is awarded (or not) by the Academic Standards Committee (ASC) based on the Visit Report and the HEI's response to the Action Plan.

Application for accreditation of a degree, or suite of degrees, will only be accepted on the appropriate application forms, which are available electronically from the IMechE website. The Institution periodically revises and updates its application forms, so it is recommended that a new copy be obtained from the website before an application is made.

4.1 Information reviewed during accreditation

The accreditation process focuses on output standards (areas of learning/learning outcomes). In considering applications for accreditation, the Institution will:

- Only accredit programmes that provide awards based on clearly defined learning outcomes;

- Only accredit programmes that evidence delivery and assessment of all AHEP learning outcomes for all graduating students;
- Check that the programme is at the appropriate level in the applicable UK (or equivalent international) qualifications framework;
- Monitor the accuracy of the HEI's published information about the programme's accredited status and registration;
- Visit the awarding HEI as part of the assessment if necessary; and
- Ensure that accreditation will confirm that the programme covers the relevant competence standards in UK-SPEC.

In making a judgement, the Institution will consider evidence from a range of indicators.

- The learning outcomes of the programme via programme and module specifications and the Output Standards Matrix.
- The teaching and learning process.
- The assessment strategies employed.
- Quality assurance arrangements and processes at the programme level, including the arrangements for programme approval, annual monitoring, and periodic review. Evidence of student involvement in quality assurance and enhancement processes is considered as best practice.
- The human, physical and material resources used to support the programme including:
  - data regarding student and staffing numbers;
  - outline CVs for all staff who teach to show their highest academic and teaching qualifications and professional registration; and
  - information about the specialist practical facilities used by students, including library resources.
- The HEIs internal regulations regarding academic progression and award of degrees.
- Entry to the programme and how cohort entry extremes will be supported.
- Arrangements for student academic and pastoral support.
- Feedback from meetings with students.
- How any previous accreditation recommendations and requirements have been actioned.
- Arrangements for major projects, including representative samples of student work.
- Information about industry involvement in programme design and delivery.

4.2 Visit overview

An accreditation visit:

- may comprise a two-part submission, but in all instances, **the 'Submission for Accreditation' must be completed at least 12 weeks before the**

date of the accreditation visit. Application forms are available on the IMechE website;

- will comprise two days of meetings with key members of staff. In the case of submissions with many programmes to assess, the visit may be extended at the Institution's discretion to accommodate the added time needed to review paperwork;
- will usually involve a visiting accreditation team made up of 2 Academics, 1 Industrialist and 1 Staff Support Member (or consultant). In addition, an observer (trainee accreditor) may also be in attendance. An academic member would typically chair the team;
- will be held during term time so that the visiting accreditation team can meet with staff, students and visit supporting facilities and laboratories; and
- will be followed up with a visit report which will be presented to the ASC.

During the visit, the visiting accreditation team will expect to meet with HEI staff, students enrolled upon the programmes being considered for accreditation, and any industry representatives who have been involved in programme design or delivery. The visiting accreditation team will expect to see laboratories and other teaching spaces and be provided with examples of the full range of marked student work, including any projects along with marking schemes and feedback to students.

The Institution would expect to visit all campuses involved in delivering programmes they are invited to accredit. The HEI must inform the IMechE if they have franchised degree programmes, degrees delivered through collaborative partnerships and/or degrees delivered at different campuses.

If the HEI becomes aware that any significant changes are planned for a programme or its delivery, they should urgently contact the Institution to discuss whether a visit is still required. In such instances where a short postponement is suitable, the HEI may be eligible to apply for a one-year extension of accreditation. **Any HEI choosing to wait until the accreditation visit to provide this information may risk jeopardising onward accreditation should changes to the programmes prove substantial (usually beyond 25%).**

4.3 Accreditation of new programmes

New programmes which do not have final output available for review as part of the accreditation visit are normally awarded accreditation when the first cohort of students graduate, at which time a desk-based review of final year examination papers and project work would be required. This will typically involve reviewing a selection of the following:

- A list of project titles and the marks awarded
- Project Module Descriptor, showing learning outcomes aligned to AHEP
- Project marking criteria
- Student project guidance
- Three individual project reports, including completed marking sheets
- Three group projects (for Integrated Masters) including completed marking sheets, and any individual reports produced by the group members, if appropriate
- Three sets of the most recent final year examination papers and solutions

- External Examiners' reports

4.4 Outcomes of accreditation

The Institution's ASC makes the final decision regarding the outcome of the accreditation process based on the Visit Report and the HEI's response within the Action Plan to any conditions or recommendations imposed by the visiting accreditation team.

The maximum period of accreditation awarded is five years, but accreditation may also be backdated to allow cohorts whose work has been reviewed as part of the programme accreditation exercise to benefit from the decision. A shorter accreditation period may be granted if the degree is new, if there are concerns about its operation, or if there are uncertainties about its future. Applications for accreditation will result in one of the following outcomes:

- **Accredited** for a period not exceeding five years (plus any backdating requested), either with or without conditions and/or recommendations; or
- **Not accredited**.

The HEI must inform the IMechE of any significant changes to an accredited degree during the period of accreditation.

In instances where a degree is not accredited, the Institution will seek to work with the HEI to achieve future accreditation by providing appropriate advice and support where possible.

It should be noted that degrees will be accredited as either partially or fully meeting the underpinning knowledge and understanding at either IEng or CEng level. It is not correct to use qualifying phrases such as 'provisional accreditation', 'partial accreditation', nor 'pending accreditation' in degree related literature such as the course prospectus.

Lists of accredited degrees will be published on the EngC's website for use by, among others, prospective students, and employers. If a degree is not accredited, the HEI making the application may ask for the matter to go to appeal (described in Appendix H).

The UCAS website promotes recognition of accredited engineering programmes as leading to professional registration. The accreditation status will be embedded within the summary of the programme.

If a degree is accredited, the following rules apply:

- The accredited **HND** or **Foundation** degree will meet, in part, the exemplifying academic benchmark requirements for registration as an Incorporated Engineer (IEng) and Students will need to complete an approved format of **further learning** pursuant to the requirements of UK-SPEC.
- The accredited **Bachelors** degree fully meets the exemplifying academic benchmark requirements, for registration as an Incorporated Engineer (IEng).
- The accredited **Bachelors with honours** degree will meet, in part, the exemplifying academic benchmark requirements for registration as a Chartered Engineer (CEng) and Students will need to complete an approved format of **further learning** pursuant to the requirements of UK-SPEC.

- The accredited **MEng** degree fully meets the exemplifying academic benchmark requirements, for registration as a Chartered Engineer (CEng).
- The accredited **MSc** degree will meet, in part, the exemplifying academic benchmark requirements for registration as a Chartered Engineer (CEng). Accredited MSc graduates who also have a Bachelors degree accredited for CEng will be able to show that they have satisfied the educational base for CEng registration.

It should be noted that due to a change in EngC policy concerning dual accreditation a Bachelors with honours degree accredited for partial CEng will no longer automatically meet in full, the exemplifying academic benchmark requirements for registration for IEng. Instead HEIs will be required to apply for both IEng and CEng accreditation of a degree programme separately and at a minimum, submit module mapping matrices against both IEng and CEng learning outcomes.

4.5 Costs of accreditation

The IMechE currently charges a fee of £3,000 for all accreditation visits. This fee contributes towards administration and volunteer costs associated with the visit and helps the Institution to continue delivering a first-rate service for its HEI partners.

Where accreditation is sought outside the UK, the HEI seeking accreditation is additionally required to cover all costs associated with the visit. More information on the criteria and process for international accreditation visits can be found on the Institution's website.

Should an accreditation visit be cancelled or postponed by either the HEI or the IMechE because of an incomplete submission less than 30 calendar days before the agreed commencement date of the visit, the HEI will be required to pay a cancellation fee equal to the cost of the accreditation visit fee.

GENERAL ACCREDITATION GUIDANCE

This section provides more general information concerning the accreditation process.

5.1 Progression

The Institution has no specific accreditation criteria regarding progression. The degree awarding HEI's regulations regarding progression will be considered in the accreditation process to ascertain if the regulations put the relevant programme AHEP learning outcomes at risk for individual students. The application form requires HEI's to provide qualitative data showing student progression rates from entry through each level of study to graduation. This may form the basis of further discussions regarding the academic and pastoral support of students.

5.2 Transfers

Differences in initial student preparation and rate of development mean that transfer between degrees accredited for CEng may be appropriate. Transfers between degrees accredited for IEng to CEng may also be appropriate when students can adapt to the different style and emphasis of the receiving degree. The degree structures set out in this document allow for such transfers. **The visiting accreditation team will look closely at the assessments on which any such transfers are based.**

5.3 Direct Entry

The HEI will need to justify and demonstrate that rigorous and auditable processes are in place to ensure that enough prior learning has been completed and that the relevant AHEP learning outcomes have been achieved for the stage of entry. On this basis, entry directly into the final year of a degree programme accredited for IEng or CEng is acceptable for accreditation.

5.4 Compensation and Condonement

The EngC has issued formal rules regarding compensation and condonement, which all HEIs are required to adhere to by September 2022 to achieve accreditation:

The EngC defines compensation as: *"The practice of allowing marginal failure (i.e., not more than ten percentage points below the nominal pass mark) of one or more modules, often on the basis of good overall academic performance."*

The EngC defines condonement as: *"The practice of allowing students to fail one or more module(s) with a fail mark of more than ten percentage points below the nominal pass mark, yet still qualify for the award of the degree."*

In consideration of the accreditation of undergraduate and postgraduate engineering degree programmes:

1. Evidence that all programme variants meet all AHEP learning outcomes must be provided before accreditation can be granted.
2. No condonement of modules delivering AHEP learning outcomes is allowed.
3. A maximum of 30 credits in a Bachelors or integrated Masters degree programme can be compensated, and a maximum of 20 credits in a Masters degree other than the integrated Masters degree.
4. Major individual and group-based project modules must not be compensated.
5. The minimum module mark for which compensation is allowed is no more than ten percentage points below the nominal module pass mark (or equivalent if a grade-based marking scheme is used).

The critical consideration in the rules above is to ensure that graduates of accredited engineering degree programmes have met all the programme learning outcomes specified in the AHEP. Should a HEI's regulations not conform with the EngC's policy, then a Condition of accreditation will be set by the visiting accreditation team to enable the HEI to amend its regulations. **Failure to conform with this policy will result in accreditation not being awarded.**

Notification must be given to the Institution by the HEI should the compensation and/or condonement requirements change during the accreditation period.

To assist HEIs, the EngC has published questions and answers related to its Compensation and Condonement Policy, along with a Guidance Note on Compensation and Condonement, which should be read in conjunction with the above policy. Refer to Appendix E for more information.

