

The House of Commons Education and Skills Committee

Call for Evidence: The Bologna Process

Submission by The Royal Academy of Engineering

- 1 The Academy (Note 1) is becoming increasingly concerned by reactions to the Bologna process, which could jeopardise the current international standing of the UK integrated Masters degree in Engineering (MEng) by denying it recognition as a fully fledged first and second-cycle qualification.
- 2 Our position is that UK engineering degree programmes are more intensive and fast paced than in Europe enabling us to deliver the academic outcomes required to support professional recognition in four years while the majority of European engineering diploma courses take five or more years. One concern is the continued emphasis by our continental colleagues on use of the European Credit Transfer System (ECTS). This promotes student workload, and hence course length as the main criterion for comparability of programmes. It would be preferable to use the more rational approach of assessing the learning outcomes themselves, based on agreed benchmark statements, which are independent of the mechanisms, academic or vocational, used to achieve them.
- 3 In preparation for the EU Ministerial Meeting in London next May it is hoped that the Bologna Follow Up Group (BFUG) Secretariat will take full advantage of this opportunity to press for the adoption of learning outcomes alone as the ultimate long-term basis for the European HE Qualifications Framework
- 4 Meanwhile, Universities UK have reminded universities (Europe Note E/05/12) that the current Ministerial agreement regarding minimum levels of ECTS Credits specifies a minimum of 270 credits, of which a minimum of 60 must be at second cycle level (Masters) which integrated Masters degrees such as the MEng to qualify as first and second cycle combined programmes. Their advice is inter alia to restructure the programme to extend the fourth year to a full 12 months, which may include placements. The (as yet) small number of UK degrees which have done this can boost the ECTS second cycle rating to 90 credits within a total of 270.
- 5 From our recent *Engineering Education in the 21st Century* (Note 2) survey the Academy is aware that there is some strong opposition in many of our university engineering departments to our taking this route. They argue as follows. First and foremost the UK currently achieves an equivalent (if different) route to professional formation by teaching a more compact syllabus in an integrated manner. This position should be defended. To divide this into two cycles is unnecessary and inefficient. It also requires extending our courses to meet the ECTS requirements at the minimum level. This will give the impression that the UK considers that its courses need modification (ie are not of the same standard as European degrees) and even then do not meet the fully fledged Bologna requirements (of 120 ECTS second cycle credits) of the continental university courses. The universities are particularly concerned that this will affect their ability to attract overseas students in future.

- 6 More significantly it is clear from our latest follow up questionnaire to every university engineering department in the UK that few intend to take any positive action to conform to the Bologna process until they receive specific directions from either their university (through QAA, UUK or HEFCE) or from the engineering institutions licensed by EC^{UK} to accredit engineering degrees. Currently all Engineering degrees are accredited in accordance with UKSPEC and the EC^{UK}/QAA Engineering Degree Benchmark Statements in order to gain professional recognition (Note 3). It is, therefore, a matter of paramount importance to issue detailed advice on how to present these requirements in such away as to be "Bologna compliant". Currently no UK body has been specifically tasked, or made accountable, for ensuring that this is done.

Notes

- 1 The Royal Academy of Engineering [RAEng] brings together over 1200 distinguished engineers, drawn from all the engineering disciplines. Its aim is to promote excellence in engineering for the benefit of the people of the United Kingdom. (www.raeng.org.uk)
- 2 See (www.raeng.org.uk/henleyreport).
- 3 Responsibility for UK engineering qualifications (and their international recognition) rests with the Engineering Council UK (EC^{UK}). The UK-SPEC, the UK Standard for Professional Engineering Competence, lays down the standards for Chartered Engineer (CEng), Incorporated Engineer (IEng) and Engineering Technician (EngTech). As regards Chartered Engineer status this requires either a (nominally four-year) Integrated MEng degree or a three-year BEng(Hons) with further learning at the Masters level. These are based solely on output standards laid down in the EC^{UK} Engineering Subject Benchmark Statement (which has also been adopted by the Universities UK (UUK) Quality Assurance Agency (QAA) for UK engineering degrees). The UK graduate then follows a course of approved industry based Initial Professional Development prior to being granted CEng status. International recognition is gained through the Washington Accord, Sydney Accord, Dublin Accord, the International Register of Professional Engineers, the APEC (Asia-Pacific Economic Cooperation) Engineer Register, the Transatlantic Economic Partnership and in Europe through FEANI (European Federation of National Engineering Associations) which accords professional recognition to members' qualifications including qualifications required by the European Mobility Directive.