Accreditation of HE Programmes (AHEP) 3rd edition 2014: Summary of key changes from the previous edition

During 2013, the Engineering Council undertook the five yearly review of several key standards-related documents including AHEP. Key stakeholders including professional engineering institutions, the HE community and employers were consulted as part of this review. All the feedback was carefully considered, and a revised (3rd) edition was published in May 2014. In keeping with the strong support for the previous edition, un-necessary changes have been avoided, and most of the document remains unchanged. This overview of the key revisions is intended to assist institutions undertaking HE accreditation, (in particular their accreditation panels and committees), engineering HE staff, and others. Professional engineering institutions are likely to use this overview to develop their own revised guidance and when interpreting AHEP for their own sector/discipline.

The 3rd edition was published on 20 May 2014 and is available on the Engineering Council's website at http://www.engc.org.uk/ahep Hard copies are available on request.

The Engineering Council's Board of Trustees approved a two year transition period to enable universities to make any necessary changes. Taking account of the academic year, all degrees taught from September 2016 should align with the revised AHEP. Accrediting panels undertaking visits after May 2014 and before September 2016 will explore with engineering HE staff their progress towards this implementation.

Layout
The key changes are:
A re-ordering of the types of degree to: (Bachelors and Bachelors Honours accredited for IEng; Bachelors Honours programmes accredited for CEng, Integrated Masters MEng and other Masters),

The inclusion of a complete set of learning outcomes for each of the four types of accredited degree. In the previous edition, these were presented as variations from the BEng (Hons) degree.

The inclusion of the introductory sections about each type of degree (preambles) as an Annex and in the form of a table, enabling comparisons to be made more easily.

These changes are intended to make the document easier to use.

Introduction
This is broadly unchanged. It has been edited to remove repetition. Foundation degrees are now covered here rather than with Bachelors degrees accredited for IEng. One additional term of interpretation - 'complex' – is included and defined. This makes explicit the alignment with Washington Accord Graduate Attributes.

Preambles about each type of degree
The preambles for undergraduate degrees accredited for CEng include differentiation in the requirements about 'knowledge informed by the forefront of the discipline': 'much' for Bachelors Honours and 'most' for the MEng.

The areas of learning and learning outcomes
A key change is the incorporation of most of what were previously entitled 'general learning outcomes' into the five areas of specific learning outcomes, in order to strengthen their position. A few that couldn't easily be incorporated form a new sixth area 'Additional general skills' which is broadly the same across all types of degree.

The five specific engineering/technical areas of learning remain the same with these exceptions:

- a minor title change to shorten the first area to 'Science and Mathematics
- the addition of 'legal' and 'ethical' within the area of learning 'Economic, legal, social, ethical and environmental context', to reflect the increasing importance of these areas.

All five now have introductory contextual paragraphs; previously these were presented only for 'Design' and for 'Engineering practice'.

In places, the use of 'critically evaluate' distinguishes the MEng from the Bachelors (Honours).

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For Masters degrees other than the MEng, some lists of examples are replaced by ‘in the context of the particular specialism’.

Science and mathematics: ‘statistical methods’ is included.

Engineering analysis: ‘an ‘integrated approach to problem solving’ is added where a systems approach is mentioned. Computational methods are mentioned for undergraduate degrees accredited for CEng.

Design: this area is strengthened for degrees accredited for IEng as the previous requirements were felt to be rather weak. This area is also where some of the general skills have been incorporated, and where some requirements have been added or strengthened, depending on the type of degree, principally in relation to:

- external needs (business, customer and users)
- context (wider engineering and public)
- constraints, where ethical, security, intellectual property (IP) and codes of practice are explicitly listed
- problem-solving skills and technical knowledge
- communication of work
- working with information that may be incomplete or uncertain.

Economic, legal, social, ethical and environmental: depending on the type of degree, references to professional codes, ethical conduct and social context have been added or strengthened.

‘Project management’ has been added for undergraduate programmes accredited for CEng; and ‘change management’ has been added for MEng. For other Masters degrees, ‘knowledge and understanding of management and business practices’ is included.

Commercial risk is explicitly mentioned for all degrees; the requirement (awareness, knowledge, evaluation etc) varies according to the type of degree.

IPR is included for all undergraduate programmes.

The inclusion of ‘legal’ in the area of learning and the requirement for an awareness of legal constraints are not intended to require specialist legal modules.

For undergraduate programmes accredited for CEng: risk issues have been enhanced to include risk assessment and risk management.

Engineering Practice: programmes accredited for IEng: an introductory context has been added which is the same as that for other undergraduate programmes.

Undergraduate programmes accredited for CEng: The previous reference to IP (which is now covered elsewhere) is generalised to ‘relevant legal issues’.

This area of learning now incorporates the general skills related to team roles (member or leader) and personal responsibility, for all types of degree.

Additional general skills: these are almost the same across all types of degree and are limited to those which weren’t easily incorporated within the previous five areas of learning. However, this does not prevent their inclusion there should providers wish.

Requirements related to personal plans of work, and exercising initiative and personal responsibility, which were previously included only for MEng programmes, are included for other undergraduate programmes.

New inclusions
A glossary of terms that incorporates relevant terms from the re-issued UK-SPEC as well as terms more specific to AHEP.

Information about accrediting EngDs.

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