5.5 Study away from the University

IMechE accredited degrees may involve work or study abroad, typically in the form of yearlong placements. The home HEI will be required to have a robust quality assurance process to show how the choice of modules to be taken at the overseas HEI are consistent with the student's degree programme in terms of level, content, and coverage of AHEP learning outcomes. The Institution would not normally expect to visit these campuses.

5.6 Articulation agreements

For incoming students, at least two years' study, including the final year, should usually be spent at the home HEI. The home HEI will be required to have a robust quality assurance process to show how the curriculum, assessment methods and monitoring systems used are sufficient to ensure the overseas studies integrate with the accredited degree and meet equivalent academic standards and AHEP learning outcomes of the programme, including project work.

5.7 Location of Study

Programmes that are not campus-based may also be accredited, for example, work-based degrees or distance learning programmes. The same accreditation standards apply for other types of degree programmes, and assessment must be at

the same standard as any equivalent programme delivered by the HEI. A sound delivery platform must underpin programmes, and there must be evidence that the communications systems in place will enable interaction between students and their tutors and peers. The arrangements for assuring quality and standards should be as rigorous, secure, and open to scrutiny as for any other provided by the HEI.

Considering the location of staff and students, the Institution has updated its process for reviewing academic qualifications for those applying for IMechE membership and professional registration. The Institution now require all universities that deliver accredited degrees to indicate the location of study of each degree awarded on the degree transcript. Applicants for Institution membership and professional registration must submit their degree transcript, along with an authenticated copy of their degree certificate when they apply for professional registration.

Further information can be found in Appendix J and on the IMechE website.

5.8 Joint accreditation by IMechE and other engineering institutions

The Institution is happy to participate in or arrange joint accreditation visits with other PEIs and is a member of the Engineering Accreditation Board (EAB). Where joint accreditation visits are arranged, the HEI will allocate the lead Institution, and all PEIs will use the same set of documentation.

It should be noted that while PEIs will arrange for joint accreditation processing and visits, decisions are made independently by their respective accreditation committees. Thus, **outcomes may vary between each PEI.**

5.9 Confidentiality of information

The Institution treats all information it receives in respect of the accreditation process as confidential. Papers provided by HEI's, reports, or minutes of meetings will only be shown to those involved in the accreditation process (including during appeals) and are not retained by individual accreditation team members after each visit.

5.10 Good practices in the conduct of accreditation

The Institution participates in numerous EngC working groups to promote accredited degrees and good practices amongst the PEIs.

Clear and open communications are essential if the potential benefits of accreditation are to be fully realised and the process is to operate smoothly. To assist this, the Institution has developed a framework of responsibilities for the parties involved in accreditation (Appendix I).

Top

5.11 Start year

The 'start year' for any degree will be deemed the year when the degree began for the normal cohort, starting at year 1 of the degree. That 'start year' applies irrespective of whether some individuals start a year earlier (e.g., on a 'Year Zero' or Foundation Course) or a year later (in recognition of advanced standing).

5.12 Pre-visit advice meetings and University-Based Registration

The Institution offer a free pre-visit meeting to assist with any logistical or policy questions before completing the submission form. The meeting will be a chance to advise which registration category programmes should be submitted and discuss which will be suitable for review.

During an accreditation visit, the visiting accreditation team will review student support and staff commitment to professional registration. The Institution will expect to see a strong staff commitment demonstrated by their professional registration and interaction with PEIs to promote the benefits of a professionally registered engineer. Our Business Development Team can help set up a University-Based Registration scheme. With a minimum of three interested applicants, our Business Development Team can talk through the process for staff to become professionally registered, check CVs for registration, and arrange for Professional Review Interviews.

5.13 Accreditation Certificates

All accredited programmes will receive an accreditation certificate signed by the IMechE Chief Executive, confirming the award of accreditation. These complimentary certificates allow staff to advertise the teaching and delivery of the programmes as accredited and reward the HEI's involvement in the accreditation process.

5.14 Key Information Sets

The EngC requires that the promotion of the accredited status of a university degree is publicised accurately to assist applicants. For this reason, the EngC provides HEFCE with statements for entry into the UNISTATS Key Information Set (KIS). It is the responsibility of the University to ensure that KIS statements are accurate.

Top

FURTHER INFORMATION

The IMechE provides information on its website: www.imeche.org and publishes guidance for those involved in the professional development of its members, initially leading to CEng status and, after that, for career development. Please use the links below to access the latest guidance:

Information for universities seeking accreditation; detailing typical accreditation visit timetables and requirements, Accreditation Submission Forms and copies of Academic Accreditation Guidelines are available from the academic accreditation webpage: www.imeche.org/membership-registration/support-for-universities/how-do-i-get-my-university-accredited

Information on further learning, including FAQ's, sample plan and list of accredited schemes and qualifications, can be found at: www.imeche.org/membership-registration/professional-development-and-cpd/working-towards-professional-registration/further-learning

Academic Requirements for professional registration are available at: www.imeche.org/membership-registration/become-a-member/academic-requirements

Further information regarding IPD, CPD and MPDS can be found at: www.imeche.org/membership-registration/professional-development-and-cpd

Find out how to connect with regional networks and other members, including volunteering opportunities at: www.imeche.org/get-involved

UK-SPEC (UK Standard for Professional Engineering Competence) is the Engineering Council policy statement containing the requirements for the formation of CEng, IEng and EngTech: www.engc.org.uk/UKSPEC

AHEP (Accreditation of Higher Education Programmes) is the Engineering Council handbook setting out the learning outcomes that must be demonstrated for the award of accredited programme status: www.engc.org.uk/standards-guidance/standards/accreditation-of-higher-education-programmes-ahep/

Guidance notes regarding the 'Engineer and Society' learning area can be found on the Engineering Councils website at: www.engc.org.uk/standards-guidance/guidance/

Further advice about the requirements for accreditation is available by contacting the IMechE at:

University Accreditation
Membership, Accreditation & Professional Development
Institution of Mechanical Engineers
1 Birdcage Walk
London
SW1H 9JJ
Tel: +44 (0) 20 7304 6866
Email: uniaccreditation@imeche.org

Top

6.1 Abbreviations

AAQA	Approval and Accreditation of Qualifications and Apprenticeships
CENG	Chartered Engineer
CPD	Continued Professional Development
EAB	Engineering Accreditation Board
ECTS	European Credit Transfer System
ENGTECH	Engineering Technician
HEI	Higher Education Institution
IAB	Industrial Advisory Board
IENG	Incorporated Engineer
IPD	Initial Professional Development
INSTITUTION	refers only to the IMechE
MPDS	Monitored Professional Development Scheme
PEI	Professional Engineering Institution
QAA	Quality Assurance Agency
UK-SPEC	The UK Standard for Professional Engineering Competence and Commitment.

APPENDIX A

Output Standards and Levels of Registration

The following defining characteristics are common to those presented in AHEP and AAQA for IEng and CEng recognition.

Foundation degrees and equivalent qualifications accredited as partially meeting IEng registration (ISCED/EQF Level 5) will have an emphasis on the applications of current and developing technology. An individual who has completed a Foundation degree or equivalent qualification must achieve the prescribed learning outcomes and will possess a coherent body of knowledge including mathematics, natural science and engineering principles, and a proven ability to apply that knowledge to analyse and solve broadly defined problems using established principles and techniques. With an appreciation of professional engineering practice and ethics, graduates will be able to apply their knowledge and skills to new situations.

Bachelors degrees and Bachelors (Honours) degrees accredited for the purpose of IEng registration (ISCED/EQF Level 6) will have an emphasis on applications of current and developing technology. Graduates from accredited Bachelors or Bachelors (Honours) degree programmes must achieve the prescribed learning outcomes (below) and will possess a coherent body of knowledge including mathematics, natural science and engineering principles, and a proven ability to apply that knowledge to analyse and solve broadly-defined problems using established principles and techniques. Some of the knowledge will be informed by current developments in the subject of study. With an appreciation of professional engineering practice and ethics, graduates will be commercially aware and able to apply their knowledge and skills to design and deliver products, systems, and processes to meet defined needs using current technology.

Graduates are likely to have acquired some of this ability through involvement in individual and/or group design projects. Programmes will develop a knowledge and understanding of current engineering practice and processes, with less focus on analysis than in programmes accredited for CEng. Design will be a significant component, especially in integrating a range of knowledge and understanding to design products, systems, and processes to meet defined needs using current technology.

Bachelors (Honours) degrees accredited as partially meeting the educational requirement for CEng (ISCED/EQF Level 6) have an emphasis on developing solutions to engineering problems using new or existing technologies, through innovation, creativity, and change. Graduates from a Bachelors (Honours) degree must achieve the prescribed learning outcomes (below) and will possess a coherent body of knowledge including mathematics, natural science and engineering principles, and a proven ability to apply that knowledge to analyse and solve complex problems. Some of the knowledge will be at the forefront of the subject of study. Graduates will be able to select and apply quantitative and computational analysis techniques, recognising the limitations of the methods employed. With an appreciation of professional engineering practice and ethics, graduates will be commercially aware and able to apply their knowledge and skills to design and deliver new products or services to meet defined needs using new or existing technologies. They are likely to have acquired some of this ability through involvement in individual and/or group design projects.

Masters degrees (other than the Integrated Masters) accredited as further learning to Masters Level (ISCED/EQF Level 7) for the purposes of registration with the Engineering Council vary in nature. Some offer the chance to study in greater depth particular aspects or applications of a broader discipline in which the graduate holds an Honours degree at Bachelors level. Others bring together different engineering disciplines or subdisciplines in the study of a particular topic, or engineering application, while a further category may be truly multidisciplinary.

Integrated Masters (MEng) degrees accredited for CEng (ISCED/EQF Level 7) registration will have an emphasis on developing solutions to problems using new or existing technologies, through innovation, creativity, and change. The Integrated Masters will go beyond the outcomes of accredited Bachelors (Honours) degrees to provide a greater range and depth of specialist knowledge, within an authentic environment, as well as a broader and more general academic base.

These programmes should provide a foundation for leadership and innovative engineering practice. Graduates from an Integrated Masters degree must achieve the prescribed learning outcomes (below) and will possess a broad and coherent body of knowledge including mathematics, natural science and engineering principles, and a proven ability to apply that knowledge to analyse and solve complex problems. Much of the knowledge will be at the forefront of the subject of study. Graduates will be able to select and apply quantitative and computational analysis techniques in the absence of complete data, discussing the limitations of the methods employed. With an appreciation of professional engineering practice and ethics, graduates will be commercially aware and able to apply their knowledge and skills to design, deliver and evaluate innovative new products or services to meet defined needs using new or existing technologies.

They will have acquired much of this ability through involvement in individual and group design projects. Ideally some of these projects would have industrial involvement or be practice-based.

