

# Brandon University: Strategic Research Plan Summary

## *The Institution*

A small undergraduate institution with limited graduate capacity, Brandon University is proud of its long tradition of teaching, research and scholarly excellence. The University fulfills the role of the traditional university in offering a broad range of degree programs in Arts, Science, Education, Fine Arts, Music, Nursing, and First Nations and Aboriginal Counselling, and in supporting and promoting the research and scholarly activities of its faculty and students. The University also offers a number of pre-professional programs as well as professional programs in Education, Business Administration and Nursing.

In recent years, the University has added graduate programs in Music, Education, and Rural Development and new undergraduate degrees in Environmental Studies, Liberal Arts, Interdisciplinary Studies, Gender and Women's Studies and the Bachelor of Nursing. The University also plans to add two new graduate programs, a Master of Arts in Prairie Studies and an Interdisciplinary Master of Science degree. Each new degree program builds on the University's strengths and provides opportunities for new linkages.

The University reaches out to the rural, northern, remote, Hutterian and Aboriginal communities it serves. Brandon University and its faculty play important roles in fostering development within these communities and their work serves as an important resource in enriching the quality of life for the people in these areas. This focus on outreach is reflected in the University's mission statement and in its research agenda.

## *The Research Plan*

Brandon University is committed to fostering excellence in its research activities and supporting the development of research networks across disciplines. The Brandon University Strategic Research Plan reinforces these two overarching principles and describes strategies to enhance the research activities by building on current strengths and capturing new opportunities within thematic umbrellas.

Brandon University has been fortunate in attracting a number of outstanding new researchers who already have had a noticeable impact on the research productivity of the institution. These new faculty members augment the strengths of longer-serving faculty and point to new directions for future research.

## *Major Objectives*

Brandon University's strategic research plan is based on four major objectives:

- 1. To sustain a broad array of research activities of regional, national and international importance*
- 2. To recognize and support applied research*
- 3. To provide opportunities that will facilitate the development of linkages between disciplines*
- 4. To build research capacity*

Brandon University has a core of researchers who receive ongoing support from external funding sources. Other faculty maintain active research programs in areas related to their teaching areas and professional associations. Brandon University will continue to support these activities, which are intrinsic to the work of the University. The opportunities offered by the CFI and the Manitoba Innovation Fund (MIF) have enabled the University to build on existing research strengths in scientific areas and to expand the range of research by providing the increasingly complex scientific equipment required in these fields. The University continues to maximize the CFI and MRIF opportunities to strengthen its research infrastructure.

*CRC Research Areas*

In allocating its Canada Research Chairs, Brandon University selected three areas that incorporate a number of the objectives listed above, including the development of linkages between disciplines, and the opportunity to build research capacity across the University. The University has distributed its Canada Research Chairs among the following broad areas, in an effort to create new synergies, foster leadership and augment productivity.

- *Community Dynamics and Cultural Development*
- *Resources and the Environment*
- *Systems, Modeling and Analysis*

*Chair Distribution*

The research areas within this Strategic Research Plan are products of the interconnectivity of the primary areas of resource management; community dynamics; music and the fine and creative arts; professional development; environmental science; systems analysis and modeling; the humanities; and the professional programs of the University, all of which perform a broad array of theoretical, experimental, and applied research. The University has identified five Canada Research Chairs, and recently awarded an additional Tier 2 NSERC Chair, as follows:

<b>TIER</b>	<b>AREA</b>	<b>GRANTING AGENCY</b>	<b>RESEARCH THEME</b>
2	<i>Systems and Modeling</i>	<i>NSERC</i>	<i>Theme III</i>
2	<i>Resource Management and the Environment</i>	<i>NSERC</i>	<i>Theme II</i>
2	<i>Archaeology Residues and Functional Analysis</i>	<i>SSHRC</i>	<i>Theme I</i>
2	<i>Literature and Creative Writing</i>	<i>SSHRC</i>	<i>Theme I</i>
2	<i>History</i>	<i>SSHRC</i>	<i>Theme I</i>
2	<i>To be determined (2009)</i>	<i>NSERC</i>	

### *Employment Equity and Gender Representation*

Brandon University is committed to the principles of employment equity and gender equality and hence will give fair consideration to all qualified individuals including women, members of visible minorities, native peoples and persons with disabilities, consistent with the University's hiring practices and articles of its Collective Agreement.

### *The Planning and Approval Process*

The Presidential Advisory Committee on Research (PACR) is responsible for assessing the ongoing success of the research plan. This Committee, chaired by the Vice-President (Academic & Research), consists of one member from each faculty/school, the University's NSERC representative, the University's SSHRC representative, and the Coordinator of Research Services.

### *Selected Research Areas*

#### *Theme I –Community Dynamics and Cultural Development*

Issues of community are complex and include a vast array of such factors as culture, environment, age and economics. A broad spectrum of researchers at Brandon University study issues relating to various aspects of “community cultural development.” For example: musicians are involved in the facilitation of community music making; health studies and social science researchers are working to define determinants of health in rural communities; and scientists are studying the means by which communities involved with cooperative water or wastewater projects resolve conflicts. Historians, anthropologists, archaeologists and humanists are conducting research into the cultural facets of local, national and international communities. Brandon University intends to build on this common focus by providing increased opportunities for the diverse approaches and issues to be pursued by cross-disciplinary teams.

