

ACCREDITATION OF UNIVERSITIES

Discussion Paper

Introduction

The proposed IAA International Actuarial Education Programme (IAEP) is expected to rely to a significant extent on universities to provide actuarial education and examinations. Within each country universities differ greatly in quality and reliability, even in mainstream subjects. Internationally there is likely to be even more variability and there will be huge differences in capacity to teach specialist actuarial subjects, especially in countries where the actuarial profession is just beginning. If the IAEP is to be fit for purpose, it will be essential to achieve a reasonable level of consistency in educating actuaries to be technically competent and professionally reliable. In order to make this a reality, the IAA must exercise appropriate quality control over the outputs from the IAEP, and it follows that it will be necessary to exercise a significant degree of quality control over the universities involved in the programme.

A number of actuarial associations already accredit universities, either by means of an explicit and active process or more passively through accepting the degrees or diplomas offered by certain universities as an appropriate route to qualification as an actuary, or for certain parts of the process. Accreditation may relate to the whole qualification process or to defined parts of it, perhaps with some universities being accredited for more than others. Some associations which organize their own professional examinations as the route to qualifying as an actuary allow universities an *exemption* rather than an *accreditation* process. This implies that individual students may obtain exemptions from individual professional examinations (in other words be deemed to have passed them without actually sitting them) on the basis of their performance in the university examinations and assessments. An exemption process is more amenable to detailed quality controls, since the universities can be measured against the benchmark of the profession's own examinations, with the clear objective that the university route should be (and be seen to be) of equivalent standard to the professional examination route.

Since it is unlikely that the IAA will put in place (for the foreseeable future) a full set of professional examinations in all subjects, against which universities could be directly benchmarked, it will be necessary to develop an accreditation process rather than an exemption process, at least for those subjects where the IAA does not offer any examinations. An exemption process may well be possible and appropriate for the subjects in which the IAA decides to offer a professional examination route.

Level 1 accreditation

It is suggested that there could be a number of different levels of accreditation by the IAA, with an increasingly stringent process being applied in respect of the more actuarial and advanced the subjects. Thus Level 1 accreditation might cover only the four subjects of the IAA Core Syllabus which are not uniquely actuarial:

- financial mathematics
- probability and mathematical statistics
- economics
- accounting

These are subjects in which it is fairly safe to assume that the IAA would not formally offer examinations on an international basis, but would rely entirely on university provision, with an alternative route provided by accreditation of the corresponding examinations of certain Full Member Associations of the IAA.

For Level 1 accreditation the requirements might be relatively simple, so that they could realistically be met by a good number of universities around the world, including some universities in actuarially developing countries. The requirements for accreditation of a course or programme might include the following:

- the course or programme must include the relevant subjects of the IAA core syllabus;
- the material covered must include the majority of the curriculum defined by the IAA for each subject;
- the teaching and learning strategies must be appropriate for each subject;
- the assessment strategies must be appropriate for each subject;
- the university must be able to guarantee that students proposed as having met the requirements have attained a satisfactory level in each of the subjects covered by the accreditation agreement, or else have in place a process for granting them passes only in certain subjects that have been passed at a high enough standard;
- the standard for a pass in IAA subjects for the purposes of the IAEP may be set higher than would be the case for the university's own courses, where averaging across subjects may be permitted and a pass may be granted for a relatively modest level of achievement;
- the university must have good systems of quality assurance for these programmes.

In addition, the IAEP may require some general requirements to be met to ensure that universities are serious in applying for accreditation and that they are genuinely interested in developing actuarial education. These criteria will apply with much greater force to the higher levels of accreditation:

- the programme offered is identified as including actuarial science;
- at least some of the university faculty should have exposure to actuarial thinking and practice and understand the principles of actuarial science and the role played by actuaries in financial institutions;
- the university should have an active relationship with the local actuarial association;
- the teaching faculty and the leadership of the relevant department of the university should demonstrate an interest in the actuarial profession and in the provision of actuarial education;
- the teaching faculty and the leadership of the relevant department of the university should demonstrate an interest in and commitment to research in areas relevant to the actuarial profession and actuarial science and its applications;
- the teaching faculty and the leadership of the relevant department of the university should be in touch with actuarial employers to ensure employability for the students graduating from the programme.

It will be appropriate to charge the universities a fee for accreditation. This will serve to cover the costs of the accreditation process (see below) and will also ensure that the university is serious about developing actuarial education. The fee should in principle be set at a level to ensure that the costs of the accreditation process are covered. However, provision may have to be made for the accreditation fees to be subsidized in some low income countries, with the cost of this subsidy being a charge on the donor monies for the particular country or region.

Level 2 accreditation

The second level of accreditation would cover, in addition to the Level 1 subjects, the actuarial technical subjects:

- statistical methods
- actuarial mathematics
- modeling

Since the IAEP may support the development of international professional examinations in the specifically actuarial subjects, such as actuarial mathematics and statistical methods (which is really applied statistics in actuarial applications), it is possible to envisage two types of Level 2 accreditation. The first would be full accreditation to teach and to examine the three 'actuarial' subjects in addition to the four 'non-actuarial' subjects. The second would be full accreditation to teach and to examine the four Level 1 subjects and Modelling and accreditation to teach the additional 2 'actuarial' subjects, with students being required to sit the IAA examinations in these two subjects (or have in place an individual exemption process for these two subjects).