Notes:

- Full-time Bachelors degrees accredited for CEng and Bachelors degrees accredited for IEng are normally three-years in duration and are made up of 360 credits. Full-time integrated master's degrees accredited for CEng, i.e., accredited MEng degrees, are normally four-years in duration and 480 credits. It is recognised that degrees in Scotland are normally one year longer than the equivalent degree in England, Wales, and Northern Ireland. In addition, the Institution encourages the use of part-time, sandwich and distance learning degrees of an extended duration.

- MScs are normally 180 credits, and it is expected that at least 70% of the modules must be above Bachelors level.

INTERPRETATION

In the tables below the following terms are used with the meanings stated:

Well-defined problems involve several factors, but with few of these exerting conflicting constraints, and can be solved through the standardised application of engineering science	**Broadly defined problems** involve a variety of factors which may impose conflicting constraints, but can be solved by the application of engineering science and well-proven analysis techniques.	**Complex problems** have no obvious solution and may involve wide-ranging or conflicting technical issues and/or user needs that can be addressed through creativity and the resourceful application of engineering science.
Knowledge is information that can be recalled.	**Skills** are acquired and learned attributes that can be applied almost automatically.	**Awareness** is general familiarity, albeit bounded by the needs of the specific discipline.

Top

APPENDIX B

Examples of Degree the IMechE will consider for accreditation

Mechanical engineering is the broadest engineering discipline and while there are many engineers who work in a purely mechanical environment there is also a broad spectrum of engineers who work in multi-disciplinary environments where mechanical engineering is an integral, but not necessarily primary, part of their work. This also holds true for those who may have progressed to a role which is predominantly managerial or outside direct, hands-on engineering.

The following list is not exhaustive and there may be many others that have not been included here. It includes the range of programmes already accredited by the Institution as well as many that have not previously been accredited by the IMechE:

- Aerospace/Aeronautical
- Automation and Control
- Automotive Engineering
- Biomedical and Bioengineering
- Building Services Engineering
- Design Engineering, Product Design and Computer Aided Design
- Energy Engineering
- Environmental/Sustainable Engineering
- Food Engineering
- General Engineering
- Integrated Engineering
- Manufacturing and Manufacturing Systems Engineering
- Materials Engineering
- Mathematical Engineering
- Mechanical Engineering
- Mechatronics
- Medical Engineering
- Micro Electro-Mechanical Systems Engineering (MEMS)
- Nanotechnology
- Nuclear Process Engineering
- Ocean and Offshore Engineering
- Process Engineering
- Railway Engineering

- Robotics and Cybernetics
- Sports Engineering
- Structural Engineering
- Transportation Engineering

Many IMechE accredited degrees, or those suitable for accreditation, also have management, business, industrial experience, or language in their titles.

Any reference to accreditation within a programme title may be misleading and is therefore not permitted by the EngC. This includes:

- Reference to accreditation (e.g., 'with accreditation' or 'accredited'), unless those words are clearly being used in a different context.
- Reference to professional titles (e.g., 'CEng' or 'IEng').
- Reference to a specific PEI (e.g., IMechE), unless the PEI awards or delivers the programme.
- Reference to the Engineering Council (e.g., EngC)

APPENDIX C

Degree Learning Outcomes

Graduates from accredited programmes must achieve the following five broad areas of learning and the corresponding learning outcomes.

- These learning outcomes are **threshold standards** and should be interpreted in the context of a particular disciplinary or multidisciplinary engineering practice, **and the stipulated threshold ISCED/EQF level of study**.
- **An individual who has completed an approved or accredited programme must meet all the identified learning outcomes**, however student learning hours are likely to vary between the five key areas of learning.
- It is recognised that an accredited programme may develop learning outcome(s) beyond the threshold level, however such additional learning is not prescribed or required for academic accreditation.
- The Engineering Council defines security as 'the state of relative freedom from threat or harm caused by deliberate, unwanted, hostile, or malicious acts. It operates on a number of levels ranging from national security issues to countering crime.' See the guidance note at: www.engc.org.uk/security

The tables below show the learning outcomes that need to be achieved in each of the five areas for a particular degree to be accredited for a certain level of professional registration. For more information on AHEP learning outcomes, please refer to the EngC's defining characteristics and learning outcomes for AHEP fourth edition and questions and answers document relating to AHEP fourth edition learning outcomes.

Incorporated Engineer (IEng)			Chartered Engineer (CEng)			
Foundation degrees, Higher National Diplomas and equivalent qualifications and apprenticeships accredited or approved as fully meeting the academic requirement for EngTech registration and partially meeting the academic requirement for IEng registration	Degrees and Equivalent qualifications and apprenticeships accredited or approved as meeting the requirement for further learning for IEng registration	Bachelors degrees and Bachelors (Honours) and Equivalent qualifications and apprenticeships accredited or approved as fully meeting the academic requirement for IEng registration	Bachelors (Honours) Top-up Degrees and equivalent qualifications and apprenticeships accredited or approved as partially meeting the academic requirement for CEng registration (Partial CEng)	Bachelors (Honours) degrees and equivalent qualifications and apprenticeships accredited or approved as fully meeting the academic requirement for IEng registration and partially meeting the academic requirement for CEng registration	Masters degrees other than the Integrated Masters and Doctoral programmes and equivalent Qualifications and apprenticeships accredited or approved as meeting the requirement for further learning for CEng registration	Integrated Masters degrees and equivalent qualifications and apprenticeships accredited or approved as fully meeting the academic requirement for CEng registration

SCIENCE AND MATHEMATICS

The study of engineering requires a substantial grounding in engineering principles, science and mathematics commensurate with the level of study.

On successful completion of an accredited or approved programme, an individual will be able to:

	Foundation degrees	**BEng Top-up degrees**	**BEng degrees /BEng (Hons) degrees**	**BEng (Hons) Top-up degrees**	**BEng (Hons) degrees**	**MSc / EngD degrees**	**MEng degrees**
Science, mathematics and engineering principles	**F1.** Apply knowledge of mathematics, statistics, natural science and engineering principles to broadly-defined problems (ISCED L5/EQF L5)	**B1.** Apply knowledge of mathematics, statistics, natural science and engineering principles to broadly-defined problems. Some of the knowledge will be informed by current developments in the subject of study (ISCED L6/EQF L6)	**B1.** Apply knowledge of mathematics, statistics, natural science and engineering principles to broadly-defined problems. Some of the knowledge will be informed by current developments in the subject of study (ISCED L6/EQF L6)	**C1.** Apply knowledge of mathematics, statistics, natural science and engineering principles to the solution of complex problems. Some of the knowledge will be at the forefront of the particular subject of study (ISCED L6/EQF L6)	**C1.** Apply knowledge of mathematics, statistics, natural science and engineering principles to the solution of complex problems. Some of the knowledge will be at the forefront of the particular subject of study (ISCED L6/EQF L6)	**M1.** Apply a comprehensive knowledge of mathematics, statistics, natural science and engineering principles to the solution of complex problems. Much of the knowledge will be at the forefront of the particular subject of study and informed by a critical awareness of new developments and the wider	**M1.** Apply a comprehensive knowledge of mathematics, statistics, natural science and engineering principles to the solution of complex problems. Much of the knowledge will be at the forefront of the particular subject of study and informed by a critical awareness of new developments and the wider

						context of engineering (ISCED L7/EQF L7)	context of engineering (ISCED L7/EQF L7)

ENGINEERING ANALYSIS

Engineering analysis involves the application of engineering concepts and tools to analyse, model and solve problems. At higher levels of study engineers will work with information that may be uncertain or incomplete. On successful completion of an accredited or approved programme, an individual will be able to:

	Foundation degrees	**BEng Top-up degrees**	**BEng degrees /BEng (Hons) degrees**	**BEng (Hons) Top-up degrees**	**BEng (Hons) degrees**	**MSc / EngD degrees**	**MEng degrees**
Problem analysis	**F2.** Analyse broadly-defined problems reaching substantiated conclusions (ISCED L5/EQF L4/5)	**B2.** Analyse broadly-defined problems reaching substantiated conclusions using first principles of mathematics, statistics, natural science and engineering principles (ISCED L6/EQF L6)	**B2.** Analyse broadly-defined problems reaching substantiated conclusions using first principles of mathematics, statistics, natural science and engineering principles (ISCED L6/EQF L6)	**C2.** Analyse complex problems to reach substantiated conclusions using first principles of mathematics, statistics, natural science and engineering principles (ISCED L6/EQF L6)	**C2.** Analyse complex problems to reach substantiated conclusions using first principles of mathematics, statistics, natural science and engineering principles (ISCED L6/EQF L6)	**M2.** Formulate and analyse complex problems to reach substantiated conclusions. This will involve evaluating available data using first principles of mathematics, statistics, natural science and engineering principles, and using engineering judgment to	**M2.** Formulate and analyse complex problems to reach substantiated conclusions. This will involve evaluating available data using first principles of mathematics, statistics, natural science and engineering principles, and using engineering judgment to

						work with information that may be uncertain or incomplete, discussing the limitations of the techniques employed (ISCED L7/EQF L7)	work with information that may be uncertain or incomplete, discussing the limitations of the techniques employed (ISCED L7/EQF L7)
Analytical tools and techniques	**F3.** Use appropriate computational and analytical techniques to model broadly-defined problems (ISCED L5/EQF L5)	**B3.** Select and apply appropriate computational and analytical techniques to model broadly-defined problems, recognising the limitations of the techniques employed (ISCED L6/EQF L6)	**B3.** Select and apply appropriate computational and analytical techniques to model broadly-defined problems, recognising the limitations of the techniques employed (ISCED L6/EQF L6)	**C3.** Select and apply appropriate computational and analytical techniques to model complex problems, recognising the limitations of the techniques employed (ISCED L6/EQF L6)	**C3.** Select and apply appropriate computational and analytical techniques to model complex problems, recognising the limitations of the techniques employed (ISCED L6/EQF L6)	**M3.** Select and apply appropriate computational and analytical techniques to model complex problems, discussing the limitations of the techniques employed (ISCED L7/EQF L7)	**M3.** Select and apply appropriate computational and analytical techniques to model complex problems, discussing the limitations of the techniques employed (ISCED L7/EQF L7)
Technical literature	**F4.** Select and use technical literature and other sources of information to address broadly-defined problems	**B4.** Select and evaluate technical literature and other sources of information to address	**B4.** Select and evaluate technical literature and other sources of information to address	**C4.** Select and evaluate technical literature and other sources of information to address	**C4.** Select and evaluate technical literature and other sources of information to address	**M4.** Select and critically evaluate technical literature and other sources of information to	**M4.** Select and critically evaluate technical literature and other sources of information to

(ISCED L5/EQF L5)	broadly-defined problems (ISCED L5/EQF L5)	broadly-defined problems (ISCED L5/EQF L5)	complex problems (ISCED L6/EQF L6)	complex problems (ISCED L6/EQF L6)	solve complex problems (ISCED L7/EQF L7)	solve complex problems (ISCED L7/EQF L7)