Current strengths include work undertaken within our long-standing Rural Development Institute, such as the community health thrust of the project pursuing the determinants of rural health (SSHRC's Strategic Initiatives program) and the SCAPE Project (Study of Cultural Adaptations in the Canadian Prairie Ecozone) funded by SSHRC's MCRI Program.

In its efforts to pursue community-based and community-focused research projects, working in partnership with communities and networking with researchers from other institutions, Brandon University has appointed its three SSHRC Tier 2 Chairs in areas paying close attention to community and cultural development: History, Anthropology, and Literature and Creative Writing.

The University's Chair in Anthropology has developed a strong research program, drawing on techniques associated with chemists and engineers to recover information from Aboriginal pottery and other artifacts. This Chair will continue to be a catalyst for expanding linkages between disciplines and encouraging synergies within research and scholarship activities at Brandon University and elsewhere. The work of this Chair, in

partnership with institutional and private sector archaeologists from other parts of Canada and the United States, will result in a clearer understanding of the day-to-day activities and material culture of people who lived in North America prior to European contact through the analysis of ancient lipid residues.

The University's Chair in Literature and Creative Writing has brought several important interdisciplinary initiatives to the university. Her own writing, editing and prolific publications combine poetic, scholarly/critical/theoretical discourses, and engage in a wide range of interdisciplinary and multimedia dialogues and collaborations, which include engagement with Gender and Women's Studies, Native Studies, Visual Arts, Music, Drama and public environmental issues.

The University's CRC in History is carrying out studies on agricultural dependencies and markets, and environmental change in the transnational Great Plains and Mexico; as well as the history of conservation and other environmental issues elsewhere in Latin America. Through the Chair's research in Canada, the United States, Mexico, Costa Rica, and Cuba, he has strengthened the University's international profile. .

### *Theme II –Resources and the Environment*

Natural resources are the sustaining force in Rural and Northern Manitoba, and for much of our urban prosperity. The Province is richly endowed, but greatly underdeveloped. Sustainable development is the key to establishing healthy, sustainable and growing communities in rural and remote areas. It is the most efficient, and in many cases the only means of reversing the undesirable trend of rural depopulation, family isolation, and depression in underdeveloped and underprivileged communities. Brandon University has dedicated researchers in the natural and social sciences who are taking a leading role in the sustainability of our communities. These researchers are investigating new and innovative methods and technologies for obtaining maximum benefit from our resources in a permanently sustainable and environmentally and socially responsible manner.

Initiatives in resource management and the environment are of critical importance to the near and long-term health of Manitoba. Prosperity brings a large measure of social and physical wellness and community satisfaction, and wellness leads to further prosperity and community growth. The University appointed a Tier 2 CRC in Resource Management and the Environment in 2005 whose research program focuses on understanding the ecology and phylogeny of selected lineages of structurally simple Fungi. Given that only 5% of an estimated 1.5 million species of fungi have been discovered, investigations of these lineages will improve our understanding of fungal diversity, particularly in poorly inventoried, northern regions. In increasing our understanding of the diversity and ecological roles of these fungi, the Chair's research supports natural and international initiatives that have identified the conservation and sustainable use of organisms as a priority.

### *Theme III – Systems, Modelling and Analysis*

Researchers in a number of disciplines use mathematical modelling and various forms of systematic analysis to study a wide variety of theoretical and applied issues. As one

example, Brandon University is a partner institution in the Winnipeg Institute for Theoretical Physics. Through this association Brandon University faculty collaborate in a high-level network of researchers. Likewise, Brandon University is partnered with the Perimeter Institute for Theoretical Physics in Waterloo. Strong working relationships have also been formed with other institutions in the area of Ordered Sets and Algebra. Other researchers are involved in developing models for complex natural phenomena and materials characterization. A number of the researchers working in these areas at Brandon University are already well known internationally.

The University appointed its Canada Research Chair in Systems, Modelling and Analysis in September 2003. The Chair's research primarily focuses on numerical and analytic studies in non-equilibrium field theory, finite temperature field theory and transport theory. The Chair has developed strong linkages with Brandon University researchers in other departments in Science, and has collaborations with researchers nationally and internationally.

### *Canada Foundation for Innovation*

Researchers at Brandon University have access to a wide range of infrastructure available through major funding initiatives provided by the Canadian Foundation for Innovation (CFI), the Manitoba Research and Innovation Fund (MRIF), Brandon University and other sources. The success of Brandon University and its researchers resulted in the establishment of ten laboratories that are fully equipped for research in (1) numerical studies in finite temperature field theory and black hole dynamics; (2) DNA sequence and fragment analysis; (3) microscopy and molecular systematics; (4) resource geology; (5) high field and solid-state liquid nuclear magnetic resonance; (6) environmental science; (7) cell biology and neuroscience; (8) functional genomics and drug resistance; (9) Archaeological Residue Analysis; and (10) a hypertext laboratory for multimedia, creative writing and publishing.

Over the coming years the University will continue to support faculty research, and will strive to maximize funds available from the CFI and the MRIF to ensure that the University's research facilities are modern and that they meet the needs of our faculty and students.

*Revised November 2007*

**\* To read Brandon University's complete Strategic Research Plan, please go to:**  
<http://www.brandonu.ca/administration/vpacademic/research/researchplan/plan.asp>