

FINAL SUMMARY REPORT OF PROGRAM REVIEW

Undergraduate Program	Department of Statistical and Actuarial Sciences
New or Cyclical Program Review (please indicate)	Cyclical
Degree(s) Offered	BSc, Actuarial Science (Honors Specialization or Major) BSc, Financial Modelling (Honors Specialization or Major) BSc, Statistics (Honors Specialization) BSc, Applied Statistics (Major)
Date of Site Visit	March 19, 2012
Evaluation	Good Quality

Summary:

The review committee was impressed by the overall quality of the undergraduate programs offered by the department. The current program structure reflects the outcome of a significant curriculum renewal that was implemented beginning in 2009 as well as responses to an external review performed in 2008 prior to re-appointment of the department Chair. The department's strengths include a pioneering 3 + 1 + 1 international program with multiple universities in China, the accreditation of the Actuarial Science program by the Canadian Institute of Actuaries as well as the designation of the department as a Centre of Actuarial Excellence, the department's ongoing efforts to develop interdisciplinary programs in fields such as environmental and health statistics, and the attention devoted to learning outcomes in the department's multiple introductory-level service courses.

The current undergraduates interviewed by the committee were uniformly well spoken and highly motivated students who strongly identified with their programs and offered positive assessments of the programs' quality and effectiveness. A majority of the students are enrolled in an Actuarial Science module and are intending professional careers as licensed actuaries. The department facilitates this career path by organizing the Actuarial Science curriculum to enable to students to begin writing their licensing exams prior to fourth year. The remainder of the students in the Financial Modelling and Statistics modules generally progress to graduate programs in those fields or related disciplines.

The review committee's report includes six recommendations, each of which have been acknowledged by the department in its response. Many of the recommendations focus on ensuring that the department is able to maintain its current positive trajectory.

1. Develop a strategic plan and determine faculty hiring priorities. The committee was provided with a working draft version of the department's academic plan for 2011-15 as well a summary of updates to that plan in the self-appraisal document. This concern arose from the committee's impression of a mismatch between the department's stated research priorities and the expertise of recently recruited faculty members and, in particular, reflects mixed messages the committee received during the site visit about the relative priority assigned to health statistics and environmental statistics.

2. Increase cooperation with Department of Epidemiology and Biostatistics. An undergraduate program in health statistics or biostatistics would be a natural fit with Western's academic strengths. The department expressed a strong desire to develop such a program but reported that it was proving difficult to establish a partnership with Epidemiology and Biostatistics. The review committee supports this direction and encourages any impediments to cooperation between the two departments to be addressed at the decanal level if necessary.

3. Increase enrolment in Financial Modelling and Statistics modules. The current enrolment data indicate that the projected enrolments in the Financial Modelling and Statistics programs for 2012-13 through 2014-15 may be inflated. The committee was concerned that the enrolment projections may mislead the department's long-term planning. Further discussion revealed that the Financial Modelling program in particular is not adequately publicized to prospective undergraduates, so an opportunity may exist to address this issue through more aggressive recruiting.

4. *Improve effectiveness of teaching assistants.* Many of the undergraduate students interviewed expressed concerns about the communication abilities of a subset of the teaching assistants as well as the opinion that the TAs staffing the department's Help Centre were not prepared to support upper-level courses. While acknowledging that such issues are difficult to avoid in technically oriented programs, the committee suggests that the communications skills of individual TAs be considered when assigning their duties.

5. *Encourage and facilitate junior faculty to obtain actuarial designations.* Each of the three faculty members who hold actuarial designations are within ten years of retirement. It is in the department's interest to renew its roster of faculty with actuarial designations to ensure Centre of Actuarial Excellence status and Canadian Institute of Actuaries accreditation of the Actuarial Science program is maintained. Adjustments to the workload of selected junior faculty should be considered to support those faculty members in preparing for and writing the relevant fellowship examinations.

Recommendation	Responsibility
Develop a strategic plan and determine faculty hiring priorities	Department
Increase cooperation with Department of Epidemiology and Biostatistics	Department, Faculty, Schulich
Increase enrolment in Financial Modelling and Statistics modules	Department, Faculty
Improve effectiveness of teaching assistants	Department, Faculty
Encourage and facilitate junior faculty to obtain actuarial designation	Department