DESIGN AND INNOVATION

Design is the creation and development of an economically viable product, process or system to meet a defined need. It involves significant technical and intellectual challenges commensurate with the level of study. On successful completion of an accredited or approved programme, an individual will be able to:

	Foundation degrees	BEng Top-up degrees	BEng degrees /BEng (Hons) degrees	BEng (Hons) Top-up degrees	BEng (Hons) degrees	MSc / EngD degrees	MEng degrees
Design	**F5.** Design solutions for broadly-defined problems that meet a combination of user, business and customer needs as appropriate. This will involve consideration of applicable health & safety, diversity, inclusion, cultural, societal and environmental matters, codes of practice and industry standards (ISCED L5/EQF L5)	**B5.** Design solutions for broadly-defined problems that meet a combination of societal, user, business and customer needs as appropriate. This will involve consideration of applicable health & safety, diversity, inclusion, cultural, societal, environmental and commercial matters, codes of practice and industry standards	**B5.** Design solutions for broadly-defined problems that meet a combination of societal, user, business and customer needs as appropriate. This will involve consideration of applicable health & safety, diversity, inclusion, cultural, societal, environmental and commercial matters, codes of practice and industry standards	**C5.** Design solutions for complex problems that meet a combination of societal, user, business and customer needs as appropriate. This will involve consideration of applicable health & safety, diversity, inclusion, cultural, societal, environmental and commercial matters, codes of practice and industry standards	**C5.** Design solutions for complex problems that meet a combination of societal, user, business and customer needs as appropriate. This will involve consideration of applicable health & safety, diversity, inclusion, cultural, societal, environmental and commercial matters, codes of practice and industry standards	**M5.** Design solutions for complex problems that evidence some originality and meet a combination of societal, user, business and customer needs as appropriate. This will involve consideration of applicable health & safety, diversity, inclusion, cultural, societal, environmental and commercial matters, codes of practice and	**M5.** Design solutions for complex problems that evidence some originality and meet a combination of societal, user, business and customer needs as appropriate. This will involve consideration of applicable health & safety, diversity, inclusion, cultural, societal, environmental and commercial matters, codes of practice and

		(ISCED L5/EQF L5)	(ISCED L5/EQF L5)	(ISCED L6/EQF L6)	(ISCED L6/EQF L6)	industry standards (ISCED L7/EQF L7)	industry standards (ISCED L7/EQF L7)
Integrated/ systems approach	**F6.** Apply a systematic approach to the solution of broadly-defined problems (ISCED L5/EQF L5)	**B6.** Apply an integrated or systems approach to the solution of broadly-defined problems (ISCED L6/EQF L6)	**B6.** Apply an integrated or systems approach to the solution of broadly-defined problems (ISCED L6/EQF L6)	**C6.** Apply an integrated or systems approach to the solution of complex problems (ISCED L6/EQF L6)	**C6.** Apply an integrated or systems approach to the solution of complex problems (ISCED L6/EQF L6)	***Learning outcome achieved at previous level of study***	**M6.** Apply an integrated or systems approach to the solution of complex problems (ISCED L6/EQF L6)

THE ENGINEER AND SOCIETY

Engineering activity can have a significant societal impact and Engineers must operate in a responsible and ethical manner, recognise the importance of diversity, and help ensure that the benefits of innovation and progress are shared equitably and do not compromise the natural environment or deplete natural resources to the detriment of future generations.

On successful completion of an accredited or approved programme, an individual will be able to:

	Foundation degrees	**BEng Top-up degrees**	**BEng degrees /BEng (Hons) degrees**	**BEng (Hons) Top-up degrees**	**BEng (Hons) degrees**	**MSc / EngD degrees**	**MEng degrees**
Sustainability	**F7.** Evaluate the environmental and societal impact of solutions to broadly-defined problems (ISCED L5/EQF L5)	***Learning outcome achieved at previous level of study***	**B7.** Evaluate the environmental and societal impact of solutions to broadly-defined problems (ISCED L5/EQF L5)	**C7.** Evaluate the environmental and societal impact of solutions to complex problems and minimise adverse impacts (ISCED L6/EQF L6)	**C7.** Evaluate the environmental and societal impact of solutions to complex problems and minimise adverse impacts (ISCED L6/EQF L6)	**M7.** Evaluate the environmental and societal impact of solutions to complex problems (to include the entire life-cycle of a product or process) and minimise adverse impacts (ISCED L7/EQF L7)	**M7.** Evaluate the environmental and societal impact of solutions to complex problems (to include the entire life-cycle of a product or process) and minimise adverse impacts (ISCED L7/EQF L7)
Ethics	**F8.** Identify ethical concerns and make reasoned ethical choices informed by professional	**B8.** Identify and analyse ethical concerns and make reasoned ethical choices informed by	**B8.** Identify and analyse ethical concerns and make reasoned ethical choices informed by	**C8.** Identify and analyse ethical concerns and make reasoned ethical choices informed by professional	**C8.** Identify and analyse ethical concerns and make reasoned ethical choices informed by professional	***Learning outcome achieved at previous level of study***	**M8.** Identify and analyse ethical concerns and make reasoned ethical choices informed by

	codes of conduct (ISCED L5/EQF L5)	professional codes of conduct (ISCED L6/EQF L6)	professional codes of conduct (ISCED L6/EQF L6)	codes of conduct (ISCED L6/EQF L6)	codes of conduct (ISCED L6/EQF L6)		professional codes of conduct (ISCED L6/EQF L6)
Risk	**F9.** Identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity (ISCED L5/EQF L5)	**B9.** Use a risk management process to identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity (ISCED L6/EQF L6)	**B9.** Use a risk management process to identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity (ISCED L6/EQF L6)	**C9.** Use a risk management process to identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity (ISCED L6/EQF L6)	**C9.** Use a risk management process to identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity (ISCED L6/EQF L6)	***Learning outcome achieved at previous level of study***	**M9.** Use a risk management process to identify, evaluate and mitigate risks (the effects of uncertainty) associated with a particular project or activity (ISCED L6/EQF L6)
Security	**F10.** Adopt a holistic and proportionate approach to the mitigation of security risks (ISCED L3/EQF L4)	***Learning outcome achieved at previous level of study***	**B10.** Adopt a holistic and proportionate approach to the mitigation of security risks (ISCED L3/EQF L4)	***Learning outcome achieved at previous level of study***	**C10.** Adopt a holistic and proportionate approach to the mitigation of security risks (ISCED L3/EQF L4)	***Learning outcome achieved at previous level of study***	**M10.** Adopt a holistic and proportionate approach to the mitigation of security risks (ISCED L3/EQF L4)
Equality, diversity and inclusion	**F11.** Recognise the responsibilities, benefits and importance of supporting equality,	***Learning outcome achieved at previous level of study***	**B11.** Recognise the responsibilities, benefits and importance of supporting equality,	**C11.** Adopt an inclusive approach to engineering practice and recognise the responsibilities,	**C11.** Adopt an inclusive approach to engineering practice and recognise the responsibilities,	***Learning outcome achieved at previous level of study***	**M11.** Adopt an inclusive approach to engineering practice and recognise the responsibilities,

	diversity and inclusion (ISCED L5/EQF L5)		diversity and inclusion (ISCED L5/EQF L5)	benefits and importance of supporting equality, diversity and inclusion (ISCED L6/EQF L6)	benefits and importance of supporting equality, diversity and inclusion (ISCED L6/EQF L6)		benefits and importance of supporting equality, diversity and inclusion (ISCED L6/EQF L6)

ENGINEERING PRACTICE

The practical application of engineering concepts and tools, engineering and project management, teamwork and communication skills. Engineers also require a sound grasp of the commercial context of their work, specifically the ways an organisation creates, delivers and captures value in economic, social, cultural or other contexts.

On successful completion of an accredited or approved programme, an individual will be able to:

	Foundation degrees	**BEng Top-up degrees**	**BEng degrees /BEng (Hons) degrees**	**BEng (Hons) Top-up degrees**	**BEng (Hons) degrees**	**MSc / EngD degrees**	**MEng degrees**
Practical and workshop skills	**F12.** Use practical laboratory and workshop skills to investigate broadly-defined problems (ISCED L5/EQF L5)	***Learning outcome achieved at previous level of study***	**B12.** Use practical laboratory and workshop skills to investigate broadly-defined problems (ISCED L5/EQF L5)	**C12.** Use practical laboratory and workshop skills to investigate complex problems (ISCED L6/EQF L6)	**C12.** Use practical laboratory and workshop skills to investigate complex problems (ISCED L6/EQF L6)	***Learning outcome achieved at previous level of study***	**M12.** Use practical laboratory and workshop skills to investigate complex problems (ISCED L6/EQF L6)
Materials, equipment,	**F13.** Select and apply appropriate	***Learning outcome achieved at***	**B13.** Select and apply appropriate	**C13.** Select and apply appropriate	**C13.** Select and apply appropriate	***Learning outcome achieved at***	**M13.** Select and apply appropriate

technologies and processes	materials, equipment, engineering technologies and processes (ISCED L5/EQF L5)	***previous level of study***	materials, equipment, engineering technologies and processes (ISCED L5/EQF L5)	materials, equipment, engineering technologies and processes, recognising their limitations (ISCED L6/EQF L6)	materials, equipment, engineering technologies and processes, recognising their limitations (ISCED L6/EQF L6)	***previous level of study***	materials, equipment, engineering technologies and processes, recognising their limitations (ISCED L6/EQF L6)
Quality management	**F14.** Recognise the need for quality management systems and continuous improvement in the context of broadly-defined problems (ISCED L5/EQF L5)	***Learning outcome achieved at previous level of study***	**B14.** Recognise the need for quality management systems and continuous improvement in the context of broadly-defined problems (ISCED L5/EQF L5)	**C14.** Discuss the role of quality management systems and continuous improvement in the context of complex problems (ISCED L6/EQF L6)	**C14.** Discuss the role of quality management systems and continuous improvement in the context of complex problems (ISCED L6/EQF L6)	***Learning outcome achieved at previous level of study***	**M14.** Discuss the role of quality management systems and continuous improvement in the context of complex problems (ISCED L6/EQF L6)
Engineering and project management	**F15.** Apply knowledge of engineering management principles, commercial context and project management (ISCED L5/EQF L5)	**B15.** Apply knowledge of engineering management principles, commercial context, project management and relevant legal matters (ISCED L6/EQF L6)	**B15.** Apply knowledge of engineering management principles, commercial context, project management and relevant legal matters (ISCED L6/EQF L6)	**C15.** Apply knowledge of engineering management principles, commercial context, project and change management, and relevant legal matters including	**C15.** Apply knowledge of engineering management principles, commercial context, project and change management, and relevant legal matters including	***Learning outcome achieved at previous level of study***	**M15.** Apply knowledge of engineering management principles, commercial context, project and change management, and relevant legal matters including

