

Strategic Research Plan Summary for the Canada Research Chairs Program and Canada Foundation for Innovation

University of Lethbridge, July 2020

Founded in 1967 on traditional Blackfoot territory, The University of Lethbridge is a public, board-governed university operating as a Comprehensive Academic and Research University under the authority of the Post-Secondary Learning Act of Alberta. The University of Lethbridge celebrates over fifty years of developing individuals who are creative and innovative learners and leaders, well-prepared to contribute significantly to their local, national and global communities. In accordance with the University of Lethbridge's mandate¹, we encourage a vibrant intellectual climate that supports inquiry at all levels and permeates all instructional programs. As we look forward to our next 50 years we reaffirm our vision of a comprehensive university: a strong independent knowledge institution that seeks to understand the human and natural world and the universe beyond, with an aim to bringing knowledge and wisdom to bear on sustaining and improving our quality of life, our society, and the natural environment.

MAJOR OBJECTIVES OF THE STRATEGIC RESEARCH PLAN

Our Strategic Research Plan intertwines the academic and research portfolios to more effectively support the quality, impact, and capacity of research and creative activity at the University of Lethbridge. It is transformative and outlines four commitments:

- We are committed to expanding research, scholarly inquiry, and creative activity. The University of Lethbridge is committed to expanding research capacity by recruiting and retaining outstanding scholars; fostering the scholarly development of our researchers, and providing our students and postdoctoral fellows with an educational experience that is enhanced by the research, advanced mentorship, and experiential learning activities at our institution. Concurrently, we will invest strategically to build provincially-, nationally- and globally-recognized research portfolios, we will support emerging areas of research excellence and inter/multi/trans-disciplinary collaborations, and we will ensure that our research and creative activities are recognized and celebrated locally, regionally, provincially, nationally, and internationally.
- We are committed to preparing the next generation for a changing world. Our goal is to be a leader in the training and development of innovators who will contribute to a knowledge-driven future. We are unwavering in our commitment that students have the opportunity to gain competencies in the four principles of liberal education. This will be achieved by exposing students to ways of looking at and studying the world beyond their own disciplinary boundaries, by fostering an ability to connect and integrate knowledge across disciplines, by emphasizing critical thinking and problem-solving skills, and encouraging students to be contributing community members on all levels. We will produce the talent and expertise needed by the public, private and not-for-profit sectors.
- We are committed to enhancing community outreach and engagement. There is a vibrancy to the research culture at the University of Lethbridge. Our research is firmly connected to the local community, the local geography, our national landscape, and further afield, to a broad range of international settings and partners. We seek to broaden the culture of community engagement. This will be facilitated by connecting researchers, scholars and artists and their world-class research and creative outputs with end users, be it community organizations, governmental agencies, non-governmental organizations, industry, and the public. We will build on existing

¹ Mandate letter may be read in its entirety at <http://www.uleth.ca/governance/mandate>

relationships and foster new collaborative opportunities to respond to address the important questions and problems facing the communities we serve.

- We are committed to engaging cross-sector industrial partnerships for knowledge mobilization and commercialization. Alberta's social, cultural, environmental and economic prosperity and sustainability will benefit from the University of Lethbridge's activities that support knowledge mobilization and translation. We recognize our capacity to collaborate with external organizations across all sectors (public, private, commercial and not-for-profit) in addressing the needs and challenges of the region that we operate within and beyond. Through heightened and intentional engagement and collaboration, the University of Lethbridge will create ongoing and expanded opportunities for students and postdoctoral fellows to engage in research and innovation activities that provide them with real-world, collaborative experience as part of their academic training.

PRIORITY AREAS FOR RESEARCH AND RESEARCH TRAINING

The University of Lethbridge deliberately focused development both in programs of instruction and in research, in order to develop excellence and depth of expertise in a rich and sustainable environment. Priority initiatives integrate long-standing areas of excellence with emerging areas of inquiry, and those of strategic importance to our community. They provide the framework for the knowledge investment, capacity building and innovative and creative outcomes that define our strategic direction and form our national and international impact. These initiatives transcend disciplinary boundaries and promote collaborative research across the Faculties of Arts & Science, Education, Fine Arts, Health Sciences and the Dhillon School of Business. They are:

- Aging and Chronic Disease. The prevalence of chronic and neurodegenerative diseases, as well as mental health issues such as dementia and depression, has significant social and economic costs. The complexity of these diseases are such that an integrated, collaborative and multidisciplinary approach is needed to find the causes and cures. Research conducted at the University of Lethbridge brings together scientists and clinicians from diverse backgrounds and perspectives to collaborate and study the mechanisms, treatment, management, and prevention of these conditions. Research in these areas has a particular focus on improving the health and wellness of all Albertans and Canadians, which has broad capacity to influence social policy, improve education, identify preventative strategies and reverse pathology, and realize breakthroughs in wellness and disease prevention and management.
- Applied Life Sciences. Knowledge of the human genome, other mammals, microorganisms and plants unlocks the door to major discoveries that can be shared across scientific disciplines. Genomics discoveries create unique research projects leading to opportunities in business and in transforming existing sectors of the economy. The ultimate success of the "Life Sciences" business sector will depend heavily on scientific innovation and the ability to link research with commercialization
- Culture and Society. Exploring the multifaceted dimensions of our increasingly global and diverse environment through an examination of the past and the present from different perspectives including identity, gender, ethnicity, religion, education, literacy, race, justice, language, nationalism and cultural diversity. University of Lethbridge researchers consider the role of schooling, health care, work, industry and social capital in both rural and urban communities. The care of the elderly, the disabled, and the addicted within families and communities represent an area of research that cuts across disciplines and faculties.
- Earth-Space Exploration. Through the use of advanced imaging and computational technologies researchers are able to better understand space and fundamental physics. It is through these studies that researchers are exploring our relationship with our planet and well as our place in the Universe. Through innovative uses of space imaging technology, university researchers are able

to see space and the cosmos in new ways, and discover answers to questions that push the boundaries of human understanding.

- Sustainable Development and Globalization. The development of Canada's resources is dependent upon sustainable land and water management practices., which involve interconnected issues of demographics, economics, and environmental sustainability. Through efforts to observe, monitor, and forecast land and natural resources, University of Lethbridge research contributes to a situation where societal benefits are maximized while minimizing current and future environmental impacts. Using an integrated approach, University of Lethbridge research informs policy so that the interrelated and increasingly complex economic, community and environmental issues confronting the key sectors of energy, forestry, agriculture and the environment are not sacrificed for strong, sustained economic growth.

INSTITUTIONAL SUPPORT FOR PRIORITY AREAS

The University of Lethbridge has built and continues to build an outstanding record of research performance that has consistently placed us among the top ranks of competition amongst our peers. The University of Lethbridge ranks in the top 5% of universities worldwide (2019, Times Higher Education World University Rankings) and consistently places among the top 3 undergraduate universities in Canada (2019, Research Infosource). Our tradition of excellence has been achieved by the collective achievements of our researchers and fostered by our commitment to support high impact research over a wide range of disciplines. This accomplishment substantiates the foundation of research that will continue to provide our students with a unique educational experience and mobilize our journey to confirming our place as a comprehensive university.

The University of Lethbridge is committed to research program growth. We have made, and will continue to make, strategic investments, namely:

1. The University of Lethbridge invested time and money to build strong research programs. The University of Lethbridge dedicated its Canada Research Chair allocation to these priority areas and strategically recruited new minds to the University. Its internal research chair program – the Board of Governors Research Chairs– ensures the University is able to retain the bright minds already on campus. These positions, when combined with other faculty recruitments, have enabled the University of Lethbridge to boast a cadre of researchers, many of whom have garnered accolades for their work in the natural sciences, health and medical sciences, social sciences and humanities, fine arts, education, and management. They have been awarded patents and licenses; won prestigious national and international awards, honours, prizes and fellowships; and have been elected to groups that recognize outstanding scholarship and achievement.
2. The University of Lethbridge developed strong multi-disciplinary research programs. The University of Lethbridge broke down discipline and organizational barriers and brought together researchers from across the province and government laboratories to address critical basic and applied questions.

The University of Lethbridge is home to a suite of specialized and renowned research centres and institutes. Not only are they a means of fostering and promoting research expertise and capability, but also serve as platforms for transdisciplinary research. These units of scholarly excellence have strengthened our identity and reputation, promoted community engagement, facilitated partnerships within and outside the university, and attracted alternative funding sources for research, teaching and student training.

