

## **Guidance Note on Academic Accreditation**

### **1. Introduction**

Paragraphs 22 to 31 of the Engineering Council's Registration Code of Practice (Registration Code) set out the requirements governing the accreditation of academic programmes by professional engineering institutions that are licensed to do so by the Engineering Council. This guidance note and its annexes complement the Registration Code and the 'Accreditation of HE Programmes' (AHEP) handbook. They reflect discussions since AHEP's publication, especially within the Engineering Accreditation Board (EAB) and the Engineering Council's Registration Standards Committee (RSC). This note does not introduce any new regulatory requirements.

The annexes cover accreditation matters related to:

- Foundation Degrees (Annex A)
- Distance learning (Annex B)
- Engineering Doctorates (EngDs) (Annex C)
- Degrees offered outside the UK (Annex D)

This note and its annexes have been prepared for use by professional engineering institutions. They may wish to use these as a basis for their own guidance to academic institutions and to accrediting panels, and are encouraged to share these or elements of these with Higher Education Institutions (HEIs) seeking accreditation.

Information for professional engineering institutions about removal of accredited status from a programme and making a decision not to undertake an academic accreditation visit are covered in separate documents.

Accreditation plays a valuable role in maintaining and developing the relationship between the profession and higher education, and in ensuring appropriate standards. Part of its purpose is to stimulate and encourage programme innovation and development. The Registration Code, AHEP and this Guidance Note help to enable this.

Accreditation is not intended to be a prescriptive exercise, and the professional engineering institutions are encouraged to avoid introducing un-necessary prescription into their individual requirements. Accreditation should be viewed as a developmental process, with more of a continuing dialogue between universities and colleges and the accrediting institutions, rather than placing all the emphasis on the five-yearly visit. This approach helps to establish an understanding of the opportunities that accreditation brings and the value of the process, as well as encouraging the development of innovative provision. It also assists degree awarding institutions that are developing new programmes.

During accreditation exercises, licensed institutions may wish to draw on the specific technical expertise of smaller professional engineering institutions or Professional Affiliates of the Engineering Council that do not hold academic accreditation licences. Under such an arrangement, the overall process and outcome remain entirely under the control of the licensed accrediting institution. Any such input should be clearly recorded in the accreditation visit report, and universities should be encouraged to include reference to the specific input in their course literature.

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This note covers the accreditation of academic programmes leading to the award of exemplifying qualifications for Incorporated Engineer (IEng) and Chartered Engineer (CEng) under the UK Standard for Professional Engineering Competence (UK-SPEC): Bachelors and Honours degrees, integrated Masters (MEng) degrees, and other Masters degrees. The principles in this note are applicable to the accreditation of Foundation degrees, though the provider will be expected to provide additional information as outlined in the Statement on the Accreditation of Foundation Degrees (Annex A to this note).

Guidance for professional engineering institutions about further learning and HNDs is available on the Engineering Council's Extranet. A definition of key terms used in the assessment of learning outcomes was produced by the Engineering Subject Centre: <https://www.heacademy.ac.uk/resource/engineering-subject-centre-guide-assessment-learning-outcomes>

## **2. Output Standards for Bachelors, Honours, Integrated Masters (MEng) and other Masters Degrees**

The third edition of AHEP, published in 2014, sets out the requirements for graduates from accredited programmes in six key areas of learning: <http://www.engc.org.uk/ahep>

### **Does a degree programme have to deliver all the required learning outcomes as set out in the AHEP?**

Yes. An accredited programme must deliver all the required learning outcomes, although as AHEP makes clear, the 'weighting given to the six broad areas of learning will vary according to the nature and aims of each programme'.

### **Where are general transferable skills covered?**

Previous editions of AHEP referred to general learning outcomes, which described the overall nature of the programme, and specific learning outcomes which should contribute to a greater or lesser extent to the delivery of the general ones.

In the third edition of AHEP, most of the previously published general learning outcomes have been incorporated into the five specific learning outcomes in order to strengthen their position, with the residual few forming a new sixth area 'Additional general skills' for each degree. Full implementation of the third edition of AHEP is expected from September 2016.

### **Are there any other reference points for accreditation?**

Yes, the qualification level descriptors: for England, Wales and Northern Ireland see:

<http://www.qaa.ac.uk/en/Publications/Documents/Framework-Higher-Education-Qualifications-08.pdf>; for Scotland see:

<http://www.scqf.org.uk/content/files/SCQF%20Revised%20Level%20Descriptors%20-%20Aug%202012%20-%20FINAL%20-%20web%20version.pdf>

These reference points are crucial in determining whether the programme is delivering knowledge, understanding and skills at the appropriate level.

The competence statements for IEng and CEng which professional engineering institutions have adopted under UK-SPEC may also be a useful reference point:

<http://www.engc.org.uk/ukspec>

### **Which should take priority – programme or module learning outcomes?**

The decision to accredit should be based on programme learning outcomes. Thus the expectation is that accrediting panels will look at learning outcomes at the programme level.

Consideration of learning outcomes at the module level may prove to be useful if further information is required but these should not be the prime source of evidence.

**Does a degree programme have to deliver all the bullet points included under the six areas of learning in AHEP?**

Yes. The bullet points describe the learning outcomes. They represent different aspects of the capabilities which graduates from accredited programmes should possess, rather than curriculum content. They therefore serve as indicators for accreditors when looking at student achievement from the programme as a whole.

