



SOCIETY OF ACTUARIES

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CAE PROGRAM PROMOTES ACTUARIAL KNOWLEDGE AND INFLUENCE IN ACADEMIA

BY PEGGY L. HAUSER

ARE YOU FAMILIAR with the Society of Actuaries' (SOA's) Centers of Actuarial Excellence (CAE) program, a university actuarial science program that has met rigorous criteria? I had the opportunity

to chair a task force last year that was asked to analyze the CAE program and recommend to the SOA board of directors a path forward for the program. We briefed the board about the initial CAE program development and its experience to date. We surveyed the academic community (both CAE and non-CAE schools) and CAE volunteers. We found that the CAE program has been very successful and want to spread the word to other members of the SOA.

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The board established the CAE program in October 2008, along with CAE grants for education and research, and a Ph.D.

stipend program (which was later renamed the James C. Hickman Scholar program). The final touches were put on the CAE program in early 2009 and the first CAE application cycle took place in fall 2009.

When the board voted to implement the CAE program it was part of a package of goals that included the following:

- Strengthen the role of academia within the actuarial profession
- Facilitate research that advances the profession
- Foster tighter relationships between academia and business community
- Create and support Centers of Actuarial Excellence.

Six application cycles have taken place since fall 2009. Twenty-five schools have

been designated Centers of Actuarial Excellence: 15 schools in the United States, eight in Canada, and two in Hong Kong. Currently these are the only countries in which the CAE designation is available.

Schools must meet eight criteria to be awarded the CAE designation; four criteria are quantitative and four criteria are qualitative. The quantitative criteria touch on a distinct major, sufficient curriculum coverage, graduate counts and faculty composition. The qualitative criteria evaluate the quality of graduates, integration with business, connection to industry, and research.

BENEFITS OF BEING A CENTER OF ACTUARIAL EXCELLENCE

Enhanced Recruiting and Elevated Program Status

Overall, CAE schools are very positive about the CAE program and its benefits. Ninety-two percent of the schools indicated that the award of CAE status had been somewhat or very beneficial to their program. Schools cited the greatest benefits of the designation



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As a university outside North America, the main benefit of being a CAE is to show to my university that my actuarial programme is up to world standards.

Increased our credibility and leverage with the administration and led directly to the creation of a new tenure-track position that would not have been created, or would have been created only many years later.

The CAE designation has been recognized by the rest of the university community as a clear affirmation of the quality of our program. We are often referred to as the “diamond” of the business school programs.

to be improvements in attracting students and employers to their program and strengthening the status of their program within the university, including securing additional faculty positions.

Although perhaps not completely driven by the CAE program, actuarial science programs have grown since 2009. Not only CAE schools but also non-CAE schools have reported increases in enrollment (91 percent of CAE schools and 94 percent of non-CAE schools with an actuarial science program). One survey comment describes the impact of the CAE designation on its enrollments.

It has helped us to attract more and better quality students. As our university is a private and small one, CAE seems to have helped us to attract good students and also to place our juniors in internships.

CAE schools reported that they derived positive effects from the criteria they satisfied to be designated as a CAE. The CAE criteria helped them both to maintain their program standards and to encourage further program development. One of the original goals of the CAE program was to improve the standing of actuarial science within university programs, and it appears CAE has succeeded on this front, based on comments from the survey:

Provided a stamp of excellence to the program. Assured internal and external parties that we have an excellent program at [U.S. CAE university]. An excellent selling point internally when the actuarial program has to ask for funding for things like staffing; externally when seeking students and donations from outside companies. Overall provided a pride to the department and the college.

CAE GRANT AWARD HISTORY (2010-2013)

YEAR	PROPOSAL TITLE	SCHOOL	GRANT TYPE
2010	Technology Enhanced Learning in Actuarial Science Classes	University of Wisconsin–Madison	Education
	Improving the Risk Models of Financial Institutions	Georgia State University	Research
2011	Multi-faceted Study of Risk Management for Insurance	The University of Iowa	Research
	Integrated Risk Management in a Changing World with Applications to Insurance Enterprises	University of Waterloo	Research
2012	Industry Partnership Program at University of Michigan	University of Michigan–Ann Arbor	Education
	Actuarial and Econometric Analyses of Systemic Risk in the Insurance Industry	Temple University	Research
2013	Actuarial Study of Dependent Risks: Analysis and Applications	The University of Hong Kong	Research
	An Undergraduate Research Program in Risk and Actuarial Science	University of Illinois–Urbana-Champaign	Education