				intellectual property rights (ISCED L6/EQF L6)	intellectual property rights (ISCED L6/EQF L6)		intellectual property rights (ISCED L6/EQF L6)
Teamwork	**F16.** Function effectively as an individual, and as a member or leader of a team (ISCED L5/EQF L5)	***Learning outcome achieved at previous level of study***	**B16.** Function effectively as an individual, and as a member or leader of a team (ISCED L5/EQF L5)	***Learning outcome achieved at previous level of study***	**C16.** Function effectively as an individual, and as a member or leader of a team (ISCED L5/EQF L5)	**M16.** Function effectively as an individual, and as a member or leader of a team. Evaluate effectiveness of own and team performance (ISCED L7/EQF L7)	**M16.** Function effectively as an individual, and as a member or leader of a team. Evaluate effectiveness of own and team performance (ISCED L7/EQF L7)
Communication	**F17.** Communicate effectively with technical and non-technical audiences (ISCED L3/EQF L4)	***Learning outcome achieved at previous level of study***	**B17.** Communicate effectively with technical and non-technical audiences (ISCED L3/EQF L4)	**C17.** Communicate effectively on complex engineering matters with technical and non-technical audiences (ISCED L6/EQF L6)	**C17.** Communicate effectively on complex engineering matters with technical and non-technical audiences (ISCED L6/EQF L6)	**M17.** Communicate effectively on complex engineering matters with technical and non-technical audiences, evaluating the effectiveness of the methods used (ISCED L7/EQF L7)	**M17.** Communicate effectively on complex engineering matters with technical and non-technical audiences, evaluating the effectiveness of the methods used (ISCED L7/EQF L7)
Lifelong learning	**F18.** Plan and record self-learning and development as	***Learning outcome achieved at***	**B18.** Plan and record self-learning and development as	***Learning outcome achieved at***	**C18.** Plan and record self-learning and development as	***Learning outcome achieved at***	**M18.** Plan and record self-learning and development as

the foundation for lifelong learning/CPD (ISCED L3/EQF L4)	***previous level of study***	the foundation for lifelong learning/CPD (ISCED L3/EQF L4)	***previous level of study***	the foundation for lifelong learning/CPD (ISCED L3/EQF L4)	***previous level of study***	the foundation for lifelong learning/CPD (ISCED L3/EQF L4)

APPENDIX D

Characteristics of Engineering Degrees

Learning outcomes are inextricably linked to the year of study and should be interpreted in this context. This implies that the taxonomy associated with the learning outcome is critical, and that suitable use of educational taxonomy in the writing of module level learning outcomes will be beneficial in providing demonstrable alignment to the standard. There is a progressive emphasis on critical thinking and the solution of a problem, more than simple discrimination. The expectation is that the fully developed learning outcomes mapping will reflect careful calibration of the module learning outcomes at the appropriate level and show thematic progression towards the eventual demonstration of the learning outcome at the appropriate threshold level.

The table below provides an example of the changing taxonomy.

	Level 5 Analyse	**Level 6 (IEng) Evaluate**	**Level 6 (CEng) Evaluate**	**Level 7 Create**
Area of Learning	**Broadly defined Problems**		**Complex Problems**	
Science and mathematics	Application of knowledge	Application of knowledge with some informed by current developments	Application of with some knowledge at the forefront of new developments.	Application of comprehensive knowledge with much knowledge at the forefront of new developments. Demonstrate critical awareness.
Engineering analysis	Analyse problems using appropriate tools and literature to reach substantiated conclusions.	Select and evaluate appropriate tools and literature to analyse problems to reach substantiated conclusions using first principles. Identify limitations.	Select and evaluate appropriate tools and literature to analyse problems to reach substantiated conclusions using first principles. Identify limitations.	Select, apply and critically evaluate appropriate tools and literature. Use engineering judgement to reach substantiated conclusions from data that may be incomplete or uncertain.

Top

Design and innovation	Design solutions involving well-defined needs using a systematic approach.	Design solutions involving a combination of needs using an integrated or systems approach.	Design solutions involving a wide combination of needs using an integrated or systems approach.	Design original solutions involving a wide combination of needs using an integrated or systems approach.
The Engineer and society	Identify, evaluate, and use a holistic approach mitigate concerns.	Identify, evaluate, and use a holistic and proportionate approach mitigate concerns.	Identify, evaluate, and use a holistic and proportionate approach mitigate concerns	Identify, analyse, and use a holistic and reasoned approach mitigate concerns, considering the broader context.
Engineering practice	Use practical, laboratory and workshop skills. Select and apply appropriate materials, equipment, technologies, and processes. Apply knowledge of business and commercial context of engineering. Communicate and function effectively as part of a team.	Use practical, laboratory and workshop skills. Select and apply appropriate materials, equipment, technologies, and processes. Apply knowledge of business and commercial context of engineering. Communicate and function effectively as part of a team	Use practical, laboratory and workshop skills. Select and apply appropriate materials, equipment, technologies, and processes, recognising their limitations. Apply knowledge of business and commercial context of engineering. Communicate and function effectively as a member and leader of a team.	Use practical, laboratory and workshop skills. Select and apply appropriate materials, equipment, technologies, and processes, recognising their limitations. Apply knowledge of business and commercial context of engineering. Communicate and function effectively as a member and leader of a team.

A particular example is offered. This relates to learning outcome 4 in the AHEP standard and is associated with the use of technical literature. It should be noted that whilst the subject is the same, the level of meeting the threshold standard develops with the level of study. At the lowest level awareness of technical literature and an ability to access such to further a problem is tested; at the highest level an ability to critically select the most suitable sources and apply these to the solution of complex problems is the aim.

Top

	Level 4 Solve	Level 5 Analyse	Level 6 (IEng) Evaluate	Level 6 (CEng) Evaluate	Level 7 Create
AHEP LO – Engineering Analysis 4 – Technical Literature	Compare / compile / manage technical literature to proceed to solve an Engineering problem.	Analyse and make decisions using technical literature to proceed to solve an Engineering problem.	Select and evaluate technical literature and other sources of information to address broadly defined problems.”	Select and evaluate technical literature and other sources of information to address complex problems.”	Select and critically evaluate technical literature and other sources of information to solve complex problems.”

APPENDIX E

Compensation and Condonement Guidance

This Guidance Note should be read in conjunction with the Engineering Council policy on Compensation and Condonement. It supplements the information provided in the policy and illustrates how the limits on compensation apply in practice. This guidance does not replace or materially alter the Compensation and Condonement policy.

Extracts from the policy are shown in bold.

The Engineering Council defines compensation as: "The practice of allowing marginal failure (i.e., not more than ten percentage points below the nominal pass mark) of one or more modules, often on the basis of good overall academic performance."

The Engineering Council defines condonement as: "The practice of allowing students to fail one or more module(s) with a fail mark of more than ten percentage points below the nominal pass mark, yet still qualify for the award of the degree."

The policy sets out the following requirements for the use of condonement and compensation. These limits are absolute, and no discretion is permitted on the part of Professional Engineering Institutions or accreditation visit panels.

1. **Evidence that all AHEP learning outcomes are met by all variants of each programme must be provided before accreditation can be granted.**

The mapping of modules against the prescribed learning outcomes for the level of accreditation sought must demonstrate that a graduate from an accredited degree will have met all the required learning outcomes irrespective of any optional modules selected. The AHEP learning outcomes must be summatively assessed.

2. **No condonement of modules delivering AHEP learning outcomes is allowed.**

No condonement is allowed for core or optional modules that contribute to the delivery of AHEP learning outcomes. Hence condonement is allowed only for modules not directly related to the study of engineering, for example a modern foreign language.

3. **A maximum of 30 credits in a Bachelors or integrated Masters degree programme can be compensated, and a maximum of 20 credits in a Masters degree other than the integrated Masters degree.**

The limits placed on the use of compensation are set out in the policy and apply to the programme of study presented for accreditation. The credit limits on compensation apply to all academic credit conferred by the degree provider as part of the programme of study, including any credit conferred through a partnership arrangement, dual award etc. Any compensation of academic credit awarded by a different provider but used to gain entry to the programme with advanced standing, for example direct entry to the second year, does not count towards the limit.

For direct entry students, entering a later year of a Bachelors or integrated Masters degree programme, 30 credits of compensation is permitted. For MSc programmes

carrying greater than 180 credits, 20 credits of compensation is permitted, regardless of the number of credits carried by the overall programme.

Note

- Whilst the rules do not permit compensation of large modules, within larger modules there may be scope for a student to perform poorly in a learning outcome but still pass the module, amounting to 'hidden compensation.' HEIs must ensure, and accrediting PEIs shall verify, that large modules are not used to enable hidden compensation.
- For degrees with international study contributing towards the accredited award, the HEI needs to cross reference to UK credit frameworks to calculate the level of permissible compensation.

Compensation limits for degrees in Scotland

<table>
<tr><th>Level</th><th>Bachelors (Ordinary)</th><th>Bachelors (Honours)</th><th>Integrated Masters</th><th>Masters degree other than the Integrated Masters</th></tr>
<tr><td>7</td><td colspan="3"></td><td rowspan="4"></td></tr>
<tr><td>8</td><td rowspan="2">Maximum 30 credits of compensation allowed for the programme of study</td><td rowspan="3">Maximum 30 credits of compensation allowed for the programme of study</td><td rowspan="4">Maximum 30 credits of compensation allowed for the programme of study</td></tr>
<tr><td>9</td></tr>
<tr><td>10</td><td rowspan="2"></td></tr>
<tr><td>11</td><td>Maximum 20 credits of compensation allowed for the programme of study</td></tr>
</table>

Note

- Any compensation at Level 7 in Scotland is not included in the overall credit limit on compensation. This will help ensure the compensation limits placed on degree programmes in Scotland are proportionate to those in the rest of the UK. Also, students joining the second year of a degree programme with Advanced Highers will be treated no more or less favourably than students joining the first year of the programme having completed Highers.
- Any compensation received on an Access or Foundation year/programme is not included in the overall credit limit on compensation.

Compensation limits for degrees in England, Wales and Northern Ireland

<table>
<tr><th>Level</th><th>Foundation Degree/Top up Degree</th><th>Bachelors and Bachelors (Honours)</th><th>Integrated Masters</th><th>Masters degree other than the Integrated Masters</th></tr>
<tr><td>4</td><td rowspan="2">Maximum 30 credits of compensation allowed for the programme of study</td><td rowspan="3">Maximum 30 credits of compensation allowed for the programme of study</td><td rowspan="3">Maximum 30 credits of compensation allowed for the programme of study</td><td rowspan="3"></td></tr>
<tr><td>5</td></tr>
<tr><td>6</td><td>Maximum 10 credits of compensation allowed for the programme of study</td></tr>
<tr><td>7</td><td></td><td></td><td></td><td>Maximum 20 credits of compensation allowed for the programme of study</td></tr>
</table>

Note

- Any compensation received on an Access or Foundation year/programme is not included in the overall credit limit on compensation.