**Can combined degrees (eg Engineering with French) be accredited and is a stipulated amount of engineering content required in these?**

Yes, they can be accredited. In discussion at the EAB, most institutions felt that generally around two thirds of the total programme would be required to deliver the required engineering outcomes. However, this is not a fixed requirement; whether a course holistically delivers the required learning outcomes is still the ultimate criterion in awarding accreditation.

**Is it a requirement for accreditation that an MEng or any other Masters degree includes a group project?**

No, not if the programme delivers all the learning outcomes. AHEP has always emphasised outcomes rather than how these are achieved. There are aspects of the six areas of learning to which a group project might make a major contribution. In the absence of a group project, the accreditation panel would need to be confident that the outcomes were being achieved by some other means.

**Can a degree be accredited for both IEng and CEng registration?**

Yes. The Engineering Council's RSC agreed in 2009 that all Honours degrees accredited as partially meeting the academic requirements for Chartered Engineer registration meet the requirements for Incorporated Engineer registration and Sydney Accord recognition, and so should be accredited for both CEng and IEng. This arrangement is backdated to cover all such degrees accredited from intake year 1999.

The learning outcomes specific to those degrees for which IEng accreditation only is being sought are described in AHEP.

**Is a visit required?**

Yes. Paragraph 27 of the Registration Code states that a visit to the awarding institution must take place and this applies to all degrees. From 2014, there is some limited flexibility where some of the programme is delivered by other provider(s). However, there are strict parameters and accrediting institutions must refer to the Registration Code before deciding not to visit.

A visit is not required where the title of an existing programme is changed or a new mode of study introduced where no other change is made to an accredited programme; this may include the addition of a sandwich mode with a different title (eg ...with a year in industry). Introduction of distance learning as a new mode of study will require closer scrutiny to consider student experience, and Licensed Members need to consider whether a visit is required.

In all other circumstances waiving the requirement for a visit must be exceptional.

From 2016 visits additional to the usual schedule of visits may not be required where the programme concerned has significant commonality with programmes already accredited by the Licensed Member.

Further guidance on this matter for accrediting institutions is available on the Extranet.

**Can a visit be coordinated with the university's periodic review process?**

Yes, and this is beginning to happen, and is encouraged.

**What is meant by accreditation being viewed as a developmental process?**

Licensed institutions are encouraged to provide assistance at an early stage to a degree awarding institution that is planning a new programme or that is new to the accreditation process. This approach is more likely to lead to the development of programmes that meet the required standard. After accreditation is conferred, continuing dialogue may take the form of annual reports or the sharing of notable or innovative practice. Universities and colleges should be encouraged to contact the engineering accrediting institution(s) for advice when considering the development of existing programmes.

**Can someone who only follows the final year of an accredited programme get an accredited degree on graduation?**

Yes. Historically, students had to spend at least two years on an accredited programme, but this rule does not exist under UK-SPEC. A university will have made the decision to admit someone to the final year of a programme on the basis that their previous academic experience enables them to achieve the necessary outcomes. However, accrediting institutions may ask universities to demonstrate how those graduating after one year would actually achieve the required learning outcomes, and decide whether to limit accreditation in the light of the response.

This arrangement would therefore apply, for example, to holders of an HND or graduates from Foundation degree programmes who wish to follow the final year of a Bachelors or Honours programme.

**Can a student who fails a project first time, then passes, be awarded an accredited degree?**

The Engineering Council is not prescriptive about this. Accrediting institutions are encouraged to avoid introducing un-necessary prescription into their individual accreditation requirements. Their requirements must be clearly communicated to degree awarding institutions and students, and correctly entered on the Engineering Council's accreditation database.

**What is the position of someone who, on completion of an accredited MEng programme, is awarded a BEng rather than the MEng degree?**

The person concerned will hold a non-accredited degree and any application for registration would be individually assessed. However, a BEng programme which is specifically designed as an exit point for MEng students who decide not to complete the MEng may be accredited if the accrediting institution is satisfied that it delivers the required learning outcomes for IEng or CEng as appropriate.

**If an MEng programme is only slightly deficient, can it be accredited with a requirement for further learning?**

No. The award of accredited status to an MEng programme means it fully meets the published requirements.

**Can someone with an accredited Masters degree but without an accredited Honours degree be considered for registration?**

Yes, but not as a Standard Route applicant. It is important that professional engineering institutions encourage universities to inform students correctly about the status of graduates from accredited Masters programmes in relation to Engineering Council registration requirements.

**Many Masters degrees have a mixed intake with not everyone having an accredited Honours degree in engineering. Can such programmes be accredited?**

Yes. The requirements for accreditation apply equally to the accreditation of Masters degrees. Paragraph 23 of the Engineering Council's Registration Code requires accrediting

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institutions to consider a range of evidence, including “entry to the programme, and how the cohort entry extremes will be supported.” A judgement has to be made in the light of this.

Accreditation of a Masters degree confirms only that it provides the further learning to Masters level component of the education requirement for CEng registration.

### **Can Postgraduate Diplomas be accredited?**

Postgraduate Diplomas are not exemplifying qualifications under UK-SPEC and should not be accredited as such. They may be accepted on an individual basis as meeting part or all of the further learning requirements, or as part of an integrated package of further learning and professional development. Postgraduate Diplomas accredited before 1 February 2007 retained accredited status until the end of their accreditation period.

