

This report considers and reports on the following documents: the program's self-study, the external consultants' report and the responses from the Department and the Associate Dean of Science.

This Final Assessment Report (FAR):

- i) provides an Executive Summary of the Review Process, including an overview of the Department as outlined in the Self-Study brief;
- ii) identifies the strengths of the program;
- iii) identifies opportunities for program enhancement and improvement; and,
- iv) prioritizes the recommendations of the external consultants in the Implementation Plan.

The Implementation Plan details the recommendations from the Final Assessment Report that are required for implementation, identifies who is responsible for approving and acting on the

comprised of three chaired appointments, a Western Research Chair, TD Professor in Data Analytics, and a Tier 1 CRC in Data Science. This research group also has joint appointments with Computer Science, Biology, and Oncology.

Although student enrolment has doubled in the last six years, surveys and testimonials by current students and alumni report a high satisfaction in their courses with a reported hiring rate of about 90%.

Western has a modular degree structure that allows students to combine subjects from different departments and faculties. Undergraduate students may earn an Honours Bachelor's degree by completing 20 courses (40 half or one-semester courses) including at least one Honours Specialization module or two Major modules. Students may also graduate with a 4-year general degree, which requires the completion of at least one major module. It is also possible to graduate with a 3-year general degree that includes at least one major or two minors. The Department of Statistical and Actuarial Sciences offers modules in Actuarial Science, Financial Modelling, and Statistics, as well as modules in Data Science offered jointly with the Department of Computer Science, designed to meet the needs of employers.

The undergraduate modules in Statistics, Actuarial Science, Financial Modeling and Data Science include:

Opportunities for Development

Advance the Multi-Hazard Risk Assessment Research Group
Rebuild links with the Schulich School of Medicine and Dentistry where there is a burgeoning field of health informatics

Changes & Enhancements

Since the last periodic review, the Department has undergone a departmental review as well as external reviews to qualify for accreditation. As a result, the Department has engaged in a number of strategic faculty hires, developed successful regional high-school outreach initiatives, enabled student involvement in strategic

The reviewers also engaged in a guided tour of the of the department's teaching and research facilities.

Following the onsite review, the external reviewers submitted a comprehensive report of their findings which was sent to the Chair and the Dean for review and response. These formative documents, including Volumes I and II of the Self-Study, the External Report, and the Faculty response, have formed the basis of this summative assessment report of the Statistics & Actuarial Science undergraduate programs.

Summative Assessment by the External Reviewers¹

.From our assessment, DSAS has demonstrated a strong commitment to keep their undergraduate programs relevant and to serve the public good and to produce graduate students who make meaningful contributions in their area of specialization upon graduation.

Strengths of the Program

Clear and appropriate learning requirements and Learning Outcomes
Curriculum mappings relate to Program Learning Outcomes and the Western Degree Outcomes.
Faculty qualifications are highly appropriate. We see very good understanding of each course almost all of the areas
pieces received by faculty in this unit are far too many to list in items of the program
are impressed to see quite a few
the reach of the excellent support an impressive array of best papers

Summary Statement

It is our perspective that this unit is delivering excellent teaching built on a foundation of strong research and scholarship. This has been the case for quite some time and will continue to be so. The Department of Statistical and Actuarial Sciences (DSAS) is well positioned to continue to excel.

Summary of the Reviewers’ Key Recommendations and Department/Faculty Responses

Reviewers’ Recommendations	Departmental/Decanal Response
<p>1. We recommend that the university gather more information on the actual experience of individual graduating students in order to determine whether the current curriculum is meeting their needs.</p>	<p>Rather than commenting on the individual recommendations made by the reviewers, the Department response to the recommendations was expressed as:</p> <p>To be sure, we will continue to listen to our students and their families and we will continue to make improvements to our undergraduate offerings.</p>
<p>2. We recommend that the department continue to evaluate and develop processes by which we can influence program and course curriculum design.</p>	<p>The decanal response notes that attention will be paid to:</p> <p>1. Reviewing curriculum mapping to ensure that it is used to inform curriculum design and course content.</p>
<p>3. We recommend that the department be careful to make certain that its modules do an adequate job of ensuring that its graduates of these modules have strong communication skills.</p>	<p>2. Review will be made of the new Data Science modules, which are offered jointly with the Department of Computer Science to ensure some course requirements in Computing Science.</p>
<p>4. DSAS may want to ensure that students get enough exposure (and coherently through exposure) over the course of their undergraduate degrees.</p>	<p>3. Examining and balancing theory and application (data) in the Statistical Science modules.</p> <p>4. Ensuring the presence of a Fellow of the Society of Actuaries in the Department in case of upcoming retirements.</p>
<p>5. We recommend that the departmental leadership engage in a forward planning exercise, identifying potential initiatives both in and beyond data science, and to continue to work on these initiatives in the long term.</p>	<p>5. Reviewing student enrolment, given the high proportion of international students and potential concerns.</p>

Implementation Plan