



SOCIETY OF ACTUARIES

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# E & E report offers clearer picture of proposed redesign

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**A** clearer picture of the ultimate design of the new education and examination system is emerging as the Board Task Force on Education readies its proposal for submission to the Board of Governors. Since the 1994 creation of the task force, certain key principles about the basic philosophy of the new system and its goals have guided the development process.

The focus of the project has been to develop a system of education that teaches the application of actuarial science and its principles. This will broaden actuarial opportunities in the future.

The August mailing to all SOA members reports that some of the most important development milestones have been reached. In addition to presenting the design of the courses in the new system, the report addresses:

- The philosophy of the professional development course
- The lists of preliminary subjects a candidate will be assumed to have taken from other educational sources
- Principles to guide awarding of credit during the transition phase between the old and new systems

Responses to a survey included in the August report were due October 4, and they will be carefully reviewed, said Marta Holmberg, SOA education executive. However, unless responses to the survey yield big surprises about the thinking of the membership, the task force expects to continue development more or less along current lines, say Holmberg and Cecil Bykerk, chair of the task force.

## Professional development

A key step in the development process was the establishment of the professional development section of

the curriculum. The intention of the task force was to move candidates away from the "education through examination tradition" toward a more interactive and, the task force hopes, more meaningful learning experience.

Under the proposal, 50 hours of education, 25 of which must come from SOA-approved activities such as seminars and workshops, have to be completed in a two-year period. Candidates must first select an FSA to act as an advisor/mentor through the process. Bykerk said the task force has anticipated some of the potential snags early. "Candidates who don't have access to an advisor can apply to the SOA, which will assign one. The advisors will guide candidates in designing their own study programs."

Bykerk also said the task force anticipates some candidates may need examples of acceptable study plans. "We intend to develop prototype plans to aid them," he said.

The chief difficulty, according to the report to members, is "the difficulty of proving the absolute quality of the knowledge level attained by each and every candidate. The selections made by each candidate will vary, but the validation requirements and the professionalism required of the candidate should ensure that each candidate meets an acceptable standard."

Holmberg said the task force is considering some type of oral exam, with the candidate defending his or her professional development work as the culmination of the process. Up to 50% of the required professional development hours may be earned through an additional Course 8, the Chartered Financial Analyst designation, the Enrolled Actuary-2 exam, or a significant research paper.

## Preliminary courses

From the start, the task force has intended to eliminate testing of subjects candidates will learn elsewhere and limit testing to subjects that form the essentials of an actuary's education. With the August report, the task force has determined what subjects fall into this "preliminary" category.

In math, these preliminary subjects are calculus, probability, introductory micro- and macro-economics, linear algebra, differential equations, numerical analysis, and statistics. In business, they are principles of marketing, principles of management, introductory accounting, business law, and applied computer skills (basic analytical tools such as spreadsheets).

"It isn't that you don't need these subjects," said Holmberg. "We are assuming a knowledge of the math subjects on the first few exams and a knowledge of the business courses in the later exams. Knowing these subjects will be very helpful in passing the exams, but no longer necessarily explicitly tested by us."

To attract candidates from a variety of backgrounds in addition to actuarial science and mathematics, the task force has also changed the first two exams. "The first two examinations may well change the mix of candidates writing the early exams," the report states. "For example, pure math students will see a change early in the process, with the new emphasis on risk assessment and risk management. In addition, more business and finance students may start taking these exams."

In response to reaction from the membership, the task force has changed its original intention to test math skills to a lesser extent than the current exams 100 and 110 do. Instead, the proposed Course 1 exam will put

questions within the context of risk assessment and management, but calculus and probability will be explicitly tested as rigorously as they are now.

### Transition principles established

“Keep taking required courses,” said Holmberg in answer to the most asked question by candidates already writing exams. Required courses are expected to correspond somewhat to the new courses being offered and therefore, credit will be transferrable.

Other general principles for giving credit for previously taken courses and exams during the transition phase are:

- New and old courses will not be concurrently administered.
- Credit will be given for new courses that correspond to a suitable extent with old ones.
- Electives generally won't correspond.
- Required courses in combination will correspond sufficiently to earn credit.

- Credit for many elective courses, if not used elsewhere, will be applicable toward satisfaction of the professional development requirement.
- Candidates will have at least three sittings for each course.

Holmberg and Bykerk said the task force intends to give candidates a full three-years' notice of the details of the transition rules.

## SOA accepted as AAAS member

by Irvin T. Vanderhoof

In recent years, the role of the actuary as a business person has captured center stage. Some actuaries believe that the business school background is now the most appropriate base for actuarial studies. The actuary who was trained as a mathematician or physical scientist seems like an anomaly to them, a quaint figure from the past.

This is a strange turn of events from several points of view. First, we can all note that many of the actuaries who make the greatest contributions to progress in the field, and are honored for doing so, have degrees in the sciences rather than business. Second, there is no good reason to give away half our profession. Actuaries have traditionally been both scientists and business people — and that combination is part of what has allowed the profession to continue to exist. If we are only business school people, then we could be replaced by MBAs and accountants.

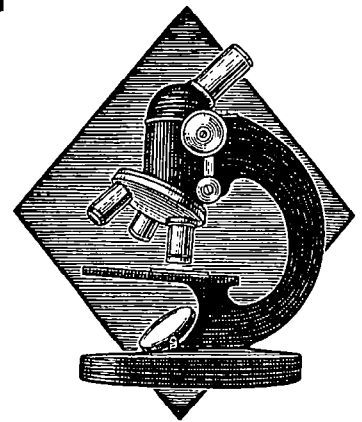
The Board of Governors of the Society of Actuaries recently achieved a formal recognition of our role as scientists. The SOA has applied for and been accepted as an affiliate of the American Association for the Advancement of Science (AAAS).

The American Association for the Advancement of Science was founded in 1848 and now has about 140,000

members from 287 affiliated scientific societies and academies of science. The association is divided into 24 sections, running from agriculture (Section O) through medical science (Section N), and ending with statistics (Section U). The SOA has affiliated with Section K (social, economic and political sciences). This is one of the smaller sections. Only about 1,500 members of the AAAS have chosen this as one of their three possible sections for membership.

The Society of Actuaries pays no fee for this affiliation, but members of the SOA are solicited for membership in the AAAS. Besides being able to vote in elections, members receive the weekly publication, *Science*. This is an interdisciplinary journal, perhaps the most prestigious one in the United States. I encourage members of the SOA to join the AAAS as part of their membership in the scientific community. The annual membership fee is \$102. Applications for individual membership can be obtained from the AAAS office (202/3260-6450; fax: 202/842-1065).

Here's another intriguing possibility. As an affiliate, we have the right to propose a scientific program for the annual meeting of the AAAS. Work is in progress to develop such a proposal for the annual meeting in Philadelphia



in 1998. Various options are being considered, but one strong candidate is the topic, “Projection of improvements in mortality rates and the implications for the Social Security systems of Canada, the United States, and Mexico.” This topic would showcase our contributions as scientists who are concerned about the public good.

News media interest in the AAAS annual meeting tends to be high, offering a significant opportunity for the SOA to become better known.

The SOA's affiliation with the AAAS is an important step in the affirmation of the future of the actuary as both a business person and a scientist.

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