### **3. Compensation**

In all universities, examinations boards may decide that a strong performance by a student in one part of the programme may compensate for under-performance elsewhere. Paragraph 23 of the Registration Code requires accrediting institutions to consider the awarding institution’s regulations regarding progression. They may impose constraints on an accreditation decision as a result of this.

The following guidelines on compensation have been formulated following discussion in EAB:

- Compensation should be allowed
- Major projects should not be compensated
- Normally only up to 20 out of 120 credits, in the final year, could be compensated
- Compensation should not undermine the overall learning outcomes of the programme(s)

Degree programmes include varying sized modules and therefore the reference to ‘normally 20 credits’ is indicative; the key consideration is the final bullet point. In their accreditation decision letters, professional engineering institutions must ask for notification should the compensation requirements change during the period of accreditation.

### **4. Coordinated visits**

#### **What is the basis for carrying out a joint accreditation visit with another institution?**

Joint accreditation visits bring considerable advantages, for example in terms of there being a single point of contact and one submission document, visit and visit report.

The EAB organises joint visits involving several professional engineering institutions. For a joint visit, there should be sufficient commonality amongst the programmes being put forward. Therefore, in general, EAB visits may not be appropriate for programmes that span a range of departments or for very large numbers of programmes, unless the commonality can be clearly defined. Further information about EAB is available at:

<http://www.engab.org.uk>

### **5. Accreditation Decisions**

Paragraph 28 of the Registration Code sets out four possible outcomes of an accreditation assessment.

Qualifying phrases such as ‘provisional accreditation’ and ‘partial accreditation’ are not used.

### **Does this mean that we cannot provisionally accredit new programmes?**

Paragraph 29 of the Registration Code states that programmes which do not have an output cohort at the time of accreditation may be accredited. This would be on the basis of their anticipated output standards. Institutions undertaking the accreditation must however monitor the output and review their accreditation accordingly, and they may accredit a new programme for a shorter period. Should they decide to withdraw the accreditation, the first graduates and those students already on the programme would still have accredited degrees. This maintains the previous practice; it is simply the term 'provisional accreditation' which has been withdrawn.

RSC encourages professional engineering institutions to work with degree awarding institutions during new programme development, offering on-going advice and support to help to ensure that UK-SPEC requirements are understood and that innovative provision is encouraged.

### **What should accreditation decision letters include?**

Under Paragraph 29 of the Registration Code, the awarding institution must be required to inform the accrediting institution of any major changes during the period of accreditation that affect the delivery of the specified programme outcomes. Examples are changes to compensation regulations, change of title, substitutions of modules, discontinuation of a module or loss of a critical resource.

Clear information about the registration opportunities for graduates from the accredited programmes should be included, and that all honours degrees accredited for CEng registration from intake year 1999 also meet the education requirements for standard route IEng registration and Sydney Accord recognition.

Awarding institutions should be informed that they may use the Engineering Council's accredited programme logo (downloadable from: <http://www.engc.org.uk/accrediteddegree/logo>) and alerted to the availability of a EUR-ACE<sup>®</sup> label (<http://www.engc.org.uk/education-skills/accreditation-of-higher-education-programmes/information-for-higher-education-providers/european-accreditation-eur-ace/>).

### **Are programmes still able to be 'partially accredited'?**

The term was discontinued some time ago. Programmes may be accredited as partially meeting the requirements. This means that a programme delivers the learning outcomes required of it (for example an Honours degree for CEng) but that a further qualification is required to meet the full requirements for registration.

### **What are the consequences for students and graduates of a decision not to award accreditation?**

It is an accepted principle across the profession that individuals who embark on a programme that is accredited should not be disadvantaged by a future decision to remove accreditation before the end of the original accreditation period. This also applies to graduates, should a decision to remove accreditation be back-dated.

Professional engineering institutions should:

- Remind universities that public information about the accredited status of their degree programmes must be correct
- Inform universities that the publication of inaccurate information can be referred by the Engineering Council to the QAA under its 'Cause for Concern' procedure

Professional engineering institutions must:

- Check the accuracy of statements about accredited status and registration as part of the periodic accreditation exercise.

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*A professional engineering institution that is considering the removal of accreditation before the end of the original accreditation period is directed to a separate document covering this matter.*

### **Can programmes be accredited for EngTech?**

No. Accreditation is on the basis of delivering specific learning outcomes derived from the statements in AHEP. AHEP deals specifically with programmes accredited for IEng and CEng, and there are no specified learning outcomes for EngTech programmes.

Paragraphs 19 and 32-37 in the Registration Code deal with the approval of programmes for EngTech registration.

### **What is the situation regarding the accreditation of HNDs?**

There is no requirement for HNDs to be accredited as such accreditation confers no advantage for an individual seeking registration, and accredited HNDs are not recorded on ACAD. Further details are in a guidance note for institutions on the extranet:

<http://extranet.engc.org.uk>

### **Do HEIs have to advise of changes to accredited programmes during the accreditation period?**

Yes. however, it is expected that programmes will change over time. Significant and therefore notifiable changes are mentioned above (decision letter contents).

### **Is there a minimum requirement about professional qualification of academic staff?**

The Engineering Council is not prescriptive about this. However, professional engineering institutions are encouraged to support engineering departments and their staff to increase the levels of professionally qualified engineering academics. This provides role models for their students and provides a mechanism for active engagement with the profession.