4. Major individual and group-based project modules must not be compensated.

Major projects are an important part of an engineering degree programme and typically make a significant contribution to the delivery of AHEP learning outcomes.

5. **The minimum module mark for which compensation is allowed is no more than ten percentage points below the nominal module pass mark (or equivalent if a grade-based marking scheme is used).**

Compensation is permitted only when the overall module mark is ten percentage points below the nominal module pass mark. For example, in the case of a normal module pass mark of 40%, compensation is permitted only when the overall module mark is between 30% and 39%.

The key consideration in the rules above is to ensure that graduates of accredited engineering degree programmes have met all the programme learning outcomes specified in the Engineering Council's AHEP (Accreditation of Higher Education Programmes) specification.

These requirements will apply to all students joining the first year of an accredited degree programme from September 2022. There is no requirement or expectation that assessment regulations will be changed for students who enrolled on an accredited degree programme before this date.

Case Studies

The following examples illustrate the practical application of the Compensation and condonement policy:

Example 1 - A Bachelors (Honours) programme delivered by a provider in Scotland

The programme assessment regulations allow compensation as follows:

Level 7: Up to 40 credits

Level 8: Up to 20 credits

Level 9: No compensation

Level 10: No compensation

The normal module pass mark is 40% and a module can only be compensated if the overall module mark is 30- 39%.

This example conforms with Engineering Council policy as compensation at Level 7 does not count towards the overall limit of 30 credits for the programme. Total compensation is limited to 20 credits for the final three years of the degree programme and the minimum compensatable module mark is within 10 percentage points of the nominal module pass mark.

Example 2 - A Bachelors (Honours) programme delivered by a provider in England, Wales or Northern Ireland

The programme assessment regulations allow compensation as follows:

Level 4: Up to 15 credits

Level 5: Up to 15 credits

Level 6: No compensation

The normal module pass mark is 40% and a module can only be compensated if the overall module mark is 30- 39%.

This example conforms with Engineering Council policy as compensation is limited to 30 credits for the degree programme and the minimum compensatable module mark is within 10 percentage points of the nominal module pass mark.

Example 3 - A Bachelors (Honours) programme delivered by a provider in England, Wales or Northern Ireland

The programme assessment regulations allow compensation as follows:

Level 4: Up to 20 credits

Level 5: Up to 20 credits

Level 6: No compensation

The normal module pass mark is 40% and a module can only be compensated if the overall module mark is 35-39%.

This example does not conform with Engineering Council policy. The allowable compensation of 40 credits is higher than the permitted use of compensation across the programme and the specification of a higher minimum module mark (35%) for compensation does not allow any increase to the 30 credit limit for the degree programme.

Example 4 - An Integrated Masters programme delivered by a provider in England, Wales or Northern Ireland

The programme assessment regulations allow compensation as follows:

Level 4: Up to 15 credits*

Level 5: Up to 15 credits*

Level 6: Up to 15 credits*

Level 7: Up to 15 credits*

*The regulations further state that a student can be compensated in a maximum of 30 credits during the course of their studies.

The normal module pass mark is 40% and a module can only be compensated if the overall module mark is 30-39%.

This example conforms with Engineering Council policy as compensation is limited to 30 credits for the degree programme and the minimum compensatable module mark is within 10 percentage points of the nominal module pass mark, however it places a requirement on the degree provider to track any compensation applied to individual students across their programme of study.

Example 5 - An Integrated Masters programme delivered by a provider in England, Wales or Northern Ireland

The programme assessment regulations allow compensation as follows:

Level 4: No compensation

Level 5: No compensation

Level 6: No compensation

Level 7: Up to 30 credits

The normal module pass mark is 40% and a module can only be compensated if the overall module mark is 30 - 39%.

This example conforms with Engineering Council policy as compensation is limited to 30 credits for the degree programme and the minimum compensatable module mark is within 10 percentage points of the nominal module pass mark.

Example 6 - A Masters degree other than the Integrated Masters delivered by a provider in England, Wales or Northern Ireland

The programme assessment regulations allow compensation as follows:

Level 7: Up to 20 credits

The normal module pass mark is 50% and a module can only be compensated if the overall module mark is 40 - 49%.

This example conforms with Engineering Council policy as compensation is limited to 20 credits for the degree programme and the minimum compensatable module mark is within 10 percentage points of the nominal module pass mark.

Example 7 - A Foundation degree and associated Top-up degree programme delivered by a provider in England, Wales or Northern Ireland

The programme assessment regulations allow compensation as follows:

Foundation degree:

Level 4: No compensation

Level 5: Up to 20 credits

Top-up degree:

Level 6: Up to 20 credits

In both awards, the normal module pass mark is 40% and a module can only be compensated if the overall module mark is 30 - 39%.

In this example, the Foundation degree conforms with Engineering Council policy as compensation is limited to 20 credits and the minimum compensatable module mark is 10 percentage points below the nominal module pass mark.

However, the Top Up qualification does not conform to Engineering Council policy as the maximum compensatable credit for this qualification is limited to 10 credits.

Regardless of the HEIs awarding the qualifications, Foundation degrees and top-up degree awards are treated as separate qualifications and compensation credit cannot be carried forward.

Example 8 - An Integrated Masters programme delivered by a provider in Scotland.

The programme assessment regulations allow compensation as follows: Level 7: Up to 20 credits

Level 8: Up to 20 credits

Level 9: Up to 20 credits

Level 10: Up to 20 credits

Level 11: Up to 20 credits

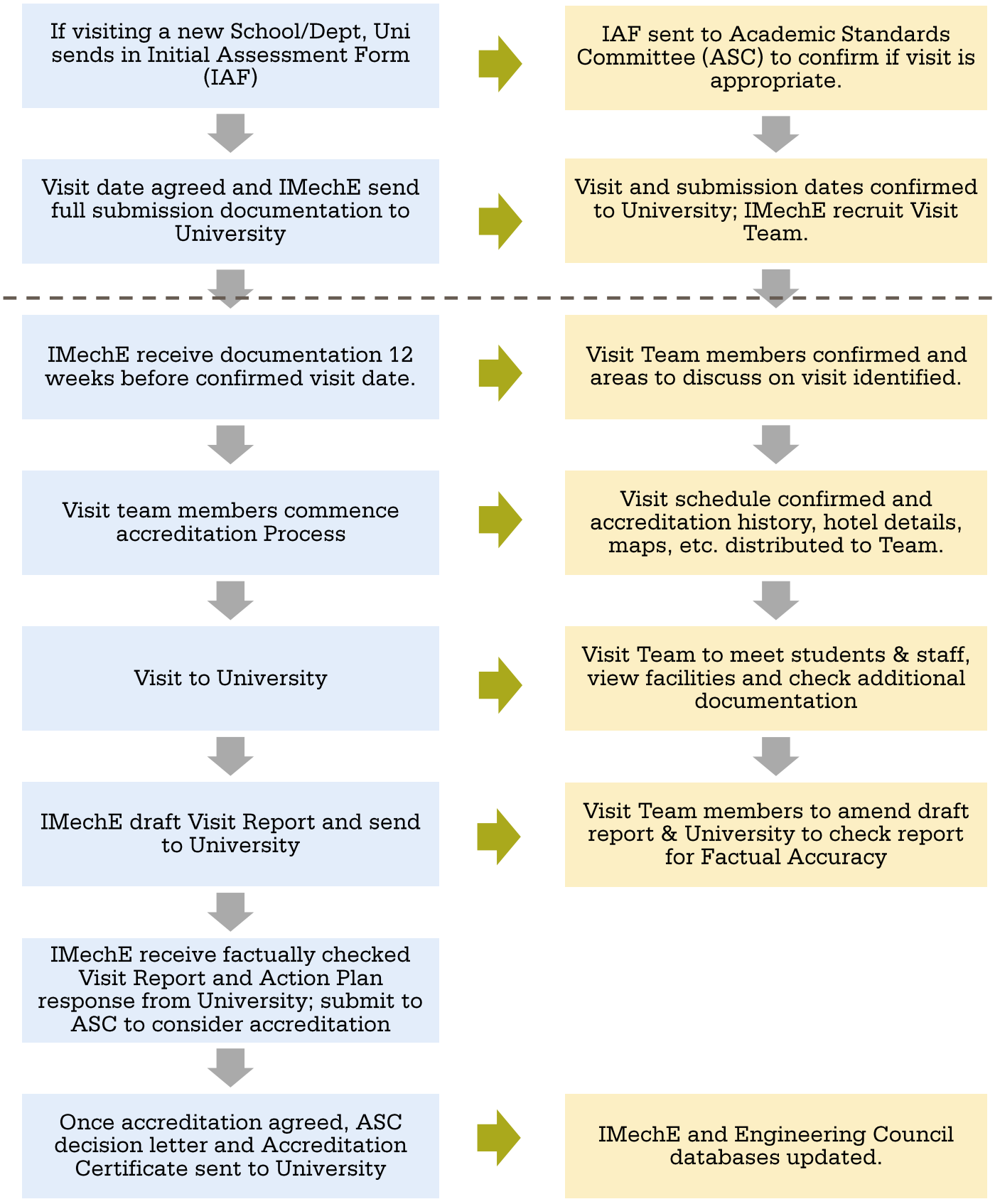
At the point of graduation students must have no more than 20 credits of compensation in total across all levels. The normal module pass mark is 40% and a module can only be compensated if the overall module mark is 30 - 39%.

This example conforms with Engineering Council policy as the overall limit is 20 credits, and the minimum compensatable module mark is within 10 percentage points of the nominal module pass mark. Note – the policy does not apply to level 7 in Scotland. However, it places a requirement on the degree provider to track any compensation applied to individual students across their programme of study.

Top

APPENDIX F

Application Protocol



APPENDIX G

Application Forms for Accreditation

- **Initial Assessment Form** or 'IAF' must be completed if you are a University Department/School which seeks IMechE accreditation for the first time. Two versions of this Form exist: one for UK visits and one for International visits.

  Microsoft Excel Form ***IMechE/AHEP4: Output Standards Matrix*** must be completed and submitted with either version of the above application forms to demonstrate an overview on where learning outcomes are delivered in the programmes.

  These forms are to be used for all IEng and CEng submissions for both undergraduate and postgraduate degrees.

- **Submission for Accreditation Form**, often referred to as the 'Main Submission' must be completed if you are a University Department/School applying for re-accreditation or have been granted permission by the IMechE to undertake an accreditation visit for formal consideration of your degree programmes following approval of your 'IAF.'

  Microsoft Excel Form ***IMechE/AHEP 4: Output Standards Matrix*** must be finalised and submitted with this submission form to demonstrate an overview on where learning outcomes are delivered in the programmes.

