

**Mount Allison University
Institutional Strategic Research Plan
April 2010 (amended April 2011)**

1. Institutional Context

Mount Allison University is one of Canada's outstanding primarily undergraduate institutions. As a small institution (enrolment approximately 2,400), our commitment to excellence in undergraduate teaching is balanced by our commitment to excellence in research demonstrated by our strong record of external funding.

This strategic research plan supports Mount Allison University's Strategic Statement (adopted in February 2007). This Statement coordinates our collective thinking and action in the following broad areas as the basis for strategic emphasis and orientation, for academic program development, for research and professional clustering, and for links with extracurricular activities. Three of the five areas – listed below – provide direction for enhancing current research strength and for nurturing emerging capacities.

1. The Environment
2. Culture and Creativity
3. Public and Community Service and Citizenship

This strategic research plan is simply that – it identifies the small number of research theme areas which provide strategic opportunities for the University in terms of building on relatively large critical masses of researchers in these themes and in themes where we have developed or are developing national recognition. It provides direction for accessing financial and infrastructure support for further development of these themes. It provides direction for the University to allocate its Canada Research Chairs and to secure Canada Foundation of Innovation funding for infrastructure support.

Over the past decade we have strategically used our Canada Research Chairs allocations – five Tier II chairs – to build research capacity across the campus. The impact of the Chairs has been to diffuse expertise and resources widely but in focused areas. We intend to continue this strategy by building on the impacts of the Chairs program to date.

This strategic research plan articulates some elements of the overall broad richness of exciting and important research at the University. Research is conducted in a broad range of disciplines.

2. Major Objectives

Our principal objective is to use our Canada Research Chairs as “anchors” around which several linked (or cognate) Chairs and related researchers can develop a critical mass of expertise. Our nominations for Chairs will be designed to build on existing and emerging research strengths and to foster cross-disciplinary collaborations.

We also have two related objectives which support this approach. The first is to promote research development in the Sciences, Social Sciences, and the Arts and Humanities not only through the selective nomination of externally recruited researchers, but also by creating new bridging faculty appointments made possible by the liberation of salaries from selective internal appointments to Chairs. Our strategy also involves a deliberate focus on three (3) Tier II level appointments and two (2) Tier I Chairs. The rationale for this approach is build capacity in wide range of disciplines and strengths, and in areas where we have or are developing national recognition.

The second is to use our Canada Foundation for Innovation funds to primarily support the needs of Chairs and researchers working in tandem with them. This approach, coupled with CFI investments in other areas, will permeate benefits across the institution and enhance our research capacity and profile.

3. Major Strategic Research Themes

Mount Allison University has established the following three research themes, based on existing and emerging areas of strength, in which it intends to maintain and develop excellence:

Environment:

Ecological Processes and Environmental Change

Mount Allison University proposes to expand and complement existing research strengths in Wetlands Environmental Science into a revitalized emphasis on Environmental Processes. More specifically, we will develop a nexus of research expertise focused on questions related to the impact that environmental changes (such as climate change or the introduction of environmental toxins) will have on key ecologically processes in coastal wetland ecosystems, terrestrial ecosystems and oceanic ecosystems. This research cluster will enable the deployment and optimization of nearly \$3 million of specialized infrastructure in our Coastal Wetlands Institute, Macroecology and Biogeochemistry Laboratory and Environmental Sciences Instrumentation Suite. . Further, this cluster will enable strengthened partnerships with Environment Canada, the Department of Fisheries and Oceans and Atlantic Canada Conservation Data Centre, all of which are proximate to Mount Allison. The existing cluster of researchers working in the area of Ecological Processes are well-funded by NSERC and CFI. With additional CFI investment and leveraged funding from other sources, we anticipate that this research cluster will become world-class.

The advancement of a Tier II Canada Research Chair to a Tier I Canada Research Chair will strengthen and solidify the international reach of this recognized research cluster (Canada Research Chair in Phytoplankton Ecophysiology). On campus, this Chair will facilitate collaborative interdisciplinary linkages between researchers working in biology, biochemistry, chemistry, mathematics and oceanography. In support of this Tier I Chair, the university will create a cognate Tier II Canada Research Chair in Environmental Sciences.

Human Interaction with the Environment

Building on research strengths in “Human Interaction with the Environment,” Mount Allison University has recruited and nominated an external Tier II Chair in this research area in order to provide guidance, leadership and facilitation within this emerging field. It is anticipated that this Chair will build linkages among researchers in Sociology, Geography and Environment, Economics, Commerce, Anthropology, and the Rural and Small Town Programme in order to explore questions related to adaptation to environmental change, community resiliency, and community capacity for development.