## **6. Charging for accreditation**

There is no common policy on charging. The Engineering Council believes that it is a matter for an individual professional engineering institution to decide whether or not to make a charge for accreditation, in accordance with its own business plans. Should a decision to charge be made, the Engineering Council's Registration Code requires this to be specified in an institution's accreditation procedures, and made clear to a university at an early stage. Up-to-date charging details are collated annually by the EAB Secretariat. If an institution wishes to introduce charging, an EAB working group has recommended an annual affiliate scheme as best practice.

## **Annex A: Statement about the accreditation of Foundation Degrees**

*This annex provides information that is additional to that in the main guidance note on academic accreditation and is specific to Foundation Degrees. Both should be referred to.*

Engineering or Technology Foundation Degrees (FDs) may be accredited by professional engineering institutions licensed by the Engineering Council as partially meeting the educational requirements for IEng registration.

Those institutions will consider requests to accredit FDs. In doing so, and before agreeing to undertake accreditation, the education provider would be expected to provide information additional to that normally expected for bachelors or masters level accreditation. This would include information about:

- The degree awarding body and its relationship with any other FD programme provider(s)
- Progression opportunities
- Careers information and guidance given to the FD students
- How the quality of any provision in the workplace is assured by the degree awarding body
- Systems for the accreditation of prior learning/experiential learning

A visit to the education provider will be undertaken, including to franchisees e. g. colleges. However, mechanisms to reduce the resource required for a visit will be explored.

Individual professional engineering institutions will be free to decide whether to:

- Approve FDs as exemplifying qualifications towards EngTech registration
- Accredit a FD (as partially meeting the requirement for IEng registration) leading to a Bachelors Degree even if that Bachelors Degree is not accredited.



## **Annex B: Accreditation of distance learning programmes**

*This annex provides information that is additional to that in the main guidance note on academic accreditation and is specific to distance learning. Both should be referred to.*

### **1. Introduction**

After the shift to an outcomes-focused registration and accreditation framework in 2003, the Engineering Council's Registration Standards Committee (RSC) re-stated its position: *UK-SPEC does not limit accreditation to any particular mode of delivery; distance learning programmes are not excluded.*

Whilst the number of accredited distance learning engineering degrees is limited, it is likely to increase. If accreditation is to continue to be useful and valued, it is important that accreditation practice embraces such developments in HE provision.

### **2. Aim and scope of this guidance**

This guidance is intended primarily for professional engineering institutions carrying out accreditation of distance learning programmes, including bachelor and masters level programmes as well as Foundation Degrees.

Useful documents referred to when preparing this note are listed at the end of this annex.

### **3. Definition of distance learning**

In general, distance learning is a mode that does not require the student to attend particular classes or events at particular times and particular locations.

A wide range of programmes may be offered as distance learning, from whole degrees to individual modules. As well as for students who are remote and off campus, it can be a supplementary activity for campus-based students.

### **4. Key principles**

Accreditation by institutions licensed by the Engineering Council has become established and valued, and it commands respect both in the UK and internationally. The same accreditation aims and standards apply to distance learning programmes as for any other type of programme, and are set out in the AHEP and the main guidance note on academic accreditation.

The effectiveness of any quality systems purpose built for distance learning should be assessed.

Assessment of distance learning assignments must be at the same level as any equivalent programme being delivered by the academic institution.

Professional engineering institutions should notify the academic institution as early as possible about any requirements for information, evidence or visit arrangements that are additional or different to those normally required for campus-based provision.

Professional engineering institutions must ensure that their accreditors are properly trained to carry out accreditation of distance learning with a positive approach and without prejudice. The primacy of achieving the learning outcomes should be stressed. Accreditors will be reviewing different types of material than for a taught course but these are no less valid.

Professional engineering institutions should ensure that accrediting panels pay particular attention to the issues below and any other aspects of distance learning provision when carrying out accreditation.

## **5. Particular characteristics of distance learning programmes**

The inherent flexibility of distance learning programmes that is often attractive to potential students can pose some challenges to established accreditation policies and procedures. Issues which may arise in relation to distance learning include:

- The open-ended nature of distance learning programmes
- The robustness of systems in support of students
- Project work and access to laboratories
- The involvement of a range of delivery partners
- More diverse student groups
- Individually tailored programmes
- Confirming the authenticity of the student

### **5.1 The open-ended nature of distance learning programmes**

Accreditation of engineering degrees is framed by intake date. In view of the pace of change in engineering and technology practice, concern has been expressed about students taking long periods to complete a distance learning degree, especially where the programme was accredited some time ago.

However, the length of time that students might take to complete a programme need not in itself be a barrier to accreditation if the required learning outcomes are still being delivered. RSC has confirmed that institutions may specify that distance learning students must graduate within a prescribed period, which may be the same or less than that prescribed by the provider.

Academic institutions should be required to specify in their accreditation submission document the maximum length of time permitted for completion of their distance learning programme(s).

As a guide, a completion period of 6-8 years is suggested. This information must be included in the notes attached to the ACAD record. If the provider's proposed time period is not acceptable to an accrediting institution, special notes would have to be added to the accreditation database. Where possible, the aim should be to reach an agreement.

