UNIVERSITY OF TORONTO

University of Toronto Quality Assurance Process (UTQAP)
Cyclical Review: Final Assessment Report and Implementation Plan

Programs Reviewed:	• Bioinformatics, B.Sc. (Hons.): Specialist • Computer Science, B.Sc. (Hons.): Specialist/Major/Minor • Information Security, B.Sc. (Hons.): Specialist • Mathematical Sciences, B.Sc. (Hons.): Specialist/Major/Minor • Statistics, Applied, B.Sc. (Hons.): Specialist/Major/Minor
Unit Reviewed:	Mathematical and Computational Sciences, University of Toronto Mississauga (UTM)
Commissioning Officer:	Vice-Principal, Academic and Dean, UTM
Reviewers (Name, Affiliation):	1. Professor Michael Bennett, Ph.D., Department of Mathematics, UBC 2. Professor Greg Dudek, Ph.D., James McGill Chair, Director, McGill School of Computer Science, McGill University
Date of Review Visit:	January 25 – 26, 2016
Date Reported to AP&P:	November 1, 2016

Unless otherwise noted, all bulleted comments apply to all programs reviewed.

1 Outcome

The Committee on Academic Policy and Programs (AP&P) concluded that the Decanal response adequately addressed the review recommendations.

2 Significant Program Strengths

- Impressive programs providing very sound educational experiences to highly satisfied students
- Small course sizes, high quality teaching, and personal interactions between students and faculty
- Excellent support staff and facilities—including computer labs, which add to high levels of camaraderie and sense of community in the department
- Active research and teaching faculty with very impressive records
- Praiseworthy efforts of faculty advisors in mentoring junior faculty and providing TA supervision and coordination
- Notable community outreach programs—including math camps and competitions

3 Opportunities for Program Enhancement

- Giving the department more control over enrolment in order to preserve distinctive features of the programs
- Addressing the serious shortage of research faculty and corresponding over-dependence on sessional and other short-term instructors, specifically in Computer Science and Statistics; considering strategic "cluster" hiring as part of new searches; and reconsidering the large budget allocated to short-term teaching positions
- Addressing high teaching loads for teaching stream faculty

4 Implementation Plan

The Dean undertook in consultation with the Department to support the following changes:

<u>Immediate Term (6 months)</u>

- Enrolment Increases
    - At UTM, the Office of the Registrar administers the admissions process into first year studies and has been asked to consult more directly with the MCS Department
    - The Department is planning to meet with members of the Registrar's Office in January 2017 to discuss enrolment numbers
- Addressing the high teaching loads for teaching stream faculty
    - The Department has been approved to conduct faculty searches for two full time teaching-stream positions in Mathematics, plus three research stream positions (one in Mathematics, and two in Computer Science)
    - The teaching loads of teaching stream faculty were reduced from 4.0 FCE to 3.5 FCE. Credit is also given for coordination of multi-section courses.
- Shortage of research faculty, and corresponding over dependence on sessional and other short-term instructors

- Last year, searches were very successful. MCS hired six new research stream faculty members (two in Mathematics, two in Statistics, and two in Computer Science).

Longer Term (3-6 years)

- Shortage of research faculty, and corresponding over-dependence on sessional and other short-term instructors
  - The Dean's Office in concert with UTM's Vice Principal, Research is working with the graduate chair of the Department of Computer Science to identify a cluster research area that will be based at UTM and built up through strategic hiring over the next five years

The Dean's Office will follow up annually with the unit to assess progress.

5 Executive Summary

The reviewers identified the programs' strengths as the very sound educational experiences provided to highly satisfied students; small course sizes, high quality teaching and personal interactions between students and faculty; excellent support staff and facilities—including computer labs, which add to high levels of camaraderie and sense of community in the department; active research and teaching faculty with very impressive records; praiseworthy efforts of faculty advisors in mentoring junior faculty and providing TA supervision and coordination; and notable community outreach programs—including math camps and competitions. The reviewers recommended that the following issues be addressed: giving the department more control over enrolment in order to preserve distinctive features of the programs; addressing the serious shortage of research faculty and corresponding over-dependence on sessional and other short-term instructors, specifically in Computer Science and Statistics; considering strategic "cluster" hiring as part of new searches; reconsidering the large budget allocated to short-term teaching positions; and addressing high teaching loads for teaching stream faculty. The Office of the Registrar will consult more directly with the MCS Department on enrolment increases. The Department has been approved to conduct faculty searches for two full time teaching-stream positions in Mathematics, plus three research stream positions (one in Mathematics, and two in Computer Science). The teaching loads of teaching stream faculty were reduced from 4.0 FCE to 3.5 FCE. Credit is also given for coordination of multi-section courses. MCS hired six new research stream faculty members (two in Mathematics, two in Statistics, and two in Computer Science). The Dean's Office in concert with UTM's Vice Principal, Research is working with the graduate chair of the Department of Computer Science to identify a cluster research area that will be based at UTM and built up through strategic hiring over the next five years. The Committee on Academic Policy and Programs (AP&P) concluded that the Decanal response adequately addressed the review recommendations.