

Laurentian University Strategic Research Plan 2012-2017

PREAMBLE

Laurentian University is the principal research and graduate training centre in Northeastern Ontario. In just 50 years, it has grown from a small undergraduate university to a mid-size comprehensive institution with increasing research intensity serving the entire Northeastern Ontario region and Simcoe County. It has thrived and developed in a resource-based region of Ontario that produces most of Ontario's metal exports (90%). As well, the region is home to the highest concentration of Francophone and 40% of the province's Aboriginal population. The region is now facing massive impacts from climate change and large scale development pressure induced by the global resource boom. All these elements are fundamental to Laurentian University's research endeavours. Within this context, the **Strategic Research Plan (SRP)** aligns itself to the University's 2012-2017 Strategic Plan and embraces its purpose statement, value, aspirations and associated results.

STRATEGIC RESEARCH THEMES:

We aspire to be known nationally for our world-class expertise in stressed watershed systems; genomics and bioinformatics; applied evolutionary ecology; rural and northern children's health; multicultural sport and physical activity; environment, culture and values; mining innovation and exploration; nanotechnology and particle astrophysics. To facilitate and encourage initiatives and new collaborations within these areas of research excellence, Laurentian University has identified five strategic research themes:

1. Environment and Conservation, 2. Health and Wellness, 3. Social and Cultural Research and Creativity, 4. Engineering, Mineral and Material Sciences, 5. Subatomic Physics – SNOLAB.

1. Environment and Conservation

We aspire to be known nationally for our world-class expertise in freshwater ecology/ environmental restoration. To achieve this aspiration by 2017, we will focus on the following:

- Establishing a NSERC Canada Research Chair Tier II in Environmental Microbiology
- Establishing a Canada Excellence Research Chair in Northern Watershed Processes and Policies
- Focusing on aquatic sciences including addressing a diversity of aquatic organisms from fish and amphibians through to invertebrates, microbes and plants through the development of the Vale Living with Lakes Centre
- Attracting an increasing number of international researchers and graduate students to the Vale Living with Lakes Centre through scholar-in-residence initiatives and conferences
- Fostering environmental science in support of First Nations land use planning activities in northern communities

2. Health and Wellness

We aspire to be recognized internationally for our expertise in rural and northern health and human kinetics. To achieve this aspiration by 2017, we will focus on the following:

- Creating the Sudbury Coalition for Health Research (SCHeR), a coalition between Laurentian University, the Northern Ontario School of Medicine (NOSM), the new Advanced Medical Research Institute of Canada, Cambrian College, Collège Boréal and other organizations in Sudbury involved in health research
- Creating a research Chair in Occupational Health and Safety (OHS) in collaboration with CROSH
- Pursuing actively the creation of a new chair under this theme
- Establishing the Heart and Stroke Foundation Chair in Aboriginal and Rural Health in collaboration with NOSM
- Providing the needed space, infrastructure, and administration to support CROSH and ECHO
- Expanding the animal research facility to meet expected demand
- Reinforcing cross cultural research with a focus on Francophone and Aboriginal health

3. Social and Cultural Research and Creativity

Laurentian University will encourage research and research collaborations, especially those that contribute directly or indirectly to regional linguistic, cultural, social, educational and economic development.

To achieve this aspiration by 2017, we will focus on the following:

- Reviewing the strengths of the research centres associated with this theme
- Support graduate programs specializing in social research, especially those with a regional component
- Funding three research chairs: a Research Chair in Sustainable Northern Economic Development, a Research Chair in Franco-Ontarian History/Studies and a Research Chair in Indigenous Relations and Governance
- Increasing the number of research grants in social sciences and humanities and the amount received by at least 25%

4. Engineering, Mineral and Materials Sciences

Laurentian University will encourage research and research collaborations, especially those that bridge the traditional disciplines in Earth Sciences and Engineering with other programs (economics, health, environment, Aboriginal, law). To achieve this aspiration by 2017, we will focus on the following:

- Establishing a new NSERC Canada Research Chair Tier II in Geochemistry
- The Mineral Exploration Research Centre will secure funding for the flagship exploration research project of the Canadian Mining Innovation Council's on 'Multidisciplinarity Integrated Footprints of Magmatic, Hydrothermal, and Basinal Ore Deposits'

5. Subatomic Physics - SNOLAB

Having grown together for 25 years, Laurentian University and SNOLAB will continue to support each other and prosper from this close relationship. To achieve this aspiration by 2017, we will focus on the following:

- Continuing to be a sought-after partner in future international collaborations, able to provide expertise in all aspects of the experiments from on-site operations and management, through data collection and interpretation.
- Continuing to attract high-profile research and researchers to Sudbury, thereby providing a stimulating academic environment, both in terms of collaborative opportunities and unparalleled supporting infrastructure.

Strategy:

Laurentian has embarked on an ambitious process to increase research capacity and develop new strategic research avenues. In order to meet those goals Laurentian will:

- Support emerging and experienced research scholars through offering legal advice, mentoring, grant writing assistance
- Create new internal funding envelopes to support emerging scholars, create new research chairs and promote multidisciplinary and partnership
- Assist in obtaining funds from diverse sources including that of the Tri- Council agencies
- Increase research capacity in Simcoe County
- Enhance travel supports to faculty and graduate students giving peer-reviewed papers at international and national conferences
- Implement scholars-in-residence programs
- Establish a policy for Research Centres and Institutes to enable the leveraging of new opportunities and external funding in response to changing circumstances
- Develop a University Analytical Services Unit to centralize acquired equipment
- Create endowments for research chairs, and post-doctoral and graduate fellowships
- Encourage coordinated action by teaching centres and committees in the Laurentian federation to support student learning through undergraduate research