### **5.2 The robustness of systems in support of students**

Programmes delivered by distance learning must be underpinned by a sound delivery platform. There must be evidence that the communications systems in place enable interaction between students and both their tutors and peers, so that distance learning students are not disadvantaged by comparison with campus-based students. There should be equitable access to student, academic and administrative services, and timely feedback on assignments.

Greater emphasis may need to be placed on the delivery and communications systems, and academic institutions may be required to provide more detail about this than is required for campus-based programmes.

Accreditors should seek evidence that the views of distance learning students are included in student feedback and that questions about distance learning are included. These may cover, for example, the quality of web-based learning systems and access to the library.

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The accreditors must meet with some distance learning students during the accreditation visit.

### **5.3 Project work and access to laboratories**

AHEP is not prescriptive about the mode of delivery. However some learning outcomes are most appropriately demonstrated by way of laboratory work.

Accrediting institutions should be prepared to consider a range of ways by which this may be demonstrated, that need not necessarily be limited to campus laboratories. For example, workbased distance learning students may be able to achieve the required standards through workplace activity.

There may need to be a greater emphasis on the systems in place to ensure that practical skills-based activities are developed, and it may be necessary for universities to provide additional material to demonstrate how distance learning programmes achieve the required skill based learning outcomes. This may include mandatory on-campus course components.

Accreditors will need to assure themselves that the same rigour and standards apply to the assessment of workbased laboratory work as would apply to full-time campus provision.

Similar considerations apply to project work.

Professional engineering institutions must make explicit to the academic institution before agreeing to carry out accreditation any requirement for a practical activity that would make it difficult for a distance learning degree to be accredited. An example is the RAeS' requirement for undergraduates to undertake flight testing.

### **5.4 The involvement of a range of delivery partners**

The Engineering Council's Registration Code of Practice (paragraph 27) requirement with regard to the requirement for an accreditation visit to all partner organisations applies to distance learning provision. It is further explained in the main note.

The awarding institution is responsible for the academic standards of its awards and the quality of provision leading to them. The arrangements for assuring quality and standards should be as rigorous, secure and open to scrutiny as those for programmes provided wholly within the responsibility of a single institution and through conventional class-based modes of teaching.

Particular attention should be paid to the procedures adopted by the awarding academic institution for approving and reviewing any delivery partner and its agents.

An awarding institution may class as distance learning a programme that is in fact being delivered under a franchise agreement. Careful scrutiny of accreditation submission documentation should be undertaken to confirm the accuracy of the information provided and ensure that appropriate accreditation activity is undertaken. Particular care should be taken with international franchise arrangements.

### **5.5 Multiple access points and more diverse student groups**

The flexibility of distance learning is attractive to those who may not wish, or be able, to attend campus. Progression data and evidence for support of the extremes of cohort is required as for any degree programme. Accreditors should be alert to levels of non-progression above those for a campus-based programme. In such cases, the academic institution should be expected to provide a more detailed breakdown, including the reasons and any mitigating actions. It is important to ascertain whether or not any enhanced level of non-progression reflects the quality of provision.

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Universities are increasingly offering multiple entry points during the academic year and students may not move through distance learning programmes as a cohort. Thus accreditors should be aware that the data and evidence provided may differ from that which they are accustomed to with more homogeneous cohorts.

### **5.6 Individually tailored programmes**

The open-ended choice of modules offered by some universities could lead some students to undertake programmes whose design and content prevent them from covering all the required learning outcomes. Whilst this is not limited to distance learning provision, it may be a greater risk in this mode.

Accreditors should seek assurance that students are being properly advised about module choice. Information about the flagging of groups of courses as providing particular pathways within an overall programme may be required.

### **5.7 Confirming the authenticity of students**

Accreditors must assure themselves that robust systems are in place, especially where examinations are taken off campus or outside the UK.

Academic institutions are advised to consider using recognised centres outside of the UK such as British Council offices.

### **Reference material**

UK-SPEC: <http://www.engc.org.uk/ukspec>

AHEP: [www.engc.org.uk/ahep](http://www.engc.org.uk/ahep)

BCS guidance: <http://www.bcs.org/upload/pdf/heaapp2.pdf>

Policy on accreditation of programs offered in distance mode (P04). Engineers Australia. 2006: <http://www.engineersaustralia.org.au/about-us/accreditation-management-system-professional-engineers>

QAA UK Quality Code for Higher Education - Chapter B10: Managing higher education provision with others: <http://www.qaa.ac.uk/assuring-standards-and-quality/the-quality-code/quality-code-part-b>

## **Annex C: Accreditation of the Engineering Doctorate as an academic award**

*This annex provides information that is additional to that in the main guidance note on academic accreditation and is specific to the Engineering Doctorate. Both should be referred to.*

### **1. Background**

In February 2012, the Engineering Council's Registration Standards Committee (RSC) approved a change to the Regulations for Registration (now Registration Code of Practice) such that an accredited Engineering Doctorate (EngD) may be considered as an exemplifying academic award for CEng for an individual holding an accredited Bachelors degree with honours in engineering or technology. This change applies to an EngD that is accredited since 1 March 2012 according to the principles below, and in line with the Registration Code of Practice.

Professional engineering institutions' experience of accrediting Masters degrees and the publication in 2011 of learning outcomes for Masters degrees paved the way for the development of a process for accrediting the EngD. Data from EngD course leaders gave a high level of confidence that an EngD programme could demonstrate the AHEP learning outcomes for Masters degrees other than the integrated MEng.

