

Canada Research Chairs (CRC) Program

University of Winnipeg Canada Research Chairs Program

STRATEGIC RESEARCH PLAN (SRP) SUMMARY (UPDATED: October 2010)

The University of Winnipeg is a primarily undergraduate university with a strong culture of research, scholarship, creativity, and innovation that spans the sciences, social sciences, humanities, and education. Recently we expanded our graduate studies program by introducing four new programs: MA in Indigenous Studies, MA in English with a Focus on Cultural Studies, MSc in Applied Computer Science and Society, and MSc in Bioscience, Technology and Public Policy. Some examples of graduate degrees on the horizon are those combining science and business; economics and social issues; and undergraduate and graduate degrees emphasizing co-operative educational opportunities. We are a university 'on the move' with an expanding campus, including the Richardson College for the Environment and Science Complex, and the Buhler Centre which will house the Faculty of Business and Economics, the Division of Continuing Education and the Plug-in Institute of Contemporary Art.

A strong commitment to the teaching and training of students in the natural and human sciences, humanities, business, and education characterizes the University of Winnipeg. Along with our own graduate programs, a number of faculty hold adjunct appointments at comprehensive and/or medical/doctoral universities and approximately 25% of our faculty are directly involved in graduate supervision. Faculty at the University of Winnipeg are also among the best in Canada at meaningfully integrating undergraduate students into their active research programs. Our researchers and scholars also regularly host postdoctoral fellows. Our strength in training is further illustrated by the numbers of students who successfully compete for CIHR Frederick Banting and Charles Best Canada Graduate Scholarships - Masters, NSERC Alexander Graham Bell Canada Graduate Scholarships – Masters, NSERC Undergraduate Student Research Awards, SSHRC Joseph-Armand Bombardier Canada Graduate Scholarships – Masters, along with a variety of other external and internal undergraduate and graduate research scholarships and awards.

The University is host to a number of research institutes and centres such as: The Institute of Urban Studies, Institute for Women's and Gender Studies, Centre for Rupert's Land Studies, Planetary Spectrophotometer Facility (PSF), Centre for Forest Interdisciplinary Research (C-FIR), International Indigenous Science Education Centre (IISEC), Centre for Research in Young People's Text and Cultures (CRYTC), and the Canadian Oral History Centre.

Goals and Key Indicators

The Canada Research Chairs program provides opportunities to attract and to retain stellar researchers, and the University of Winnipeg will employ its CRC allocations for both purposes. We will seek outstanding leaders who will create dynamic new synergies among researchers and across traditional disciplinary boundaries. We will seek innovators who are committed to research training and able to drive our research efforts forward. The developmental opportunities provided through the Canada Research Chairs program are augmented by those provided through the Canada Foundation for Innovation New Opportunities program and other initiatives such as SSHRC's CURAs. It is the University of Winnipeg's intention to employ these programs, and the synergies between them, to continue to develop and enhance our research excellence.

We have begun to make progress in achieving these goals, which we are measuring through a variety of indicators, including:

- Development of a Strategic Research Plan that provides clear strategies and targets for the development of research.
- An increase in the number of scholars (faculty, post doctoral fellows, visiting scholars, research associates, adjunct professors) and students (graduate and undergraduate) wishing to be affiliated with the University and its research initiatives.
- Successful interdisciplinary research teams or clusters of scholars drawn from diverse areas of expertise to work together to develop research their research grating strategies and applications and to improve their success rates. The goal here is to seek out and create opportunities for University researchers to obtain access to increased grant funding.
- Increase in the number of scholars who play significant roles in major national and international conferences and scholarly meetings. Internal funding to the University of Winnipeg's Research Committee has increased, allowing more faculty members to carry out research and to disseminate that research via travel grants for conference presentations.
- That our relationships with a variety of similar focused external organizations (e.g. other universities, NCEs) and other constituencies (e.g. governments, industry, NGOs, community) will be deepened and strengthened. As witnessed in the development of the Northern Studies Committee, the awarding of the Canada Research Chairs, and the research being conducted by faculty since these indicators were established, the University of Winnipeg has been building stronger relationships with funding partners, sister institutions, within the community and with government.

Research Thrusts

Research strengths at the University of Winnipeg go well beyond those focused upon here, and the University acknowledges that the faculty's high caliber research and scholarship is fundamental to the University's ability to fulfill its mission and achieve its goals. The University of Winnipeg values and supports these individual scholarly achievements. The research areas

highlighted in this document are anchored in the opportunities and limitations presented by the Canada Research Chairs Program and in the University's allocation and projected allocations of Chairs.