Further, this Chair will benefit from the unique local context that is afforded in the Maritimes where traditional resource-based economies are changing dramatically in response to economic, social and ecological change. The university intends to support this Chair with an appropriate level of infrastructure funding.

Environmental Technologies

Research strengths in both Green Chemistry and the Nanoparticle Assembly related to the energy sector have emerged from our Department of Chemistry and Biochemistry. Recent grants from NSERC, AECL, and the New Brunswick Innovation Foundation have further strengthened this emerging research cluster. The search for cleaner and more efficient technologies is the foundation of this work. This research area complements our focus on ecological processes stream by exploring how alternative technologies can minimize detrimental environmental impacts. The advancement of a Tier II Canada Research Chair to a Tier I Canada Research Chair will strengthen and solidify the international reach of this recognized research cluster (Green Boron Chemistry).

Environment and Human Health

The Department of Physics provides the foundation for research in *Biophysics*, with work in the fields of X-ray diffraction, and in atomic, molecular and laser physics. This group has active collaborative relations with researchers in the region, elsewhere in Canada including NRC, and NASA. In September 2000 they moved into a wholly reconstructed building. This building provides exceptionally modern lab facilities and the prospect of a new level of synergy with colleagues in related disciplines. One of our Tier II Chairs in biological physics is an expert in biologically important materials, and recently been given a CIHR designation by the Chairs secretariat.

Culture and Creativity:

Critical Theory in the Interpretation of Culture

Building on considerable research strengths in the interpretation and representation of culture, a long history of strength and excellence in the fine and performing arts, and the presence on

campus of an internationally recognized gallery, Mount Allison University established a Tier II Canada Research Chair in Critical Theory in the Interpretation of Culture. This position created interdisciplinary and builds transdisciplinary linkages between arts, humanities and social sciences research and creative practice. The University's Strategic Statement includes a commitment to explore the feasibility of a school of fine and performing arts.

Performance and Society

A number of faculty members in Music and Drama are known for their strong abilities in the development of new performance and presentation materials grounded in an critical evaluation and understanding of local, regional, provincial, and national contexts. This linkage of research with performance enhances our collective understanding of our society. Examples include, but are not limited to, new music production in the Music Department, and the performances of the bilingual theatre troop Tintamarre (whose productions are based on the historical and current aspects of our bilingual province).

Landscapes

Interpretation of the landscapes we occupy – the natural and built environments – has long been a subject of research and production among our faculty. This exploration of our identity and its meaning for our community and society forms a critical part of our collective dialogue. Faculty in Fine Arts produce award winning interpretations in a variety of media. Researchers in our English and Modern Languages and Literatures departments have developed a reputation for scholarly work interpreting the writing of local and regional writers as expressions of who we are. Geography and Environment faculty explore the deep connections between human activity and use of the land for production and consumption.

Public and Community Service and Citizenship

Canadian Studies

The University's Centre for Canadian Studies, created in 1968, is a research and outreach institute with a long history of fostering research and publication focusing on Canadian culture and society. This Centre is one of only a few of its kind in Canada. It draws together several members of the Faculty of Arts and the Faculty of Social Sciences with expertise in Maritime history, Canadian political and social history, Maritime literature, Canadian literature, Quebec and Acadian literature, Canadian art, music education in Canada, Canadian economic, social and historical geography, the Canadian economy, sociology of Canada, aboriginal peoples and culture, and Canadian politics. Because of its interdisciplinary nature and ethos, Canadian Studies works well for productive collaboration among these researchers and provides an important intersection for national and international scholars interested in the study of Canada. One of our current Tier II Chair appointments has provided leadership and scholarship in this Social Science area of Canadian Public Policy.

There is an opportunity to build research collaborations on issues concerning Aboriginal issues and culture, community development, the role of place in shaping community and society, and the role of individuals in shaping community and society. There is significant opportunity for synergy with appropriate support contribute to informed community and public policy debate on these matters.

4. Deployment of Canada Research Chairs

As of April 2011, Mount Allison University has an allocation of seven (7) Tier II Chairs, with flexibility to convert up to four (4) of these into two (2) Tier I Chairs. Three are tied to NSERC, and four are Special Allocations.

As of April 2011, the following Tier II Chairs are expiring after an initial nomination and renewal of the same candidate.

- Ecological Process and Environmental Change (April 2011)
- Boron Pharmaceutical Chemistry (April 2011)
- X-Ray Fluorescence Medical Physics (June 2012)
- Canadian Public Policy (December 2012)

The following Tier II Chair was vacated July 2010.