Professional engineering institutions are encouraged to consider requests to accredit the EngD.

### **2. Aim and scope of this guidance note**

This guidance is intended primarily for professional engineering institutions and their representatives who are carrying out accreditation of EngD programmes.

Institutions may also wish to use this as a basis for their own guidance to academic institutions and to accrediting panels.

### **3. Key principles and reference points**

When accrediting EngDs, the arrangements for the accreditation of HE programmes set out in the Engineering Council's Registration Code of Practice, paragraphs 22-31, apply.

Professional engineering institutions must ensure that accreditors are familiar with the EngD and its particular features. A briefing note about the EngD is included towards the end of this annex to assist members of visiting panels and accreditation committees.

Accreditation should be carried out using the following reference points:

- The principal reference point is the learning outcomes for Masters degrees. (Accreditation of Higher Education Programmes: [www.engc.org.uk/ahep](http://www.engc.org.uk/ahep)).

Note especially the references in the preamble to the varying nature and purpose of such degrees, the opportunity to study in greater depth and the multidisciplinary nature of some degrees. These considerations also apply to the EngD.

Other reference points are:

- The Dublin Descriptor for third cycle qualifications: [http://www.uni-due.de/imperia/md/content/bologna/dublin\\_descriptors.pdf](http://www.uni-due.de/imperia/md/content/bologna/dublin_descriptors.pdf)

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- 'Doctoral degree characteristics' published by the QAA in September 2011: [http://www.qaa.ac.uk/en/Publications/Documents/Doctoral\\_Characteristics.pdf](http://www.qaa.ac.uk/en/Publications/Documents/Doctoral_Characteristics.pdf) where the doctoral degree, including the EngD, is described as being at level 8 (SCQF level 12)
- The UK-SPEC standard of competence and commitment for CEng: [www.engc.org.uk/ukspec](http://www.engc.org.uk/ukspec)

When reviewing an EngD for accreditation as an academic award, accreditors are reminded that the programme is not expected to provide full competence for CEng. The assessment is whether or not the programme is delivering knowledge and understanding which will underpin the CEng standard.

Evidence collected from UK EngD providers indicated that it ought to be possible for an EngD to deliver the engineering-specific learning outcomes and the additional general skills at the required level.

Accreditors may wish to pay particular attention to: the nature of the project, the balance between the management and more technical engineering content, the integration of learning with the research project objectives and application, supervision arrangements for the Research Engineer (RE), and systems for ensuring that the RE is allowed sufficient time to undertake any university modules and prepare for exams.

There is generally more industrial input in an EngD compared to a Masters degree. Accreditors should satisfy themselves that the attainment of knowledge and understanding is not lessened by the emphasis on the development of competence.

In line with normal accreditation practice, there will be a meeting with REs; it is also useful to meet with some employers of REs.

In addition to material normally considered during degree accreditation, accreditors may find it useful to refer to:

- Monitoring reports and mid-term reviews provided for funding agencies such as the EPSRC
- The EngD validation document that an Industrial Doctorate Centre would have had to prepare for the university, showing the learning objectives.

### **Briefing note: The Engineering Doctorate**

The Engineering Doctorate (EngD) was established in the UK in 1992 following the Parnaby Report's conclusion that an alternative was required which would be distinct from, and complementary to, the traditional existing PhD. The EngD is more vocationally focused and suited to the needs of industry. It is an alternative to the traditional PhD for students who want a career in industry.

The EngD is open to articulate and highly motivated graduates with a good degree in engineering or another relevant discipline. The four-year programme combines PhD-level research projects with taught courses, and students spend about 75% of their time working directly with a company, focusing on the corporate need. EngD students, known as Research Engineers (RE), undertake technical and management training, assessed as part of the degree, to help their professional development. Their PhD-level research projects are jointly supervised by the university and a company, and aim to help the performance of the company.

The EngD has become well established over the past 20 years as a consequence of the EPSRC-funding of Industrial Doctorate Centres (IDCs) which are exemplars of HE-industry collaborations. Many IDCs are partnerships between universities and have a diversity of industrial partners and research programmes. More than 270 companies are currently sponsoring about 1000 active REs. EngDs are also offered outside of the EPSRC IDC system. Some attract significant private sector support and funding from other sources such as European Union grants.

There is a strong emphasis on leading-edge research in a business context and development of competence that equips the RE for a range of roles in industry. The programme contributes to a body of knowledge on a particular technical discipline, industrial sector or multidisciplinary theme. Of the four years, approximately 25% can be recognised as 'learning' to at least Masters level via taught courses and 75% of the time is spent working directly with the collaborating company. Many individual REs spend a significant amount of their time in-company.

The EngD is at least equivalent to the intellectual challenge of a PhD (level 8 in the qualifications framework for England/Wales and N Ireland; level 12 in Scotland), but is enhanced by the provision of taught material in both management and technical areas.

### **What to expect of an RE seeking CEng status**

The following expectations for RE competences are set out by EPSRC and are applicable to any EngD:

- Expert knowledge of engineering/science areas relevant to their research project;
- An appreciation of industrial engineering and development culture including:
  - the role of research;
  - product development;
  - marketing awareness;
  - environmental impact;
- Project and programme management skills - financial planning and control;
- Teamwork and leadership skills - communication skills – oral, written, technical, non-technical;
- The ability to apply skills/knowledge to new and unusual situations;
- The ability to seek optimal solutions to complex or multifaceted problems.

