

The University of Regina
Strategic Research Plan for the Canada Research Chair (CRC) Program and the
Canadian Foundation for Innovation (CFI), 2006 - 2010

CANADA RESEARCH CHAIRS AT THE UNIVERSITY OF REGINA

The U of R will meet the requirements of the 21st Century's knowledge society by attracting high quality researchers, students and staff, and supporting them in their pursuit of scholarly excellence. It is committed to building on its strengths and looking to the future with its significant influx of new faculty, infrastructure and equipment acquired over the past eight years. The University also seeks to respond to the change in provincial demographics resulting in greater urbanization and a growing Aboriginal population. The University of Regina recognizes the importance of research carried out by its scholars in a variety of fields and welcomes the opportunity provided by the Canada Research Chair (CRC) and the Canadian Foundation for Innovation (CFI) programs to enhance that activity in selected areas. The strategic use of CRC/CFI support allows the University to achieve research excellence in areas that reflect its interests and capabilities.

A major challenge for the University is to capitalize on the vigorous research activity being undertaken in individual disciplines. The University has been effective in meeting this challenge in part by focusing on collaborative/interdisciplinary research and scholarly activities and formally organizing interdisciplinary research centres and institutes – several of which have been established in partnership with external stakeholders. Through CFI and other funding, state of the art equipment and laboratories have been established across the University in the past four years including the following:

- JEOL JSM-6360 Scanning Electron Microscope; Scanning Probe Microscopy; Subatomic Physics Alpha Computing Environment (OpenSPACE); Trace Analysis Facility (the only one in Western Canada); GHG capture Pilot Plant and; the Neuromechanical Research Centre in the new Centre for Kinesiology, Health and Sport Complex.

The University is in the process of building a new state of the art research lab facility (Lab Building Addition) to be completed by 2007. Support from the Canada Foundation for Innovation and the Province of Saskatchewan's Innovation and Science Fund has been an essential component of our research growth. Since 2000, the University's external research revenue has grown from \$11.6 Million to \$22.4 Million. The increased emphasis on research including the establishment of new research facilities, and research support mechanisms at the University, along with a dramatic boost in newly hired, research-oriented faculty will ensure that this increase continues.

OBJECTIVES OF CFI/CRC RESEARCH STRATEGY

In accordance with the Canada Research Chairs Program objectives, the overall intent of our research plan is to augment research capacity to foster research excellence in select areas and develop world-class centres of research excellence.

The University of Regina has been successful in securing 12 Canada Research Chairs, although it has combined two Tier 2 allocations into one Tier 1 nomination (resulting in 11 chairs). Seven were awarded as of February 2006, one nomination is under review and three nominations are being prepared. The University is using its Chairs to engage in world-class research activities and provide strong leadership in developing collaborative and interdisciplinary research partnerships. The University of

Regina established a President's Scholars Program to further recognize and support research and scholarly excellence at the University of Regina.

RESEARCH EMPHASES

The University of Regina focuses its teaching, research and service on areas in which it has established or potential strengths and interests. These thematic emphases are intended to facilitate the development of creative new research and academic programs and partnerships, both inside and outside the University. The five thematic research areas that provide significant opportunity for further development, and the potential for far-reaching impact, regionally, provincially, nationally and internationally selected for support and development are culture and heritage, energy and the environment, informatics, health study and social justice. Some highlights of that work follow.

Culture and Heritage

Culture and Heritage builds on the University's traditional strengths in the applied arts and fosters a symbiotic relationship between applied and scholarly research on the arts. It is inclusive of many disciplines such as the humanities, fine arts, social sciences and education. It has been strengthened through its strategic partnership with the First Nations University and through such initiatives as:

- The New Media Studio Laboratory - a unique facility to enhance interdisciplinary research (Computer Science, Engineering and Fine Arts) into multimedia content, design and production.
- Establishment of the centre canadien de recherche sur les francophones en milieu minoritaire.
- Program development and research support initiatives of the new Humanities Research Institute.

