Senate Committee on University Planning

Academic Unit Review Summary: DEPARTMENT OF BIOLOGY

Site Visit	**18 March 2013**
Informal Response to Planning	**28 June 2013**
Formal Response to Planning	**31 October 2013**
Implementation Update	**15 April 2015**
Midterm Review	**2016-17 (8-year cycle)**

Summary of Departmental Self-Study: The Department of Biology has a long and celebrated past at Mount Allison University. It is home to several current and past teaching and research award recipients. The department offers curricula and research and laboratory experiences for a large undergraduate study body and a small graduate program. Students have the opportunity to learn across a wide spectrum of areas in an environment that is research-intensive and provides them with the exposure that they require for careers in the life and health sciences and in various fields of applied scientific research. The department has 11 faculty members at present, as well as several lab instructors and research staff. Enrolments in Biology have been on the increase for several years, and the expansion of interest on the part of students has endured throughout all years of the programs available. In 2012, nearly half of all graduating Science majors were in Biology.

The department's commitment to undergraduate teaching is long-standing and exceptional. The integration of laboratory and research experiences in the undergraduate curriculum at Mount Allison inspired the current NSERC USRA system. MTA biology students receive more extensive laboratory experience than is the case for their counterparts at many universities in Canada. MTA biology graduates are much sought after by graduate programs, and once in these programs, they generally find that they are much better prepared for advanced study and research than are their peers. For those interested in professional training in medicine and other health professions, the foundations learned at MTA serve them particularly well, given their exposure to fields such as comparative anatomy, bacteriology, embryology, genetics, and cell biology.

The department's infrastructure includes specialized research facilities (e.g., the Crabtree Aqualab, the fish ecology and aquaculture facility, and the digital microscopy facility), some of which have benefited from CFI and major donor support. While major infrastructure that has been acquired primarily serves research purposes, students (including those enrolled in the department's small graduate program) benefit by being able to use this infrastructure in their labs and research projects. The central building of the department (the Flemington Building) houses most laboratories. There are some long-standing challenges in this building (specifically related to ventilation and accessibility) that have, in many ways, been exacerbated by the growing enrolments within the department.

Summary of Program Review Report: The external review commends the department for the strong academic program it provides, the comprehensive and diverse curriculum, the collegial relations between faculty, and the very highly productive relationships between academic and technical staff and students.

The program review team offered a number of comments about future directions for the department and the University, all of which are designed to build on the strengths of the department.

Key recommendations for the University include:

- attending to the infrastructure concerns about the Flemington Building;
- ensuring stability in the staffing of the department;
- working with the department to deal with enrolment pressures; and
- developing mechanisms to ensure the incorporation of student feedback in evaluation processes (in by implication, the ongoing quality assessment of the department's academic programs).

Key recommendations for the Department of Biology include:

- revisioning the governance structure within the department (i.e., moving to a committee-based process rather than a "committee of the whole" approach) and engaging in formal strategic planning;
- conducting a comprehensive curriculum review and mapping exercise that includes, but is not limited to, the identification of learning outcomes for all courses, and specification of the manner in which courses scaffold to ensure students' grounding in the core areas of the discipline (such an exercise would also, of necessity, involve identifying opportunities for collaboration and articulation with other programs in cognate fields); and
- ensuring clarity with respect to program information and access to upper-year courses for students in the majors and honours programs.

The review team's conclusion bears mentioning: "the Department of Biology has personnel with appropriate experience, knowledge and expertise to maintain the momentum they have developed in teaching and research. We congratulate the department on its obvious strengths, and we urge the members of the Department to explore innovative ways to further enrich the opportunities of students and faculty for exploring biology."

Summary of Departmental Response: The department was pleased with the conclusions of the program review team, and concurred with many of the review team's recommendations. A new committee structure has been established within the department. In addition to a working group that is charged with redesigning the first year course in biological sciences, the department is involved in a comprehensive curriculum review. This will guide the department's actions in teaching and research in the years ahead. The department anticipates engaging in a strategic planning exercise as well.

Planning Committee and Provost Response: The Planning Committee and the Provost agreed with the tenor and substance of the reflections contained in the department’s self-study and its response to the external reviewers’ report.

A study of the ventilation issues in the Flemington Building was carried out in the fall of 2013. Modifications to the physical plant within the building are being planned and should be completed by the end of 2014, if not sooner. These modifications should address some of the concerns about the ventilation challenges identified in the self-study and review report. In addition, with the leadership of the Dean of Science and the collaboration of the Department of Chemistry and Biochemistry, adjustments are being made regarding the use of lab space in the Barclay Building in order to accommodate Biology labs.