IDCs must ensure that there is appropriate support for the RE which typically includes the academic supervisor and an industrial supervisor. Preparation for the chartered professional review is supported in a variety of ways, for example, there may be a professional mentor.

EPSRC suggests that an RE keeps a log book of all their work including attendance on taught courses and the progress of their project work. This could be a helpful inclusion within an individual's evidence of professional development. Each RE is subject to periodic progress reviews, copies of which could form part of the evidence that the CEng standards have been met. The RE may be registered on a professional engineering institutions' development monitoring system.

### **Reference**

The EPSRC Industrial Doctorate Centre Scheme: Good Practice Guidance

<http://www.epsrc.ac.uk/newsevents/pubs/the-epsrc-industrial-doctorate-centre-scheme-good-practice-guidance/>

## **Annex D: Accreditation of academic programmes outside the UK**

*This annex provides information that is additional to that in the main guidance note on academic accreditation and is specific to programmes outside the UK. Both should be referred to.*

### **Introduction**

Accreditation of academic courses by professional engineering institutions that are licensed to do so is not restricted to provision within the UK. There are three key parameters for academic accreditation outside the UK:

- The same standard and learning outcomes (Accreditation of HE Programmes) apply to all programmes put forward for accreditation regardless of the provider and location of delivery
- The Engineering Council's Registration Code of Practice (Registration Code) 22 – 31 set out what professional engineering institutions should specify in their detailed criteria and procedures for accreditation
- The Rules and Procedures of the International Engineering Alliance.

### **Aim and scope of this guidance note**

This guidance is intended primarily for institutions that wish to undertake accreditation outside the UK. It focuses on generic principles, rather than including detailed procedures, and does not restrict an individual institution from making its own decisions about non-UK accreditation. Institutions are encouraged to develop their own policy about accreditation outside the UK. They may wish to use this guidance note as a basis for their own guidance to academic institutions and to accrediting panels.

References to useful documents appear within the document and are also listed at the end. References to relevant sections from The Rules and Procedures of the International Engineering Alliance are also included within the document.

### **The basis for agreeing to accredit or declining a request**

Professional engineering institutions are encouraged to be clear and transparent about the basis for agreeing to accreditation requests from non-UK academic institutions, as well as understanding the reasons why this is being sought. Some have a policy or checklist to assist them in making such decisions.

Considerations might include:

- Whether the awarding institution is within an area of strategic interest
- The likely tangible benefit to membership and hence registration
- The existence of an active local/regional group to assist with briefing and assessing
- The ability to resource it, and in a timely way, which may be faster than in the UK
- Preparedness to deal with local customs and politics
- Ability to maintain the relationship between visits.

They may wish to emulate the Engineering Accreditation Board's (EAB's) practice of seeking more initial data from a non-UK institution. This assists in deciding how to deal with the accreditation request and might cover: staff and student membership of UK professional engineering institutions; the programme specifications; details about facilities; and details of any local/ national accreditation and accreditation agencies.



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Where possible, it is prudent to undertake preliminary independent research about the quality of the awarding institution and/or the education provider. This is essential if this is a private provider and unknown to the professional engineering institution.

Particular attention should be paid to programme content and how this maps to the published learning outcomes, albeit in a local context. The requirement for this should be clearly stated in advance.

Some institutions offer a local briefing or undertake a pre-accreditation visit. This may involve fewer representatives than a full visiting panel and may involve locally-based individual(s) appointed by the institution. This can be very useful in revealing areas of concern which the awarding institution may be asked to address before a formal visit can be confirmed.

Professional engineering institutions should be aware of the possible conflict of interest between coaching (for accreditation) versus assessment. Individuals involved in providing guidance and advice to a university during programme development should not also carry out the accreditation assessment.

### **Resourcing issues and strategies for achieving efficiency**

Non-UK academic accreditation is more resource-intensive than UK accreditation in areas such as staff time; dealing with logistical issues such as travel and sometimes security checks on non-UK personnel; tailoring the visit schedule to meet local needs and constraints; the flexibility to be able to deal with any complex issue(s) at the time rather than later; the need for a larger pool of accreditors; and increased direct costs.

The requirement to visit, set out in the Registration Code paragraph 27, applies to UK and non-UK accreditation. This includes visiting the awarding institution and all providers involved in delivering the programme; and when the awarding institution offers multiple versions of a programme in different locations, visiting each location for which programme accreditation is sought.

The revision mentions the possibility of not undertaking a visit in certain defined circumstances. Further guidance on this matter is being developed.

The Engineering Council's RSC has agreed that whether or not to make a charge for accreditation visits is a matter for licensed accrediting institutions to decide upon individually, in accordance with their business plans. For non-UK accreditation, it is common practice for them to seek to cover the full direct costs of the visit.

Joint accreditation visits are an option, with or without EAB involvement. A professional engineering institution may wish to make use of another institution's visit report as part of the submission, or to assist in deciding whether or not to undertake a visit.

### **The composition of accrediting panels**

The same requirements apply as for a UK visit in terms of the panel's balance and experience, and their training. In general, only senior or experienced accreditors should be used. The accompanying staff member may be viewed by the non-UK university as a representative of the Engineering Council as well as their own institution, and may need to be briefed accordingly.