  When completing the Submission for Accreditation you will also need to complete forms:

  - IMechE/AHEP4: Laboratory/Hands-on Experience Details
  - IMechE/AEHP4: Graduation Statistics ,and
  - IMechE/AHEP4: Methods of Assessment.

  These forms are to be used for all IEng and CEng submissions for both undergraduate and postgraduate degrees.

- **Request for accreditation without a visit Form**, or 'Form RAWV' must be completed if you are a University Department/School which has IMechE accredited degree programmes and seeks approval outside of the standard 5-year accreditation cycle for the following:
  - Propose changes to an accredited programme which has 30% or less of its content unchanged;
  - Propose changes to an accredited programme which has between 31% and 50% of the content of a programme unchanged to determine if a 'light-touch' visit is required to assess the changes; or
  - Request accreditation of a new degree which has significant commonality (minimum of 70%) with an accredited programme;

  Requests for any proposed changes to an accredited programme will be limited to this one form.

  Microsoft Excel Form ***IMechE/AHEP4: Output Standards Matrix*** must be completed and submitted with this form for both the existing programme and new/revised programme to demonstrate an overview on where learning outcomes are delivered in the programmes. Form IMechE/Form-RAWV: Comparison Table will also need to be completed.

- **Submission for extending accreditation (Form REDA)** must be completed if your University Department/School is applying to extend accreditation of its degree programmes by one academic year beyond the maximum five-year period of accreditation. Under Engineering Council regulation, the IMechE Academic Standards Committee is permitted to extend accreditation by one additional cohort in exceptional circumstances.

  Requests for extension beyond one academic year require subsequent approval from the Engineering Council's Registration Standards Committee. The Registration Standards Committee reserve the right to decline any request to extend accreditation and any decision made by the Registration Standards Committee is final and overrules any decision made by the Academic Standards Committee. For such requests beyond one academic year, additional documentation must be completed. Please contact the Institution should this be applicable to your University Department/School.

  Microsoft Excel Form ***IMechE/AHEP4: Output Standards Matrix*** must be completed and submitted with any submission form to demonstrate an overview on where learning outcomes are delivered in the programmes.

If you require a copy of any of the documents listed, or if you are not sure which document applies to you and require more information, please contact us at uniaccreditation@imeche.org. All documents listed are also available to download from the IMechE website at: http://www.imeche.org/membership/employers-and-accreditation/university-accreditation.

APPENDIX H

Degree Accreditation Appeals Process

Definitions:

ASC: Academic Standards Committee

EngC: Engineering Council

HEI: Higher Education Institution

QMB: Qualifications and Membership Board

1 Introduction

1.1 This document sets out the policy for dealing with appeals from a HEI following a degree accreditation decision made by the ASC. Any HEI which has a submission for accreditation turned down may appeal in accordance with the procedures contained in this document.

2 Grounds for Appeal

2.1 An appeal may **only** be made on one or more of the following grounds:

a) Existing information that could have influenced an accreditation decision, and which due to circumstances outside the department's control could not be presented, has subsequently become available.

b) Facts contained in the submission documentation that might affect the accreditation decision have not been taken into account.

c) Evidence exists of administrative, procedural, or other irregularity in the conduct of the visit or the meeting of the ASC at which the decision was reached.

3 Initial Action

3.1 An HEI that does not accept a decision must write to the Institution within 30 days of receipt of the decision. The Secretary of the ASC shall establish the facts with the relevant ASC members involved in the accreditation review and resolve any factual misunderstandings that exist. If the HEI then accepts the original decision, the matter will be ended. If the HEI is not satisfied with the decision, or it is found that there are grounds for an appeal, the matter will be brought before the next ASC meeting for re-consideration. The HEI will be informed of the outcome, in writing, within five working days of the meeting.

3.2 If the HEI does not accept the subsequent decision it may lodge an appeal, in writing, with the Institution within 90 days of the date of the letter informing it of the decision. An appeal will only be accepted from the Head of Department or Faculty who has responsibility for the relevant degree subject area. Appeals must be in writing, state the decision concerned and the grounds for the appeal, and include the appeal fee of £500 (returnable at the discretion of the Appeals Committee). Supporting documentation may be included in support of the appeal.

3.3 Normally, appeals submitted outside the specified time scales will be invalid. The appellant may withdraw the appeal at any stage by submission in writing to the Institution.

4 Receipt of the appeal

4.1 The Institution will acknowledge the appeal in writing within five working days of its receipt. The appeal will be considered by the Chair of the Qualifications and Membership Board (QMB) who will decide whether there is a prima facie case for appeal. Where required, further information may be sought from the appellant. If it is considered that there is a prima facie case an Appeals Committee will be convened, and the EngC will be notified.

5 The Appeals Committee

5.1 The Appeals Committee is required to examine the case and decide whether it requires the ASC to reconsider its decision. The Appeals Committee will normally meet within six weeks of the receipt of the appeal at the Institution.

5.2 Twenty working days' notice of the date, time, and venue of the meeting of the Appeals Committee shall be given to those required or invited to attend. Notice will be sent to the appellant by recorded delivery to the address given in the notice of appeal (under clause 3.2).

5.3 The Appeals Committee shall consist of persons who have no direct involvement with the ASC or the HEI involved. The membership will be:

- Two members of the QMB nominated by the Chair of the QMB, one nominated as Chair;
- A member of the Professional Review Committee nominated by the Chair of the Professional Review Committee;
- A Member or Fellow of the IMechE who is not one of the above; and
- An external representative (e.g., representative of another engineering professional body).

5.4 A quorum of the Appeals Committee will be four members (*but must include the external representative*). The appointed Secretary to the Appeals Committee will have no vote and will not count as part of the quorum.

5.5 Papers for the meeting will be sent to members of the Committee and the persons required or invited to attend no later than five working days before the date of the meeting. The papers will include the appellant's notice of appeal together with any supporting documentation and information provided by the ASC concerning the original decision. Additional papers may only be tabled at the meeting with the prior approval of the Chair of the Appeals Committee.

5.6 The HEI making the appeal must be represented at the meeting (maximum of two representatives) and must notify the Institution of the names and appointments of the persons attending. If the appellant is not represented at the meeting, the Chair is satisfied that the notice of the meeting was duly and correctly sent and there being no extenuating circumstances the appeal will be dismissed. Normally the ASC shall be represented by the Chair (or nominee) and *another who would normally be* the Chair of the team which visited that HEI.

5.7 The following procedure will normally be followed:

- Preliminary private discussion by the Appeals Committee;
- Evidence from the appellant;
- Evidence from the ASC representatives;
- Joint question and answer session (if required); then
- Private deliberations by the Appeals Committee.

5.8 All decisions of the Appeals Committee shall be by majority vote of the members. In the event of the vote being tied, the Chair will have a casting vote.

5.9 The proceedings of the Appeals Committee shall be confidential to the Committee and the Secretary, except that when an appeal is upheld relevant records of the meeting will be made available to the ASC to assist their further deliberations.

6 Procedure after the Appeals Committee meeting

6.1 Once a decision has been made the ASC will be informed. If an appeal is upheld the Appeals Committee will normally require the ASC to reconsider its decision. The ASC shall consider the matter at its next scheduled meeting, giving due attention to the comments, recommendation and any other information provided by the Appeals Committee. The ASC will confirm its original decision or make such adjustments as, in the circumstances, seem just and inform the Chair of QMB of the outcome.

6.2 Where the original decision is confirmed the Chair of the QMB may, if in his or her opinion due and proper account has not been taken of the Appeals Committee's findings, refer the matter to the QMB. The QMB has the authority to uphold or annul the decision of the ASC.

6.3 Once the QMB has reached a decision the appellant will be informed, in writing, of the decision within five working days of the meeting. Where time delays occur because of scheduled meeting dates, the appellant will be kept informed of progress. There is no further right of appeal to the Institution and no further correspondence will be entered into regarding the appeal. The EngC will be notified of the decision.

7 Procedure to be followed in the event of an appeal being dismissed.

7.1 If the appeal is not upheld the appellant will be informed of the outcome, in writing, within twenty working days of the meeting. There is no further right of appeal to the Institution and no further correspondence will be entered into regarding the appeal. The EngC will be notified of the decision.