For accreditation at this level it would be even more important to be satisfied that:

- the course or programme includes the relevant subjects of the IAA core syllabus;
- the material covered includes the majority of the curriculum defined by the IAA for each subject;
- the teaching and learning strategies are appropriate for each subject;
- the assessment strategies are appropriate for each subject;
- the university is able to guarantee that students proposed as having met the requirements have attained a satisfactory level in each of the subjects covered by the accreditation agreement, or else have in place a process for granting them passes only in certain subjects that have been passed at a high enough standard;
- the standard for a pass in IAA subjects for the purposes of the IAEP may be set higher than would be the case for the university's own courses, where averaging across subjects may be permitted and a pass may be granted for a relatively modest level of achievement;
- adequate systems of quality assurance are in place.

Level 3 accreditation

The third level of accreditation would include the subjects covered by Level 1 and Level 2 accreditation but would also cover the two more advanced actuarial practice subjects:

- investment and asset analysis
- actuarial risk management

For this level of accreditation it would be necessary to demonstrate, in addition to the above criteria, a significant amount of professional actuarial input into the development and teaching of the programme and teaching components, involving practising qualified actuaries.

Apart from the specific requirements relating to capability to teach these subjects, university departments seeking accreditation at this level would be required to demonstrate:

- a commitment to support the actuarial programme on a long term basis and continuing interest in the provision of the relevant subjects and the pursuit of a relevant research agenda;
- a significant in-house actuarial capability and access to external resources in terms of practising actuaries willing to support the programme by teaching or running seminars;
- employment at the university of at least two full-time or part-time academic staff who are fully qualified actuaries, preferably with practical business experience;
- a willingness to work with the local actuarial association to enhance actuarial education and to promote the profession;
- a willingness to work with the profession to support career opportunities for students through actively engaging with potential actuarial employers.

Accreditation process

Universities wishing to be accredited by the IAA for the IAEP would need to go through a formal process of submission, review and approval, followed by an ongoing monitoring process. An initial submission for accreditation might be required to include some or all of the following material:

- i) Aims and objectives of the programme and a statement of why the university wants to offer an IAA accredited actuarial programme;
- ii) Teaching and learning and assessment strategy in order to demonstrate how the aims and objectives of the programme will be met;
- iii) Syllabus content including matching against the IAA syllabus and curriculum and an explanation of variances;
- iv) Assessment and grading processes with examples of assessments and examinations, including a summary of current experience of offering examinations in relevant subjects. Assessment should be at least 70% by unseen written examinations and the whole assessment process must be capable of demonstration as meeting IAA requirements and standards;
- v) Existing and planned links with employers including placements in order to demonstrate employability of graduates within the profession;
- vi) A statement of the resources available for students on the programme to demonstrate that the required standard of output can be achieved. The statement should refer to:
 - Staff CVs
 - IT facilities and student access to them
 - Library and related facilities
 - Student workloads
 - Contact hours per actuarial subject
- vii) Entry profiles of students to the programme to enable comparison between universities on entry standards;
- viii) Any available statistics on employment records of past students as a measure of relevance of the programme to the profession;
- ix) A statement on how the general requirements for accreditation are met.

Review process

Applications for accreditation would be reviewed initially by a Review Team. This process might be subcontracted by the IAA to different actuarial associations on a regional basis. The Review Team would assess the application as submitted in paper/electronic form, would seek further information as necessary from the university in question and would in most cases carry out an on-site visit to the university. The visit would include some or all of:

- i) A meeting with the management of the Faculty/School/Department offering the programme to review more strategic issues e.g. resources.
- ii) A meeting with the Programme Team to discuss issues of concern from the documentation submitted.
- iii) A meeting with students (on comparable courses).
- iv) A meeting with employer contacts.
- v) A review of resources available for the programme.

The Review Team would then report to the IEPC (or a specific University Accreditation Sub-committee) or other appropriate body responsible for making decisions on

accreditation and making recommendations to the governing body of the IAEP. The report would include a review of whether the university in question can meet the accreditation criteria and a recommendation as to whether to approve, in whole or in part, the request for accreditation, together with any conditions or requirements to be met and provisions for review.

Monitoring

The IAA would require annual submission of a report from the university about the programme and would carry out a monitoring visit to the university at least every 5 years using a similar agenda to the initial review process above, with a report being produced and considered by the University Accreditation Sub-committee. This visit would, in particular, meet representatives of students and employers and would review progress in meeting any recommendations made as a result of the initial accreditation process. The length of time between visits would be on the recommendation of the University Accreditation Sub-committee.

The annual report on the operation of the programme would be required to demonstrate standards achieved on the programme. This annual report should also include general information on quality assurance at the university from any relevant external agencies, should give an account of the operation of the programme and should report any substantive changes to the programme, syllabus or teaching staff making a significant contribution to the programme. It should include comments on standards and whether these have changed in any way.

The annual report should include the following data:

- Number of students on programme each year.
- Number of students completing the programme each year.
- Distribution of marks on different assessments and examinations
- Pass mark and mark for distinction.
- Details of input to courses from insurance practitioners each year
- Employment statistics of students completing the programme in the previous year.

Comments would also be sought from other local stakeholders, including regulators, the local actuarial association and employers of actuarial students from the programme.

Withdrawal of accreditation

Procedures should be documented for withdrawal of accreditation from a university or downgrading the level of accreditation. An appeals process should be provided.

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