- Critical Theory in the Interpretation of Culture

The plan for the renewal and redeployment of our Chairs is as follows:

- Tier I Phytoplankton Ecophysiology (May 2011)
- Tier 1 Green Boron Chemistry (December 2011)
- Tier II Human Interaction and the Environment (May 2011)
- Tier II Marine Environmental Ecology (July 2011)
- One additional Tier II chair

5. Support for Women as Canada Research Chairs

Mount Allison University is committed to supporting an environment which would allow for consideration of qualified women candidates for Canada Research Chairs. We follow the principles laid out in our collective agreement with regards to equity. Further, we ensure that equity principles are followed during selection and nomination process by the inclusion of an equity representative on the Chair selection committee.

6. Research Training at Mount Allison University

As a primarily undergraduate university, Mount Allison is focused on students enrolled in first degree programs. We have a small Masters of Science program (available to students in most of the Science disciplines, in Biology, Chemistry and Biochemistry, and Environmental Science), subject to the interest and availability of faculty to supervise. Furthermore, we will be participating in the proposed new Province of New Brunswick School of Graduate Studies, which will increase our access to and ability to provide opportunities for, a larger number of graduate students. Mount Allison is committed to the continuation of its graduate programs and to ensuring that our undergraduate and graduate students receive the highest level of faculty-directed research experience, training and mentorship. We also have a commitment to support the presence of postdoctoral research fellows on our campus (typically five or more in any given year).

Given our institutional focus on scale undergraduate students, there is a necessary emphasis on training and development of undergraduate researchers. These students may be Honours students with rich and deep research opportunities; they may be research employees on faculty-led projects; they may conduct their own independent research with appropriate supervision; and they are afforded opportunities to co-publish with faculty. Our undergraduate research training provides a superior educational experience for strong, motivated students, many of whom go on to graduate studies. It also provides Mount Allison's faculty with ongoing research stimulus.

We have developed a strategy to assist our faculty members to secure Adjunct Professor appointments at universities with graduate programs, providing them with access to these research personnel. In addition, we actively encourage the appointment of Adjunct Professors in our faculties to increase the range of research and supervisory expertise available to us, to our faculty, and to our students.

7. University Support for Research

The University supports research activity through a variety of means, including:

1. Direct research funding of faculty from operating budget and from a growing endowed trust.
2. Provision of a substantial and growing number of student summer research fellowships.
3. Provision of a number of postdoctoral fellowships from endowed funds.
4. Provision of research facilities, equipment and technical support, including a significant program for renewal and renovation funded in part by benefactors to the University.
5. Participation in inter-university and government-to-university organizations that promote and support research.
6. Provision of selective and limited teaching release for faculty where appropriate.
7. Contribution of matching funds for CFI awards.
8. The University has committed to renewal of facilities as a goal in the University's Strategic Plan (2000), and through a Board policy of expending 4% of replacement value of physical plant on renewal and maintenance. These efforts have led to a re-investment of almost \$50 million in the campus during the past decade. The University's own Strategic Plan sets a goal of reinforcing and extending support for researchers.

9. Assessment of Progress and Success

This Institutional Strategic Research Plan, developed for the Canada Research Chairs program, and approved in principle by our Senate, forms one approach to clarifying our institutional objectives. It is a sub-set of our broader institutional Strategic Statement which was approved by the Senate and Board in 2007. We intend to assess our progress and success through the mechanism of the joint Board and Senate monitoring of the implementation of the University's Strategic Plan. This will be done by regular reporting and documentation of performance. Measures of progress and success of our CRC plan will include:

- Increased numbers of undergraduate and graduate students and postdoctoral fellows engaged in research
- Increased levels of multi-disciplinary research at the University
- Increased rates of faculty peer-reviewed publications
- Increased faculty success rates in securing external peer-reviewed research grants and awards
- Increased numbers of visiting research collaborators to broaden our intellectual community
- Increased knowledge and technology transfer activities

10. Planning and Approval Processes

At Mount Allison University on-going academic planning is considered by the Senate's University Planning Committee, chaired by the Vice-President (Academic and Research). The University's research policies are developed and new initiatives evaluated by the Senate's Research and Creative Activities Committee, chaired by the Provost and Vice-President, Academic and Research. The University's Institutional Strategic Research Plan was developed by the Provost and Vice-President, Academic and Research, with support from the Office of Services and the Research and Creative Activities Committee). It involved consultations with the Heads of Departments, academic Deans, and the University Planning Committee. The strategic research themes and objectives have been formally approved by the Senate.