3. The University of Lethbridge developed the tools and infrastructure needed to conduct the research. Our community of scholars enjoys access to exceptional research tools, facilities, and infrastructure that supports the breadth of scholarship that defines our institution. With the

completion of the \$280M Science Commons Building in 2019, our researchers, students, and community will have access to a spacious, state-of-the-art, flexible, and adaptable research facility.

4. The University of Lethbridge fostered partnerships. Research at the University of Lethbridge is firmly connected to the local community, the local geography, our national landscape, and further afield, to a broad range of international settings and partners. Our researchers thrive within established and budding local, national and global networks, which strengthens the many communities served through our research. We are a founding member of many provincial and national organizations and partnerships, and we are key players in provincial research programs and priorities. We have benefitted from a multiplicity of investors who believe we are best positioned to take the lead on solving issues of regional, provincial, national, and international concern.

These investments enabled the University of Lethbridge to witness unprecedented growth within these priority areas over the past decade – the number of faculty and students working in these areas are greater, research funding is significantly higher, and the available research infrastructure is cutting-edge. These investments promise to reap future rewards.

EQUITY, DIVERSITY, AND INCLUSION IN CANADA RESEARCH CHAIR NOMINATIONS

The University of Lethbridge is pleased to meet and exceed the targets set for our institution by the CRC relative to under-representation of the four designated groups (women, persons with disabilities, Indigenous Peoples and visible minorities). Women scholars hold 36% of currently filled CRC positions, exceeding our targets in this category. Additionally, the University meets its persons with disabilities and Indigenous Peoples targets, and currently exceeds its visible minorities target.

The CRC recruitment process adheres to the University of Lethbridge’s *CRC Equity, Diversity, and Inclusion Action Plan* and [Best Practices for Hiring with a Focus on Diversity and Equity](#). This includes (but is not limited to):

- Ensuring search committees include a broad representation of individuals from the designated groups.
- Requiring unconscious bias training through the Tri-Agencies [online training module](#).
- Providing a toolkit for the committee members that includes advise on how to evaluate applications that include non-traditional components (e.g., community-focused research); the institution’s CRC equity targets, current representation, equity commitment and action plan; a list of suggested effective interview questions (as well as impermissible questions); and key steps for making the decision-making process open and transparent.
- Conducting interviews in the same format for each candidate.

CRCS AND CANADA FOUNDATION FOR INNOVATION SUPPORT BY RESEARCH PRIORITY

In filling CRC positions, the University looked beyond its walls and sought out the best researchers. All but two of the University’s CRCs are external to the university and are recruited based on the research priorities identified above. Table 1 outlines the allocation of existing CRCs and future CRCs.

Table 1. University of Lethbridge CRC Allocations

Research Priority	CIHR		NSERC		SSHRC		Future*
	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	
Aging and Chronic Disease				2			
Applied Life Sciences			1	1			

Culture and Society			4	
Earth-Space Exploration		1		
Sustainable Development and Globalization		2		NSERC Tier 2 (1 position)

* As a small institution with limited allocations available for applications to the CFI, the University elects to strategically invest in the areas of top institutional priority, with first priority given to members of the CRC program. In alignment with the 2017 changes to developing chairholder support packages, and in keeping with priorities guiding provincial matching programs, ORIS has assigned consistent maximum values to CRC chairholder nominations/renewals, which may vary in only exceptional circumstances, in order to ensure equity within the program.

ASSESSMENT OF OBJECTIVES

Under each research direction, we have identified a range of indicators to help map our success. We acknowledge that there is no universal approach to understanding research achievement given the diverse individual and interdisciplinary research and creative activities that define our academy. Demonstrable outcomes will include:

- Value of external research grants and awards, and diversity of funding sources;
- Number of research chairs;
- Undergraduate and graduate students involved in research as part of their academic studies;
- Industry engagement and new partnerships with external organizations; and
- Continue to meet or exceed our equity, diversity, and inclusion targets.

PLANNING AND APPROVAL PROCESS

The development of the *Strategic Research Plan, 2020-21 to 2022-2023* began with extensive consultations over the course of 2019 with researchers, department chairs, Faculty Deans, directors of research centres and institutes, and with the University Library. These consultations informed the structure, the strategies and initiatives for the current plan. President's Executive, Provost's Committee, and Statutory Deans' Council reviewed and provided feedback on drafts. General Faculties Council gave final approval in May 2020. The plan is effective from July 1, 2020 to June 30, 2023.