Centers of Actuarial Excellence

- Chinese University of Hong Kong
- Concordia University
- Drake University
- Georgia State University
- Illinois State University
- Pennsylvania State University
- Robert Morris University
- Simon Fraser University
- St. John's University
- Towson University
- Temple University
- Université Laval
- Université du Québec à Montréal
- University of Connecticut
- The University of Hong Kong
- The University of Iowa
- University of Illinois at Urbana-Champaign
- University of Manitoba
- University of Michigan
- University of Nebraska–Lincoln
- University of St. Thomas
- University of Toronto
- University of Waterloo
- University of Wisconsin–Madison
- Western University (formerly University of Western Ontario)

In addition, the CAE criteria have proved to be useful guidelines for program development. In fact, several schools reported that they enhanced their programs in pursuit of CAE status. Some of these schools subsequently earned the CAE designation after those enhancements.

CAE GRANTS

An additional benefit of the CAE designation is access to CAE education and research grants. The SOA board in 2008 also approved creation of a CAE Grants program. Schools that have attained CAE status are eligible to compete for SOA-sponsored grants in research and education. These grants allow universities to make significant investments in education methods or materials, research and the profession. Each year the program offers to award one education and one research grant. Generally, award amounts and durations can range between \$50,000 and \$100,000 per annum over a period of three to five years. The CAE Grants Committee looks for grants with specific application to actuarial work. In each case, the output from the grant must be something that can be shared with the wider actuarial and academic community.

The table on page 33 shows the grant proposals that have been awarded funds since the program's inception.

CAE FACULTY CONFERENCE

Another benefit of the CAE designation is the opportunity for CAE faculty to attend the CAE Faculty Conference. In early 2010, after the first wave of schools had been awarded the CAE designation, the SOA sought opportunities to connect directly with CAE faculty members in a meaningful way. The first CAE Faculty Conference was held that summer in

Chicago and has been held there each year since.

The conference gives two faculty members from each CAE school a chance to network and exchange best practices, and gives the SOA an opportunity to present current initiatives and to speak with these key stakeholders about the needs of the profession. Time is also allotted for presentations from recent CAE grant recipients on their respective projects. Survey comments about the faculty conference include:

The CAE Faculty Conference has given us an excellent opportunity to share ideas and experiences with fellow CAE schools. The presentations have been informative and the dinners, lunches and breaks have been especially informative.

The value of face-to-face discussions on important CAE topics cannot be overemphasized. These are truly unique events and [U.S. CAE school], for one, is very thankful that the SOA provides us with these opportunities. PLEASE KEEP IT UP!

CAE STUDENT SUMMIT

Recognizing that the SOA's connection with students at CAE schools is equally important, the SOA launched the first CAE Student Summit in August 2012. Similar to the faculty conference, two students from each CAE school are invited to attend as the SOA's guests.

The student summit event has proven to be an exciting gathering of top-tier actuarial students. Activities include a presentation

from the SOA president, a featured actuary panel discussion, and activities for networking with fellow attendees. As a follow-up, staff provides the attendees with a slide presentation that highlights their experiences at the summit and addresses SOA initiatives. The students are asked to present the slides at a meeting of their school actuarial clubs. Survey comments related to the student summit include:

A boost to the morale and professional alignment of the students who participate. It spills over from them to their peers.

Students are very proud to attend the student summit as representatives


of the university. It provides great opportunities for them to communicate with fellow actuarial students from other universities, to learn from experienced actuaries from industry, and to know of the most recent developments in this profession.

The student summit was held again in August 2013, and a third summit will take place in August 2014.


CAE PROGRAM MEETING GOALS

Finally, we asked both CAE and non-CAE schools whether the CAE program was meeting its goals to enhance actuarial knowledge and expand the profession’s influence in academia. Over 80 percent

of respondents from CAE schools agreed that the program was meeting its goals. Both CAE and non-CAE schools cited the influence with university administrators of having clear standards for actuarial science programs as a positive factor.

If you are interested in learning more about the CAE program, including the criteria schools must satisfy, please check the SOA Web page at <http://www.soa.org/Education/Resources/cae/default.aspx>. 

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