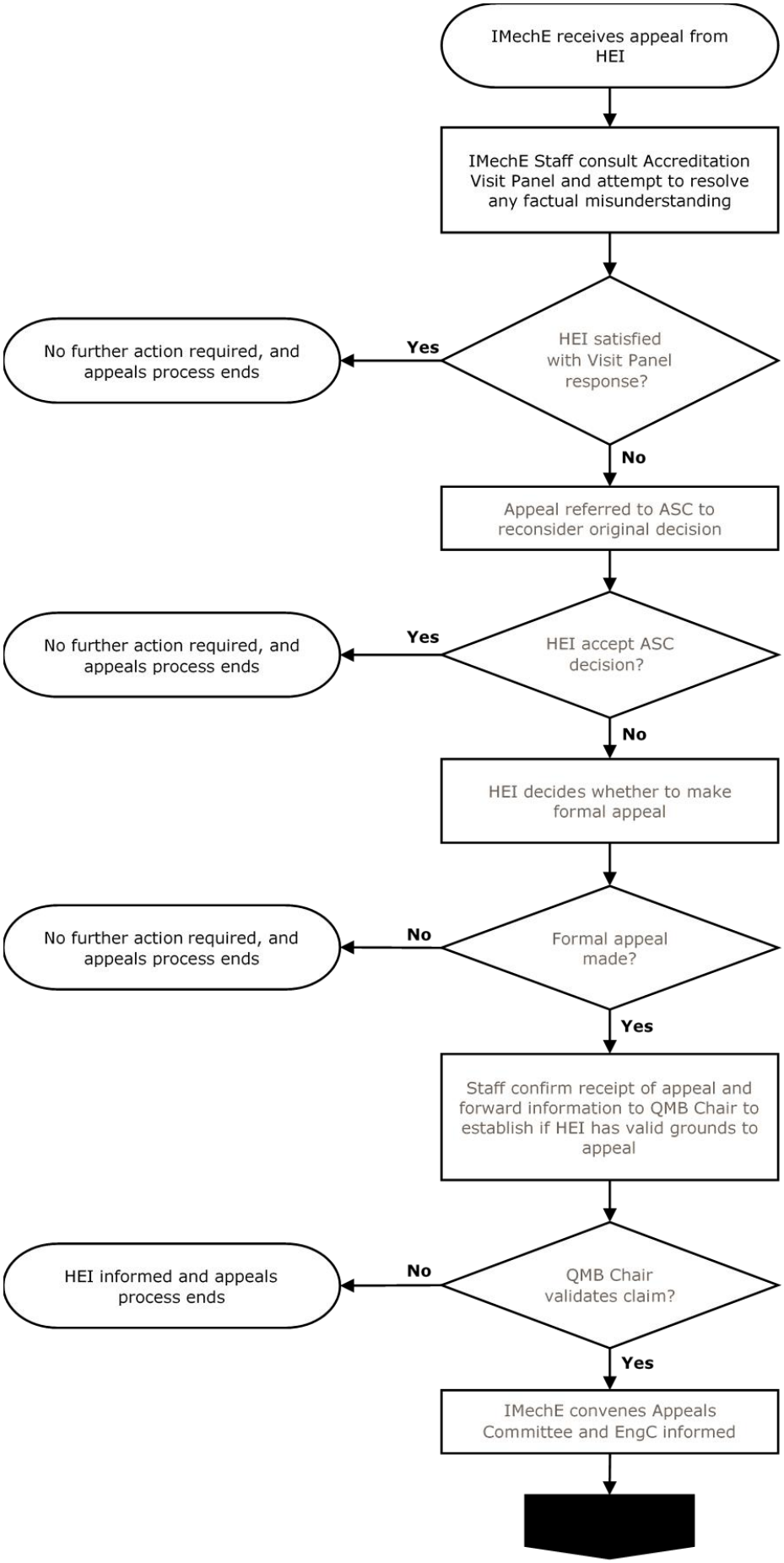
8 Confidentiality

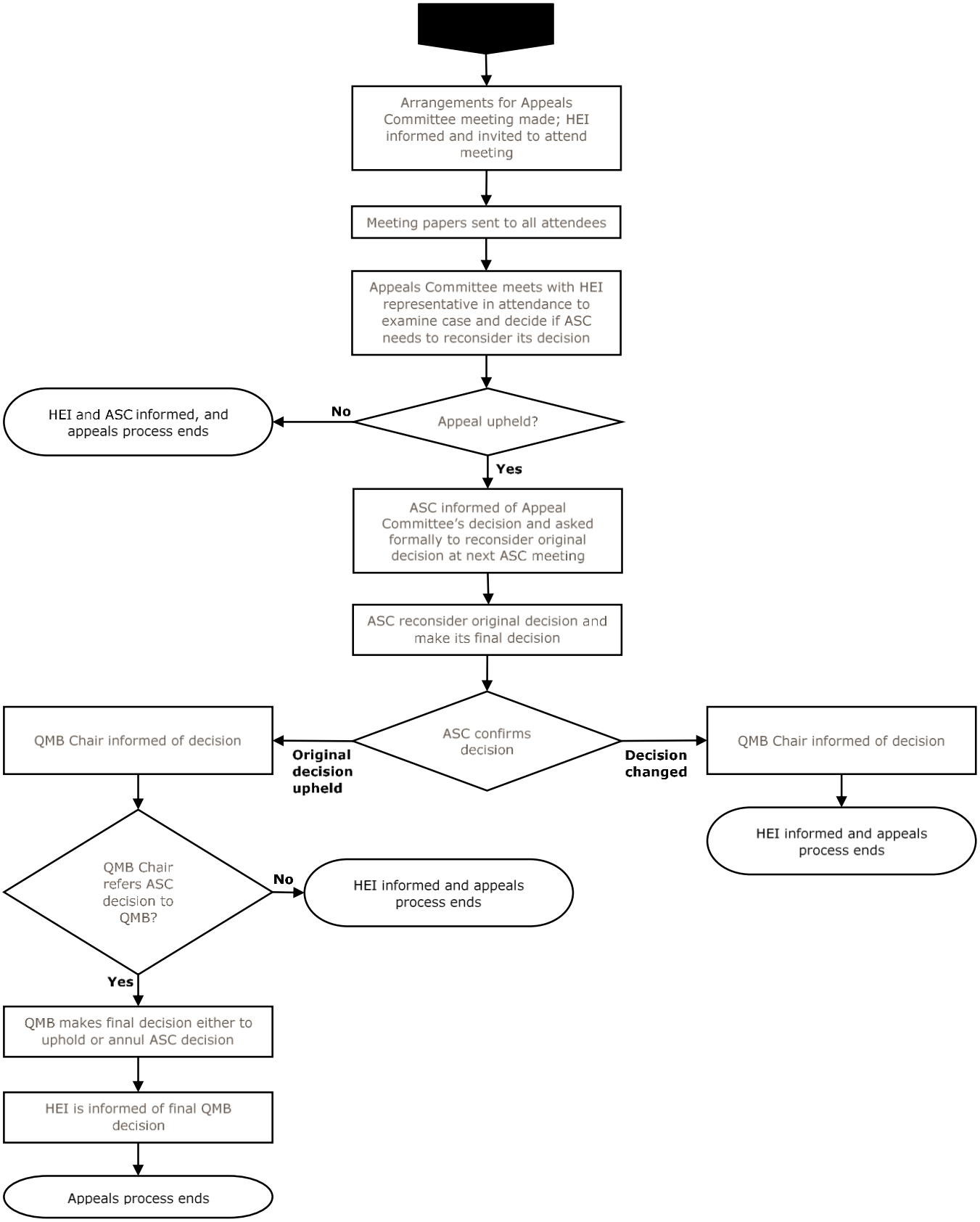
8.1 It is a requirement of all those involved that all information relevant to the appeal be treated as confidential. Once an appeal has been accepted there should be no communication of any sort on the subject of, or subjects with a direct influence on, the appeal between interested parties and members of the Appeals Committee.

9 The Appeals Process Flowchart

Please see next page.

Top


IMechE receives appeal from HEI
IMechE Staff consult Accreditation Visit Panel and attempt to resolve any factual misunderstanding
HEI satisfied with Visit Panel response?
Yes
No further action required, and appeals process ends
No
Appeal referred to ASC to reconsider original decision
HEI accept ASC decision?
Yes
No further action required, and appeals process ends
No
HEI decides whether to make formal appeal
Formal appeal made?
No
No further action required, and appeals process ends
Yes
Staff confirm receipt of appeal and forward information to QMB Chair to establish if HEI has valid grounds to appeal
QMB Chair validates claim?
No
HEI informed and appeals process ends
Yes
IMechE convenes Appeals Committee and EngC informed


Arrangements for Appeals Committee meeting made; HEI informed and invited to attend meeting
Meeting papers sent to all attendees
Appeals Committee meets with HEI representative in attendance to examine case and decide if ASC needs to reconsider its decision
Appeal upheld?
No
HEI and ASC informed, and appeals process ends
Yes
ASC informed of Appeal Committee's decision and asked formally to reconsider original decision at next ASC meeting
ASC reconsider original decision and make its final decision
ASC confirms decision
Original decision upheld
QMB Chair informed of decision
Decision changed
QMB Chair informed of decision
HEI informed and appeals process ends
QMB Chair refers ASC decision to QMB?
No
HEI informed and appeals process ends
Yes
QMB makes final decision either to uphold or annul ASC decision
HEI is informed of final QMB decision
Appeals process ends

Top

APPENDIX I

Framework of Responsibilities in Accreditation

Clear and open communications are essential if the potential benefits of accreditation are to be fully realised and the process is to operate smoothly. To assist this, the Institution has developed the following framework of responsibilities for the parties involved in accreditation.

IMechE's accreditation teams and staff are responsible for:

- ensuring that the policies and procedures are promulgated widely and consistently applied;
- ensuring that Higher Education Institutions are well-informed and prepared for the visit;
- pursuing only data and information necessary to judge whether accreditation criteria are met;
- focusing on financial and other resources only to the extent that they affect compliance with accreditation criteria;
- keeping institutional executives appropriately informed at all stages of the process;
- communicating consistent and accurate information at all stages of the process;
- identifying and disseminating good practice while recognising the need for appropriate confidentiality; and
- providing opportunities for objective review and resolution of differences should any arise during the accreditation process.

Higher Education Institutions are responsible for:

- carefully studying the relevant IMechE criteria, policies and procedures;
- providing clear, accurate and complete information in applications for accreditation and all associated paperwork;
- providing QAA degree programme specifications for degrees submitted for accreditation;
- committing key staff (academic and administrative) to the accreditation process;
- informing IMechE of the reasons why accreditation is being sought, in the context of institutional and programme aims and strategic direction; and
- providing constructive information in a timely manner if there are concerns or difficulties that emerge during the accreditation process.

Both parties are responsible for:

- providing for candid and constructive evaluation of the accreditation process;
- ensuring open exchange if issues and concerns are identified by any party; and
- encouraging flexibility, openness, and co-operation in considering potentially beneficial variations of accreditation review.

APPENDIX J

Location of Study

Following consultation with Professional Engineering Institutions (PEIs) throughout 2017 the Engineering Council has published new guidance which outlines the requirements placed on universities to ensure the location of study is clearly identifiable where an accredited degree programme is delivered at multiple campus locations. This guidance has been developed in response to the growing number of UK universities having arrangements with external organisations, which has made it increasingly difficult for PEIs to determine the location of where a degree programme has been completed when an applicant comes to apply for membership and professional registration.

Where a university seeks accreditation of a degree programme which is delivered at multiple campus locations – including through franchise or partnership arrangements – the IMechE must be invited to visit all locations involved in the delivery of the programme, or otherwise be informed of all campus locations for which accreditation is not being sought. An accreditation visit is usually required to each campus location for which programme accreditation is sought to enable the IMechE to consider evidence from a range of indicators including human, physical and material resources, and meeting(s) with students. Should the programme be delivered at more than one campus location then students will only be considered to have completed an accredited programme if they have completed it at the campus location for which the accreditation has been confirmed.

Equally, universities involved in the delivering and/or awarding of degree programmes delivered on multiple campus locations must either secure accreditation of their degree programmes in all locations, or make it absolutely clear in any material referring to the programmes where such programmes have not been accredited. It is especially important for degree programmes which share the same title, and which are delivered on multiple campus locations to be clearly differentiated from one another should accreditation not be sought at all locations. If the IMechE believe that a university is not being sufficiently clear regarding the non-accredited status of franchised degree programmes and/or degrees delivered through collaborative partnership(s) and/or at different campuses, then accreditation may subsequently be withdrawn or refused.

To ensure the location of study of an applicant's degree programme is clearly identifiable the IMechE has updated its processes for reviewing academic qualifications. Effective immediately, any university seeking IMechE accreditation will now be required to clearly present the location of study of each degree awarded on the degree transcript. The degree transcript, in addition to an authenticated copy of their degree certificate must then be supplied by the applicant when seeking IMechE membership and professional registration. Applicants seeking IMechE membership and professional registration who hold an IMechE accredited degree but cannot provide satisfactory evidence of the location of study will no longer be automatically recognised as accredited and will instead have their academic qualifications assessed by the Institution's Academic Assessment Committee (AAC).

/imeche
/imeche
/imecheuk
/imecheteam
/institution-of-mechanical-engineers

Institution of Mechanical Engineers
1 Birdcage Walk
Westminster
London SW1H 9JJ

+ 44 (0)20 7304 6866
uniaccreditation@imeche.org
imeche.org