Through a broadly consultative process the University identified six areas of existing and future strength to be developed through the deployment of Canada Research Chairs and other appropriate mechanisms. These areas are listed by year awarded:

- *Applied Health and Medical Research*
- *Cultural Studies*
- *Environmental Studies*
- *Experimental Physics*
- *Fresh Water Ecology and Hydrology*
- *Indigenous Development*
- *Urban Studies*

❖ *Applied Health and Medical Research*

Nuclear magnetic resonance (NMR) imaging research at the University of Winnipeg involves faculty members from the departments of Physics, Psychology, Biology and Chemistry. The University of Winnipeg recognizes the importance of research into the development of new magnetic resonance imaging (MRI) procedures to study a wide variety of physical, chemical, biological, and material properties in order to locate and/or diagnose injury or disease. For example, changes in the brain and other parts of the central nervous system – from diseases such as Alzheimer's, schizophrenia, multiple sclerosis and stroke – that previously could only be seen through biopsy or after death, can now be examined in vivo using this technique. NMR and MRI can also be used for research into lung physiology and disease, as well as to study the properties of new materials. This offers an assortment of health, social and economic benefits to Canada.

❖ *Cultural Studies*

Cultural Studies at the University of Winnipeg is a strong multidisciplinary research area where our researchers seek to explore culture and the arts as part of a social, economic and political environment. There are five main themes being explored in this area: Cultural Theory, Cultures of Childhood; Gender, Sexualities and Culture; Local, National and Global Cultures; Manuscript, Print and Digital Cultures.

❖ *Environmental Studies and Freshwater Ecology and Hydrology*

The environment is the fastest growing concern among Canadians today. Global warming, air and water pollution, organic chemical contaminants, and community sustainability are the main focus of this important research thrust. We are eager to continue to develop this research area at the institution by submitting research proposals to the CFI, as well as other external agencies in

order to acquire the needed infrastructure to expand our institution's research capabilities in environmental research.

❖ *Experimental Physics*

Recognizing the growing importance of basic research in the global scientific community, the University of Winnipeg hired an experimental subatomic physicist in October of 2004. Since joining the faculty the researcher has played an important role in a large number of prestigious research collaborations and in the training of highly qualified personnel. Since this hire in, the University has successfully acquired the needed infrastructure to expand our institution's research capabilities in subatomic physics through accepted research proposals from CFI and other external agencies. We are now focused on the future of this timely research field, with the hopes of becoming a world leader in the area.

❖ *Indigenous Development*

The Aboriginal population of Canada is a diverse population with distinct cultures, languages, religious beliefs, political systems, and histories. There is a multitude of research themes are all being explored within both an urban and regional context at the University of Winnipeg including transitions to and from urban and rural contexts, self-governance, education, economic and community development, social welfare, and health. This research involves researchers from all areas including: Aboriginal Governance, Education, Geography, History, Mathematics and Statistics. Politics, and Urban and Inner-City Issues.

❖ *Urban Studies*

Research in this area focuses on the issues urban centres are facing and will face in the coming decades. These include growing disparities of wealth, shrinking household size, urban migration and integration of Aboriginal and newcomer groups, housing and community renewal, and the role of community groups in urban redevelopment planning. As an institution we are particularly interested in contributing to the development of policies and programs that will address the needs of the Aboriginal, refugee, and immigrant communities that make-up the largest proportion of Winnipeg's inner-city neighbourhoods.

Projected Chair Distribution

We are grateful for the opportunities that the CRC Program presents to the University of Winnipeg. We anticipate that we will continue to have the Canada Research Chairs distributed across our NSERC and SSHRC strengths.

Tier	Area	Granting Agency	Year Awarded
2	Dendrochronology	NSERC	2002/2007
1	Urban Change and Adaptation	SSHRC	2003 – 2010
1	Aboriginal Peoples and Histories	SSHRC	2004 - 2011
2	Culture of Childhood	SSHRC	2005/2010
2	Indigenous Science Education	SSHRC	2006

2	Environmental Toxicology	NSERC	2008
1	Inner-City Issues, Community Learning and Engagement	SSHRC	2010
1	Subatomic Physics	NSERC	In-process Spring 2011
2	Energy, Resource Economics and Sustainability	SSHRC	In-process Fall 2011

Planning and Approval Process

The University of Winnipeg's planning and approval process for the Canada Research Chair is open and includes consultations with all Departments and Faculties. The University Research Committee discussed written submissions outlining proposed research thrusts and consultations were held to discuss the recommendations arising from those Research Committee discussions. The final version of the SRP was reviewed and endorsed by the President.