## **Awareness of different practice**

The local context in which non-UK programmes are delivered is likely to differ from the UK HE environment in a variety of ways, for example: the primary and secondary education system; qualifications framework; student funding; health and safety culture; quality assurance; data protection issues; and the legal basis under which an HEI operates. Further examples of what to look out for are available on the EAB website.

There is unlikely to be an external examining system like that in the UK. It may be possible to secure independent scrutiny of the courses by other means and this should be investigated with the awarding institution. Where different systems of classification such as Grade Point Average are used, accrediting institutions will need to ensure that such matters are included in their training for accreditors.

## **Dealing with programmes that are not delivered in English**

There is some limited experience of this amongst accrediting institutions. In general, it is challenging and involves a great deal of work for the university and the visiting panel, and should not be undertaken unless it can be properly resourced.

The awarding institution will need to provide its submission and associated material in English. During the visit, arrangements need to be in place to enable the visiting panel to sample student work and project reports, and to enable the translation of new data or documents, in case these are requested by the panel.

## **Working with local accrediting bodies**

The Engineering Council is a signatory to the various international accords, which also apply to the professional engineering institutions by virtue of the licensing process.

Arrangements for accreditation, rules and good practice for signatories to international accords is set out in the *International Engineering Alliance (IEA): Educational Accords [Rules and Procedures document](#)*. These cover collaboration between accord signatories, arrangements in a non-accord jurisdiction, what to take into account when agreeing to undertake accreditation in a non-accord jurisdiction, expectations for the conduct of reviews, working in developing countries, and how to deal with differentiated or undifferentiated programmes. The applicable sections are listed below:

### **Dealing with specific situations, see:**

- B.8 Engineering programs accredited by accord signatories in non-accord jurisdictions;
- B.8.1 programme implemented without differentiation in two different jurisdictions, each with accrediting bodies who are signatories to the accord;
- B.8.2 differentiated programme offered within the jurisdiction of a signatory;
- B.8.3 undifferentiated or differentiated programme offered within a non-accord jurisdiction;
- B.8.4 in applying the accords, a further allowed exception is defined for accreditation of engineering programs offered by non-accord jurisdictions.

## **Section C: Principles of good practice for accord signatories working internationally**

The principles of good practice in Section C8 also apply in non-signatory jurisdictions and encourage communication with local accreditation agencies where these exist, see:

- C.8.1 Principle 1: considerations for accord signatories when determining to undertake quality assurance evaluations in another jurisdiction not a member of the accord
- C.8.2 Principle 2: expectations for conduct of evaluative services
- C.8.3 Principle 3: quality assurance of online and web-based instruction and programs
- C.8.4 Principle 4: responsibilities to students and colleagues
- C.8.5 Principle 5: working in jurisdictions which are developing countries

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Note that the Washington Accord applies only to accreditations conducted by the signatories within their respective national or territorial boundaries. The Sydney and Dublin Accords make some allowance for accreditation of programmes delivered in multiple jurisdictions. See especially paragraphs 3 and 4 in the section titled 'Sydney Accord: Recognition of Equivalence of Educational Base for Engineering Technologists' and paragraphs 15 and 16 in the section titled 'Dublin Accord: Recognition of Equivalence of Educational Base for Engineering Technicians' of the [IEA Rules and Procedures](#)

Professional engineering institutions should ensure that the awarding institution is aware of these criteria from the outset.

Communicating with the local accreditation agency helps to establish whether the programme is eligible for accreditation in the home jurisdiction, whether the agency accredits the type and level of programme, and to a similar profile. Note that some signatories do not accredit engineering technologist or postgraduate programmes. Others have requirements for non-engineering content which may put a programme outside the scope of the home agency while potentially meeting the UK criteria.

It is good practice to invite the local agency to provide an observer to participate in the visit. Some signatories require the awarding institution to obtain the agreement of the home accreditation agency.

The Engineering Council will collate annually details about non-UK engineering accreditation activity and share this amongst professional engineering institutions via EAB. In addition, those institutions are encouraged to keep the Engineering Council informed about planned non-UK accreditation activity. Where an institution does not have a relationship with the relevant agency, the Engineering Council can assist in establishing contact.

### **ACAD listing**

Unless there is a good reason not to, ACAD records will distinguish between degrees offered by a UK awarding institution within and outside the UK. In the case of multiple campuses, if a specific location has not been visited and is therefore not included in the accreditation, this should be made clear in the public note on ACAD.

The existence of any partnership arrangements (eg franchise or collaborative) should be clear from the accreditation submission, and the accrediting institution should seek clarification if there appears to be any ambiguity, for example about which campus is named on a degree certificate.

### **Useful links**

UK-SPEC: [www.engc.org.uk/ukspec](http://www.engc.org.uk/ukspec)

Accreditation of HE Programmes: [www.engc.org.uk/ahep](http://www.engc.org.uk/ahep)

IEA Protocols: [http://www.ieagreements.org/Rules\\_and\\_Procedures.pdf](http://www.ieagreements.org/Rules_and_Procedures.pdf)

Engineering Accreditation Board (EAB): [www.engab.org.uk](http://www.engab.org.uk)

Engineering Council Registration Code of Practice (Registration Code):  
<http://tinyurl.com/nmec4c5>