Energy and Environment

The University has strong research groups investigating various aspects of climate change and adaptation to climate change, including the development of remediation and mitigation technology. It has established research expertise in petroleum and environmental engineering and through its partnership with the Petroleum Technology Research Centre is actively engaged in energy research relevant to Saskatchewan. In addition to a strong energy focus, the Energy and Environment initiatives address the Prairie environment, environmental impacts assessment, environment and development, policy development and environmental education. Energy and Environment initiatives are supported at the University of Regina through recent initiatives including:

- The CFI-funded Environmental Quality Analysis Laboratory;
- Petroleum Technology Research Centre and the International Test Centre for CO₂ Capture.
- Centre for Sustainable Communities a partner in Regina's Communities of Tomorrow initiative.
- Rough Sets with Risk Assessment through Grid Computing - a key component to the Weyburn Project as well as other CO₂ monitoring initiatives related to the environment.
- Geomodelling and GIS Research Laboratory.

The combined activities of this area support the development of a better understanding of climate change impacts on the Prairie ecosystems, the development of carbon management technologies, the search for alternative energy sources, and the development of energy and environment related policy options.

Informatics

Informatics research focuses on the development and application of information technology in areas related to the other research emphases, particularly in Energy and Environment, and Health. Current areas of expertise in the University include mathematical software and modeling, artificial intelligence, information retrieval and multimedia computing as evident in the New Media Studio Laboratory and the Institute for Computational Discovery. The High Performance Computing Farm in Sub-Atomic Physics is used in processing algorithms, ultra-high-speed networking and object-oriented programming. Informatics is also supported by the newly created Rough Music & Audio Digital Interaction Laboratory (aRMADILo) and a recently established Open Systems Lab.

Health

Health research at the University of Regina has increased substantially over the past five years, and involves the multidisciplinary study of the impact of health determinants on various populations, as well as research on policy and program interventions designed to improve health determinants and peoples' equitable access to health services. Researchers have explored the physiology of pain, aging and cardiocolgistic functioning encompassing factors such as living/working conditions of rural women, the development of cardiac rehabilitation programs in the health services sector, teacher preparation programs for Aboriginal students, the role of food banks in today's society and early childhood development.

Our Health emphasis builds on the activities of several research institutes and academic units including: The Centre on Aging, Saskatchewan Population Health Evaluation Research Unit (SPHERU), Saskatchewan Institute of Public Policy, Canadian Plains Research Center, Seniors' Education Centre, and the Social Policy Research Unit. The new Centre for Kinesiology, Health and Sport reflects the increasing health commitment of the University and houses new research laboratories including the Anxiety and Illness Behaviours Laboratory and the Traumatic Stress Group. It has also allowed for the co-location of others of our health related research centres into the same facility.

Our partnership with First Nations University of Canada brings opportunities for collaborative work on Aboriginal Health through SPHERU and the Indigenous Peoples' Health Research Centre (IPHRC).

Social Justice

The University of Regina has historically had a strong voice in social justice and is in an excellent position to take advantage of its location in the capital of a province long regarded as a leader in social policy innovation. Social Justice builds upon the current activities of several research institutes and centres as well as academic units including the Saskatchewan Institute of Public Policy, the Canadian Institute of Peace, Justice and Security, the Social Policy Research Unit, the Canadian Plains Research Center, the Seniors' Education Centre, the Saskatchewan Instructional Development Research Unit, the Early Childhood Program of the Faculty of Education, the Department of Justice Studies in the Faculty of Arts, and the interdisciplinary Women's Studies Program.

The Tier I Canada Research Chair in Social Justice and the newly established Law Foundation Chair in Police Studies will extend the capacity of the University of Regina to undertake research and develop programs that will benefit the Aboriginal community and enhance social justice policymaking. They will be supported by the Saskatchewan Institute of Public Policy.

Social Justice at the University of Regina is also directly related to the University's internationalization strategy. The promotion of justice, civil society, and peace, and the building of institutions to support them are and will continue to be an integral part of our international agenda.

ALLOCATION OF CHAIRS

The following is a breakdown of the University's allocation of the Canada Research Chairs. It is important to note that the University must maintain flexibility in its allocation of Canada Research Chairs and the University's own President's Scholars among the five research thematic emphases to ensure we can take full advantage of emerging opportunities. Three nominations are currently being prepared in the final year of eligibility (2006).

Year 1	Year 2	Year 3
SSHRC Tier 1 (Special) Public Policy & Economic History	SSHRC Tier 1 – Social Justice NSERC Tier 1 Energy & Environment NSERC Tier 1 Energy & Environment NSERC Tier 2 Informatics	SSHRC Tier 2 Social Justice (Aboriginal)
Total: 1	Total: 4	Total: 1
Year 4	Year 5	Year 6
NSERC Tier 2 (Special) Informatics	NSERC Tier 1 – Energy and Environment (a combination of two Tier 2 chairs)	SSHRC Tier 2 – Social Justice CIHR Tier 2 NSERC Tier 2 - Energy & Environment
Total: 1	Total: 1	Total: 3

INTERNAL VS. EXTERNAL NOMINEES

The University will fill the Chairs on the basis of excellence and "fit" with the University's strategic plan. Every effort will be made to recruit externally, but highly qualified internal candidates will be selected when appropriate.

GENDER REPRESENTATION

The University of Regina is committed to the principle of gender equity and has implemented procedures to ensure that gender considerations are an integral part of any faculty searches. One of our four approved Tier 1 chairs is female. One of three approved Tier 2 chairs is female. Currently we have a female nominated for a Tier 1 chair (a combination of two Tier 2 chairs), and expect (and hope) that one of the remaining nominations will be female. Gender representation is an important criterion in the establishment of all faculty search committees, and Canada Research Chair committees are specifically requested to seek qualified female candidates for inclusion in the candidate pool and report on the number of female candidates interviewed and efforts to secure female candidates. Where appropriate, female candidates at the University are targeted and asked to consider applying for the Chairs.

EVALUATION OF SUCCESS

The University of Regina will use various measures to monitor success in meeting the key objectives of the Strategic Research Plan including evidence of significant increases in research faculty, graduate students and post-doctoral fellows. We will also monitor tri-council research revenues to measure growth in research capacity. We will continue to establish world-class centres of research excellence in conjunction with provincial, national and international partners and focus on areas of expertise and strategic interests. We will increase national and international research and teaching links and monitor the number of projects supported by international organizations. We will continue to increase the number and quality of scholarly publications, and the number of national and international research and scholarship awards received by faculty and students.

INSTITUTIONAL SUPPORT

The University of Regina is committed to making use of the Canada Research Chairs to augment its research capacity to foster research excellence in select areas. The creation of the President's Research Scholars program is a reflection of the University's commitment to a strong and vibrant research culture. The Province of Saskatchewan is supporting the Canada Research Chair program at the University by matching the first two years of funding for each Chair and matching CFI contributions for the infrastructure component of the Chair program. We will continue to work with the Province to ensure they are aware of our research initiatives and our specific needs for CFI and CRC matching funds. Funding of \$36.6M is available for the construction of a new Laboratory Building Addition, and the Province has committed funding support for the proposed Technology Innovation Centre being planned for the University of Regina Research Park. In addition, the Government of Saskatchewan and the Government of Canada through the Department of Western Diversification have provided funding for the development of research infrastructure in support of Energy and Environment and Informatics. The Saskatchewan Health Research Foundation is providing financial support to our Health researchers and research institutes.

The University of Regina established a University Industry Liaison Office in July 2002 to assist in the innovation and commercialization of research, and to support the dissemination efforts resulting from CRC/CFI support. The role the UILO will play in furthering research and innovation at the University of Regina will increase significantly with the establishment of the Technology Innovation Centre in partnership with the Regina Regional Economic Development Authority (RREDA), industry and three levels of government. It is targeted for operations in 2007.

PLANNING AND APPROVAL PROCESS

The five areas of strategic emphasis have been developed in consultation with the broader academic community including the University Council, Senate and Board of Governors. The development of the University's CRC/CFI research strategy was done in consultation with the Deans' Council, the President's Research Committee, the Planning and Priorities Committee of Council, and faculty members. The University has signed a Memorandum of Agreement (MOA) on the Canada Research Chairs with the University of Regina Faculty Association.